

DEVELOPMENT OF VOCATIONAL INTEREST  
INVENTORY FOR THE S. S. C. LEVEL STUDENTS  
IN DACCRA CITY

Ph.D.

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QUAZI ANWARA KHATUN  
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DEVELOPMENT OF A VOCATIONAL INTEREST INVENTORY  
FOR THE SECONDARY SCHOOL CERTIFICATE  
LEVEL STUDENTS IN DACCA CITY

384841

Dissertation Submitted in Partial Fulfillment  
of the requirement for the Degree of  
Doctor of Philosophy

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The researcher, Efforts have been made to keep the terms simple, clear and precise. There are no lines crossed for occupational areas with equal number of items in each area. The areas were: (1) Teaching, (2) Medicine, (3) Nursing, (4) Social Welfare, (5) Engineering.

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ABSTRACT

Monsur, Quazi Anwara. "Development of a Vocational Interest Inventory for the Secondary School Certificate Level Students in Dacca City". Unpublished Doctor of Philosophy Dissertation, University of Dacca, 1977.

Statement of the Problem

The problem for the present study was to develop an Interest Inventory for the Secondary School Certificate level students in Dacca City. The more specific purpose of the study was to construct a valid and reliable instrument for measuring the vocational interests of the S.S.C. students who have not yet entered into any job but who are expected to make decisions regarding their occupations on completion of their study.

Methods of Study

In all 300 items were constructed on the basis of the study of related literature and a priori reasoning of the researcher. Efforts were made to keep the items simple, clear and precise. These 300 items covered ten occupational areas with equal number of items in each area. The areas were: (1) Teaching, (2) Medicine, (3) Nursing, (4) Social Welfare, (5) Engineering,

(6) Business, (7) Secretarial Science, (8) Accountancy, (9) Law and (10) Family Welfare. Of the 20 occupational areas, supplied to the experts for ranking, these were the ten most preferred ones.

The study was conducted in two phases. The first phase involved (i) selection of items for the Inventory, (ii) determination of sex differences in respect of responses to the items of the Inventory, and (iii) assessment of validity and reliability of the Inventory. The second phase of the study tested the validity and reliability of the Instrument. Certain hypotheses were also tested in this phase.

A two-stage sampling technique was adopted for the selection of sample in both the phases of the study. The primary sampling unit consisted of all the schools of Dacca City and the secondary unit comprised the students from these schools. Two hundred respondents in the first phase and three hundred respondents in the second phase were randomly selected according to this sampling technique.

Discriminating ability of items was the main criterion in selection of items of the Inventory. Chi-square and DP techniques were used to determine the

discriminating ability of the items. Items having Chi-square values of 5.99 or more and having DP values of 1.50 or more were retained for inclusion in the Inventory. By applying these two techniques jointly one hundred items, 10 in each occupational area, were finally selected for the Inventory.

A simple analysis of variance was done to see whether boys and girls reacted to the items of the questionnaire differently.

Validity of the Instrument was determined and tested by its discriminating ability between the sub-tests. This ability of the Instrument was tested by the facts that (a) the scores of the experts tended to be higher in their own areas than those of other areas; (b) the high-scoring respondents tended to score higher in specific areas of their interest than in the other areas.

The above comparisons were made by the techniques of analysis of variance and comparison of multiple means by the Studentized Range Statistic (q).

The reliability of the Inventory was determined and tested by the statistical technique of split-half reliability. The scores of the two equivalent halves,



having even-numbered items in one set and odd-numbered items in the other, were correlated by the Product Moment Method.

Sex differences and differences in the courses of study were tested by the statistical technique of a two-way analysis of variance. Some other hypotheses of this phase were tested by t-tests and Chi-square tests.

### Results

Items having Chi-square values of 5.99 or more and DP values of 1.50 or more were retained for inclusion in the Inventory. By applying these two techniques jointly 100 items, 10 from each occupational area, were finally selected for the Inventory.

A simple analysis of variance showed that there was no significant difference in the responses made by boys and girls. This implied that the Instrument could be used for both boys and girls.

An analysis of variance and a comparison of multiple means of the scores of the first phase in the study indicated significant F-ratios and significant q-values. This implied that the Instrument discriminated between the sub-tests. Validity of the Instrument was,

therefore, determined. The above analyses were also done with respect to the scores of the second phase. All the F-ratios were significant at the five per cent level and most of the q-values, with the exception of the area of Accountancy, were also significant. This implied that the Instrument had the power to discriminate between the sub-tests. The validity of the Instrument was, therefore, tested.

The split-half coefficients of correlations for the responses of 200 respondents in respect of the different sub-tests ranged between .67 and .92. The same co-efficients for the responses of 300 respondents in respect of the different sub-tests ranged between .71 and .96. All these correlations were significant at the five per cent level. Thus, the obtained results determined and tested the reliability of the Instrument.

A two-way analysis of variance was made to see the differential patterns between the respondents in respect of sex and courses of study. The results of this analysis showed that the boys did not differ from the girls in their vocational preferences. This analysis also indicated that science students differed from the non-science students in their vocational preferences.

The results of t-tests showed that science students were more in favour of choosing Medicine as a profession than the non-science students. The non-science students, however, were more in favour of choosing Social Welfare, Business, Secretarial Science, Accountancy and Law as vocations than the science students. Moreover, there was no significant difference between the science and non-science students in their vocational choices with reference to the areas of Teaching, Nursing, Engineering and Family Welfare.

Chi-square tests showed that fathers' income and educational level did not make any difference in matters of vocational choice of their sons and daughters.

### Conclusions

On the basis of the findings of this study the following conclusions are arrived at:

1. The Instrument designed to assess the vocational preferences of the S.S.C. level students in Dacca City is a valid one.
2. The said Instrument is also reliable.
3. The said Instrument could be profitably used by teachers, counsellors and guidance workers

- for measuring vocational preferences of both boys and girls.
4. The Instrument is found to be valid when applied to a sample of 150 boys and 150 girls (Phase II).
  5. The Instrument is found to be reliable when applied to a sample of 150 boys and 150 girls (Phase II).
  6. The Instrument is also capable of discriminating vocational preferences of science and non-science groups of students (Phase II). Here the responses of the science and non-science students in respect of the items of the Instrument are found to be different.
  7. The Instrument is also capable of discriminating the patterns of vocational choice of the science and non-science students. The science students are found to be more in favour of choosing Medicine as a vocation than the non-science students; and the non-science students are found to be more in favour of choosing Social Welfare, Business, Secretarial Science, Accountancy and Law as vocations than the

science students.

8. The Instrument further shows that fathers' income or educational level does not make any difference in matters of vocational preferences of their sons and daughters.

### Recommendations

In view of the experiences of the researcher in developing the present Interest Inventory and the problems faced in course of conducting the study, the following recommendations are submitted:

1. The number of experts may be increased for future study to enhance the validity of the instrument.
2. More occupational areas may be included.
3. A D.O.T. (in Bengali) may be prepared.
4. The instrument may be standardized.
5. The instrument may be administered on sample selected from different age-levels.
6. Sex-differences in vocational preferences may be tested with a larger and adult sample.
7. Studies may be designed to compare vocational interest patterns of people from rural and

urban areas.

8. A longitudinal study may be made to determine the influence of age on vocational preferences.
9. Studies may be designed to compare vocational preferences of respondents having age-level of those covered in the present study and students of higher age-level (preferably above 17 years).
10. Efforts may be made to see how the vocational preferences of women are influenced by men's evaluation of different occupations (men's ascription of status to different jobs) by including appropriate questions in the background information.
11. Studies may be designed to explore the possibilities of having clusters of occupational interests in course of developing any vocational interest inventory.
12. Studies may be made regarding the feasibility of constructing any valid single interest inventory in the line of the sex-balanced Unisex Interest Inventory (Uni-II).

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Donald G. Giger, and John G. Critter, *Occupational Interest Inventory* (New York: Harper & Row, 1962), pp. 3-5.

major interpretations. CHAPTER I Interest, namely, as expressed, elicited, tested and inventoried. Fryer has named expressed interest as "specific interest" which is

Introduction

A vocational interest inventory serves as a tool used for offering vocational guidance to some one who is in need of help in matters related to occupational choice. Super and Crites have suggested that vocational counselling has two fundamental purposes: firstly, to help people make good vocational adjustments and, secondly, to facilitate smooth functioning of the economy through effective use of manpower.<sup>1</sup> Again, in order to evaluate a person's vocational prospects, two types of information about him are necessary; namely, (a) the psychological facts which describe his aptitudes, skills, interests and personality traits; and (b) the social facts which describe the environment in which he lives, the vocational influences which affect him, and the resources which are at his disposal. The term "interest" has been interpreted in different ways by different writers on vocational guidance. Super and Crites have given four

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<sup>1</sup> Donald E. Super, and John O. Crites, Appraising Vocational Fitness (New York: Harper & Row, 1962), pp.1-5.

major interpretations of the term interest, namely, ~~and~~ expressed, manifest, tested and inventoried. Fryer has named expressed interest as "specific interest" which is an individual's verbal profession of likes or dislikes regarding an object, activity, task or occupation.<sup>1</sup>

Expressed interests of children are relatively more unstable and, as such, do not provide useful data for purposes of prediction. However, data regarding those of older adolescents and adults are more promising. It is because of the fact that interest patterns begin to crystallize by adolescence and that the exploratory experiences of the adolescent years in most cases merely clarify and elaborate upon what has already begun to take shape. Hence, any importance which may be attached to expressions of specific interests varies more distinctly with the maturity of the individual. Finally, vocational interest patterns, in general, have a substantial degree of permanence at the early adulthood stage. Thus, for most persons adolescent exploration is an awakening to something that is already there.

Over the past half century, interests have been the topic of much attention from vocational and counsell-

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<sup>1</sup>Ibid., p.378. is assumed by the vocational psy-

ing psychologists in the developed nations of the world. More often attempts have been made to differentiate between expressed interests and manifest interests. In the case of an "expressed interest", the subject states that he likes or dislikes an object, activity, task or occupation while he is indifferent to some other activities or experiences. Manifest interest, on the other hand, is synonymous with participation in an activity or occupation. These manifest interests are sometimes more the results of an interest in the by-products of activity rather than the activity itself. This happens in situations when boys and girls join as guiders or scouts with the intention to travel to different places which result in participation in such programmes. Under this category of "manifest interest", objective manifestations of interests are studied in order to avoid the subjectivity of expression or the implication of a stable quality in interest. The phrase "tested interest" is used to refer to interest as measured by objective tests, such as achievement tests in mathematics or teacher-made-tests in history. This tested interest is differentiated from "interest-inventories" which are based on subjective self-estimates by the individual. It is assumed by the vocational psy-

chologists, that, since interest in a vocation is likely to manifest in action, it should also result in an accumulation of relevant information.

Inventoried - interest is assessed, by vocational psychologists and counsellors, through lists of activities and occupations which bear a superficial resemblance to some questionnaires for the study of expressed interests. Each item in the list is responded to with an expression of preference. In this case the essential and all important difference is, that, in case of the inventory each possible response is given an experimentally determined weight. The weight corresponding to the answers given by the person completing the inventory, is added in order to yield a score which represents not a mere subjective estimate (as in the case of expressed interest), but a pattern of interests which research has shown to be rather stable. Regarding the stability of interests, Super states that the question of permanence is closely tied up with that of change of interests associated with age. The patterns of interests which begin to manifest themselves by age 15 tend to be those which are revealed at ages 25, 35, and 55. Most of the change which does take place with maturity tends to be complete by age 18.

Bruce Shertzer and Norman J. Peters, *Guidance* (New York: The Macmillan Company, 1967), p. 199.

The type of change which may take place at that age is systematic and predicatable on the basis of Interest Inventory data.<sup>1</sup>

Thus, it is recognized that interests change with age, though variations at different ages above the teens are less significant than those of sex, occupational groups, or unskilled and professional groups. While interests become more stabilized in post adolescence, the information regarding how much change occurs within individuals over a span of time is a matter of further study.

Strong's study has tried to meet the apparently logical objection that no statistical combination of unstable elements can yield a stable total when he attempted to study the effect of changes of responses to specific items on inventory scores. The shifts there had no appreciable effect on scores for occupational interests. The fact that shifts in one direction are balanced by shifts in the other direction explains the ground for absence of such appreciable effect. This happens when the underlying pattern or trend of interests

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<sup>1</sup> Bruce Shertzer and Herman J. Peters, Guidance (New York: The Macmillan Company, 1967), p. 199.

is constant.

As regards types of interests, Strong and his students discovered that the interests of a man in a given occupation, e.g. engineering, were different from those of men-in-general. Gaining information about nature of these interests was possible only after scales had been developed for measurements of men in a number of occupations through factor analysis and item analysis. It is a widely accepted fact that Strong's work laid the foundation for many studies in the psychology and measurement of interests. It also made possible the development of practical or usable instruments for use in job selection or counselling sessions.

Shertzer and Peters think that one's interests at any time are legion and vary in intensity and duration.<sup>1</sup> According to them human behaviour involves wants which are satisfied by reaching goals and also the processes of attaining goals. Thus, interests involve reaction to specific things.

In order to find out if there exists any relationship between the interests of individuals and the

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<sup>1</sup> Ibid., p. 198.



occupations they choose, interest tests have been constructed by experts in psychology and guidance. They have constructed interest tests by analyzing differences in responses given by people in different occupations. An eighteen-year longitudinal report on this shows that those who have changed their occupations and those who have not done so do not differ much in respect of their mean scores.<sup>1</sup> It is possible because of the fact that both development of interests and vocational choices are dependent on several factors.

One difficulty faced by guidance workers and social psychologists is to find out if there is any relationship between interests and values held by individuals. While interests refer to likes or dislikes for specific objects or situations, values stand for motive forces, such as personal power, wealth, religion, and the like. Hence, values refer more to the individual's philosophy of life and his attitude towards the world around him. It is observed by certain writers that interests change more rapidly than value systems. Prominent among them are Guba and Getzels, Stanley and Waldrop, Sarbin and Bordie

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<sup>1</sup> Bruce Thortzer and Norman J. Peters, *Guidance* (New York: The Macmillan Company, 1967), p. 200.

<sup>2</sup> *Ibid.*, p. 199.

<sup>3</sup> *Ibid.*, p. 200.

who have studied the relationship of interests and values using the Strong Vocational Interest Blank and the Study of Values.<sup>1</sup> Most of their studies have found that significant relationships exist between interests and values though the two factors are sufficiently independent and could be used either singly or jointly for counselling purposes.

The foregone discussions lead to a mention of the studies which deal with relationship between abilities and interests. Several studies have been carried out most of which report correlations ranging from about - .40 to + .40.<sup>2</sup> The relationship, however, is affected by a number of factors, such as, types of test used, sex, age, education, occupation and the like. Research findings often prove to be contrary to common expectations. The motivation theory holds that an individual is more likely to measure high in interest areas where he has a relatively high ability and that low interest will come out with a concomitant low ability. Research findings do not corroborate this view. Ewens has examined the similarity

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<sup>1</sup> Bruce Shertzer and Herman J. Peters, Guidance (New York: The Macmillan Company, 1967), p. 200.

<sup>2</sup> Ibid., p. 200.

between aptitude and achievement on the basis of profiles and patterns.<sup>1</sup> In his study, the data on interests were based on Kuder Preference Record and an Activity Experience Inventory developed by Ewens himself. His study showed correlations ranging from - .53 to + .57.

In course of formulating a theory of interests, Super and Crites state that interests are the product of interaction between inherited neural and endocrinal factors. These also result from interaction between the opportunity and social evaluation of individuals. Very often it so happens that some of the things a person does well as a result of aptitude bring him the satisfaction of mastery as well as approval of his friends and associates resulting in arousal of interests. This individual, having realised his peers' and companions' approval through identification, patterns his actions and his interests after them. So much so, that, if he fits the pattern reasonably well he remains in it. Otherwise, he has to take recourse to a different identification and develop another self-concept and interest pattern.

In advanced countries of the world counsellors,

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<sup>1</sup>Ibid., p. 200.

psychologists, rehabilitation officers, school and college administrators, social workers, employment officers, personnel directors, librarians, psychiatrists, economists, sociologists, parents and teachers—people of various groups and varied types of responsibilities — are involved with occupational information. They may be involved directly or indirectly, consciously or unconsciously as they are concerned with problems of occupational choice, distribution, mobility and also some adjustment between jobs and job-seekers. Occupational information, thus, is an indispensable part of vocational guidance. For, an individual is not expected to choose the occupation he is not familiar with. Wise choice of an occupation necessitates handiness or availability of accurate information about certain occupations, their requirements and the facilities they offer. Here the occupational information is not enough for the purpose of guidance. Knowledge and acceptance of one's aptitudes, abilities, interests, values, feelings, misgivings, likes and dislikes are equally important. A clear idea about the relative significance of all these factors also plays an important role in the field of both academic and occupational choices made by an individual.

### Statement of the Problem

The problem involved in this study is to carry out the spade work in an effort to develop a vocational interest inventory. The researcher hopes to devise a useful and workable instrument which will help parents, teachers, educators, social workers, psychologists and counsellors to find out the differences of vocational preferences among boys and girls from different educational institutions. Though in advanced countries extensive use of measuring instruments has been made, very few of such standard instruments is applied in Bangladesh for helping students in making their academic or vocational choices.

The instrument aimed at by the researcher is expected to throw some light regarding the tendency of young boys and girls toward specific courses of study leading to future career selection. More specifically, therefore, the problem of the present study is to develop a vocational interest inventory to be used for educational and vocational guidance purposes in Bangladesh.

It may be noted here, that, family welfare is a newly covered area so far as the selection of areas for the development of any interest inventory is concerned.

In Bangladesh, very recently, efforts leading to population control have gained a momentum and the issue of population planning and family welfare has been treated as a national problem. The researcher has, therefore, made an attempt in this study to find out the reactions of the secondary level students to this specific area by including items in the questionnaire which are reflective of family planning and population control and which have been covered in the general heading of "Family Welfare".

#### Need for the Study

An experiment in social work known as "The Avondale Project", was in fact, the first attempt to bridge the gap between school and work for fifteen year old school leavers in London. It set a pattern for many of the school counselling projects undertaken since. The writer has described the peculiar position of the group "Fifteen Plus" who belong to a complex and changing society with a vast area of choice. According to her there are enormous differences in opportunities offered in different class and income levels; but nevertheless a boy or girl belonging to such levels and growing up with

it becomes influenced by an environment offering a multiplicity of different modes of behaviour, beliefs and understanding.<sup>1</sup> In such a situation an adolescent is expected not only to understand and, perhaps, control his own emerging feelings, but to choose how he will behave, where he will work or where he will live. Thus, emerging into the most difficult years of his life, an adolescent is left exposed to the intensity of his own feelings and the harshness of the society in which he lives. Gradually modern society is recognizing that adolescents need and can profit by help of one sort or other. Even if there are centers who offer help, some initiative has to be taken by the young persons. In order to make use of the services offered these young persons must not only be aware of the existence of such advice regarding career plannings or other social and family problems, but must volunteer themselves to receive the help. Peculiarity of this age is such, that, the adolescent-still in part a child - is held by his family expectations and family feelings. He is neither competent enough to assess his problems realistically, nor ready to step out of his family and make independent decisions. Thus, in his fantasy choice he may take recourse to actions

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<sup>1</sup>Rosamunde, Blackler, Fifteen Plus (London: George Allen and Unwin, 1970), pp. 11-12.

which are harmful to himself and others.

Ralph Albertson has referred to certain "simple truths" regarding the advantages of expert vocational counsel to young men and women.<sup>1</sup> They include hints, such as, (i) it is better to choose a vocation than merely to 'hunt a job'; (ii) no one should choose a vocation without careful analysis, through honest supervision and under proper guidance; (iii) the youth should have a large survey of the field of vocations, and not simply drop into convenient or accidental positions; (iv) expert advice, or advice of men who have made a careful study of men and vocations and of the conditions of success, is expected to be better and safer for a young man than the absence of it.

A similar suggestion from Frank Parsons regarding three broad factors in the choice of a vocation is worth noting. These are:

- (1) a clear understanding of yourself, your aptitudes, abilities, interests, ambitions, resources, limitations, and their causes;
- (2) a knowledge of the requirements and conditions of success, advantages and disadvantages, compensation,

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<sup>1</sup>Ibid., p. 5.  
<sup>1</sup>Frank Parsons, Choosing A Vocation. (New York: Agathon Press, 1967), p. xiii.  
 (New York: McGraw-Hill Book Company, 1963), pp. 1-5.



opportunities, and prospects in different lines of work; (3) true reasoning on the relations of these two groups of facts.<sup>1</sup>

Thus, the more light an individual can bring to bear on the problem from his own observation, reading, and experience, the better it will be for the clarity and strength of the conclusions arrived at as well as the permanent value of the results attained.

As an indication of success in one's achievement his best abilities and enthusiasm must be combined with his daily work. As such he needs to 'investigate' himself in order to determine his capacities, interests, resources and limitations, along with their causes; so that he may compare his own aptitudes, abilities, ambitions etc. with conditions of success in different situations or positions.

Hoppock has given at least five reasons as to why the wise choice of an occupation is important and why factual information about jobs are essential to such choice.<sup>2</sup> He thinks that occupational information is indispensable. For, one cannot choose what one does not

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<sup>1</sup> Ibid., p. 5.

<sup>2</sup> Robert Hoppock, Occupational Information, (New York: McGraw-Hill Book Company, 1963), pp. 1-5.

know, whereas many occupations are unknown to most of us. Again, occupational information alone will not ensure success in life. Some other factors, such as knowledge and acceptance of one's own aptitudes, likes and dislikes are also necessary, as is clear understanding of the relative significance of all these facts. The reciprocity of the relationship of the above factors is understandable. It is clear that knowledge of occupations can effectively be applied only when someone knows something about himself; again, it is equally obvious that knowledge of oneself can be effectively applied to the choice of an occupation only when one knows something about the occupation. Thus, one, to the exclusion of the other, is incomplete and ineffective.

Several writers have tried to emphasize the issue of vocational maturity which has an important implication for guidance practices. Super and Overstreet think, that depending on the societal demands' being somewhat flexible in their requirements, the best time for an individual to begin his developmental task regarding vocational preferences is when he is ready to begin (to choose). It follows a sequence which ensures that before a behavioural task can be performed, a certain repertoire

*R. F. Herdick and others (ed., et al.), Testing in Guidance and Counseling (New York: McGraw-Hill, 1963), pp. 40-50.*

of appropriate behaviour must be present. Dysinger names this preparedness as "vocational readiness" which is comparable to the concept of "reading readiness" in the field of educational guidance. Havighurst has labelled it as the "teachable moment". Consequently, when the boy is ripe, i.e. mature either vocationally or academically, and society requires, and the self is ready to achieve a certain taste, the teachable moment has come. It is natural that efforts at teaching which would have been largely wasted if they had come earlier, produce commendable results when they come at the "teachable moment", when the task should be learned.<sup>1</sup>

Bardie and his associates have suggested that the successful person does his job well and receives satisfaction and happiness from it. According to them success is dependent on both abilities and interests. Before some one can make satisfactory decisions regarding educational programmes or vocational choices, he must have information about both his aptitudes and his interests.<sup>2</sup>

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<sup>1</sup> Donald E. Super and P. L. Overstreet, The Vocational Maturity of Ninth Grade Boys (New York: Teachers College, Columbia University, 1960), pp. 9-13.

<sup>2</sup> R.F. Bardie and others (or, et al.), Testing in Guidance and Counseling (New York: McGraw-Hill, 1963), pp. 48-50.

In this context Myers observes that it is highly desirable that the methods and techniques of vocational guidance be restated in the light of social, economic, and educational changes that have taken place in recent years.<sup>1</sup> There is a great awareness among the public about the need for guidance, and also greater concern, than ever before, about helping youth find their way to genuine occupational satisfaction and success. As early as in 1915, when the vocational guidance movement was in its initial stage, Myers laid a stress on the need of an organized vocational guidance programme. Even after half a century, vocational guidance exercises the same status and gives emphasis on a comprehensive programme of educational and vocational guidance. Though there has been much discussion regarding the measure of responsibility to be shared by the parents, the school, the state and by the industrial and commercial organizations, there can be no question regarding the need for a rational plan.

It is hoped that information obtained with the help of the proposed inventory will prove to be helpful

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<sup>1</sup>G. E. Myers, Principles and Techniques of Vocational Guidance (New York: McGraw-Hill Book Company, 1941), p. 60.

not only to special workers in the field of vocational guidance, but to all who are genuinely interested in youth and their problems. It includes people such as supervisors, school administrators, teachers, librarians, social workers, educational directors, rehabilitation officers and the like. This instrument is expected to throw light on situations where youths or adults need assistance in choosing an occupation, preparing for, entering upon and progressing in it.

While attempting to evaluate interests of boys and girls on the basis of success, Fryer assumes that the activities in which the student is most interested are the ones in which he will persist longest, and consequently, obtain most practice and success.<sup>1</sup> However, the difficulty of using success as a criterion of interest in such cases arises firstly from dependency of success on ability, and secondly from the difficulty of determining equality of opportunity.

Coming back to the need for the present study, it may be stated that the need for help in making occupational

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<sup>1</sup>R. F. Bardie and others (or, et al.) Testing in Guidance and Counseling (New York: McGraw-Hill Book Company, 1963), pp. 48-50.

choices for her people is as acute in Bangladesh as it is in other countries of the world, specially in the developing countries. However, the steps adopted here to meet this felt need are less adequate and far from being organized. Concerted efforts should be made by the educational planners, social workers, and psychologists to tackle problems resulting from vocational maladjustments or immaturity in vocational development among the youths of Bangladesh. Moreover, the rapid change in the social and economic fields in the past quarter of a century which has resulted in a complexity in the environment and an awareness in the alarming rise of juvenile delinquency among its youths, has given rise to the awareness of introducing guidance in today's schools and colleges. Besides, the amazing development of the pure and applied sciences and the mechanization of industry in today's world has forced its segments to minute vocational specializations and an unlimited number of vocational choices. Moreover, the waves of urbanization in the specific pyramidal economic structure which have led to the thickness of population in certain areas and the resultant socio-logical problems have affected all age-levels of people, specially the youth.

In absence of reports from any National Committee on Youth Employment in Bangladesh, exact data regarding the percentage of high school drop-outs or uneducated, unskilled and unemployed youths is not easily available. The frightening consequences of wastage of manpower through maldistribution of workers in the job market, can easily be conceived. The situations where the jobs do not match with the workers are expected to result in creating frustration and resentment among the young people of Bangladesh. It is obvious that the right choice of jobs may save the nation from wastage of manpower. Though the young job seeker may not be aware of this truth, his choice may have an impact on the society by way of human welfare. For, thousands of choices may result in either strength or weakness in certain areas where maldistribution of manpower will yield huge national loss.

Another note of warning can be taken into consideration in view of the imminent problem of over-population in Bangladesh. The developing countries of Asia, Africa, and Latin America started witnessing the disequilibrium in the vital rates after World War II. The introduction of medical services, improvements in public health and nutrition and general education caused

a sharp decline in death rates. However, fertility has maintained a high level and this resulted in a high average annual rate of growth of 2.3 per cent in Asia, 2.6 percent in Africa and 2.9 percent in Latin America. Excluding Japan, China and U.S.S.R., the population of these three continents accounts for nearly 55 percent of the world today; and the high growth rate in these continents leads to an explosive population situation.<sup>1</sup> In this context it may be stated that there will be a larger number of high school drop-outs or uneducated, unskilled and unemployed youths in the years to come. Unless the educational planners and vocational counsellors chalk out plans for utilizing the manpower, a huge wastage of national economy will follow and result in creating further social problems for tomorrow's Bangladesh. The technological changes in recent years have, rather suddenly, cast a dramatic challenge to the political, economic, and social scenes in the educational institutions of Bangladesh. Though it is not easy to comprehend the full scope and strength of this challenge for the coming years, its dimensions are clear enough to

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<sup>1</sup> Aminullah Mia, Unpublished thesis proposal for Ph.D. degree in the Manchester University, 1976.



call for a drastic change and a massive response on the part of modern education. It is with this realisation that the Education Commission's Report of 1974 has tried to focus the importance of vocationally-biased education instead of a subject-oriented system for the young people of the newly emerged nation of Bangladesh.<sup>1</sup> A job is now vital to the young person, as vital is the fact that this job provides an outlet for an individual's abilities and that it can be compatible with his considered aspirations. These conditions are not met very frequently in the newly opened vocational spheres facing the group of young men and women with limited education and skills. Hence, job selection in the technological work - world has proved to be a desparate affair which is very often subject to wildest chance. Often it is equally unrelated to the young job-seeker's aptitudes and abilities. Many young people are unaware of the job opportunities and the job descriptions. Nor can they make their own selection of career when they are forced by circumstances to do so at certain points of their life.

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<sup>1</sup> Government of the People's Republic of Bangladesh, Report of the Commission on National Education, 1974, (Bengali version) pp. 41-48. (New York: Doubleday and Company, 1967), p. 25.

A helpful plan is suggested in the Encyclopaedia of Careers which the young job-seeker should follow as his guide. It reads:

1. Identify several occupations which sound interesting to you.
2. Read the descriptions of these occupations from the encyclopaedia (of careers) to determine the requirements for the occupations.
3. Working with your counsellor, try to determine how closely your abilities match those required in the occupations.
4. Finally, try and determine the extent to which your interest patterns match those of persons who have been successful in the occupations.<sup>1</sup>

The basic necessity of any job seeker is, necessarily, to earn a living. However, if the candidate is in a position to channel his efforts toward a career of his choosing, he will find the responsibility of working much more satisfying. Thus, in selecting a career, the job-seeker should take into careful consideration both his own interests and abilities and the special requirements of the chosen field. A careful preparation helps to ensure that the candidate will present his qualifications in the most advantageous fashion to the widest possible range of potential employers. Besides, a sound preparation is expected to develop self-confidence among the job

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<sup>1</sup>Hopke, W. E., Encyclopaedia of Careers and Vocational Guidance, vol. I. (New York: Doubleday and Company, 1967), p. 26.

seekers.

In Bangladesh the need for offering vocational guidance should not be restricted to men alone. The present day situation calls for entry of women into the job market. A country, in which women constitute about half of its total population, cannot afford to have its manpower go wasted by leaving behind her women as unskilled, uneducated and unemployed group of the society.

There is another important reason why women, along with men, should be given training in jobs both at home and outside. If a woman is trained in any job requiring a particular skill, she will try to bring up the members of her family who will be motivated to add to the family income by using her training and experience. On the other hand, if a woman cannot manage to train the children herself she will, at least, offer scope for her children to be trained under guidance of experts. As opposed to the woman who has not experienced the taste of self-sufficiency or economic emancipation through self-reliance, she will be in a position to open the eyes of other female members of the community regarding this vital social and economic need.

Current emphasis on guidance and testing can be established from the supporting recommendations of the

Commission on National Education which suggests that appropriate tests and evaluation techniques should be used and proper counselling be provided to the students of this country at each of the critical stages in their educational careers.<sup>1</sup> For, in these cases the students are faced with the problems of choosing from among alternative educational possibilities. The issue of selection of career, again, is dependent on such factors as nature and scope of the information available to the students. In order to decide who should receive what type of education so that in future there can be a scope to match the job and the worker, the Commission has stated that:

. . . children leaving school, particularly if their parents are poor, and there is subsequent economic pressure to enter employment quickly, often enter jobs unsuited to their abilities, aptitudes and interests. This leads not only to personal frustration but to lowered efficiency and manpower wastage. One way to avoid this and place young persons in more suitable employment is by the use of the techniques of vocational guidance.<sup>2</sup>

The development of an effective vocational interest inventory for use in the cultural setting of

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<sup>1</sup>Government of Pakistan, Report of the Committee on National Education, (Karachi: Government of Pakistan Press, 1960), p.257.

<sup>2</sup>Ibid., p. 159.

Bangladesh is a challenge to educational and vocational planners. In absence of widely used tools to measure the interests of the students or the new entrants in today's job market, the present study may be conceived as a humble beginning in the attempt to trade on the vast unexplored area of vocational guidance. The inventories like the one undertaken by this researcher, are expected to help counsellors who aim at helping the vocationally and academically undecided young learners and can be of use to personnel workers in selection, placement and counselling of such individuals.

It is, thus, clear from the survey of relevant literature on vocational interests that, in developed countries vocational interest inventories have proved to be essential instruments in selection of jobs. These instruments are also used for facilitating adjustments of employees with their jobs. Furthermore, school psychologists, counsellors and guidance workers make extensive use of these tools in counselling or guidance situations faced by students before they enter any specific job area. Unfortunately, in Bangladesh there has been, rather a meagre attempt to develop any vocational interest inventory. The researcher, in a bid to break the ice, wants to make a modest beginning in the

direction of developing such an inventory. The main purpose of developing such an instrument is not to help people make a choice in their jobs. It is to see whether students of the secondary level at the time of leaving school, have developed any preference for a career as a result of their knowledge and experience with the subjects they have studied. Furthermore, the purpose behind developing this instrument is to find out such patterns of interest among students in the secondary level and help them in selecting courses of studies that will ultimately lead them to such careers as are suitable for their interest-patterns.

### Delimitation of the Study

1. This study is limited to the geographical boundary of Dacca City alone.
2. The study is limited to the Secondary level students.
3. The study is limited to the S.S.C. candidates for the year 1977.
4. The experts included in the study belong to only ten respective occupational areas, namely (i) teaching (T), (ii) medicine (M),

(iii) nursing (N), (iv) social welfare (SW),  
 (v) engineering (E), (vi) business (B),  
 (vii) secretarial science (SS), (viii)  
 accountancy (A), (ix) law (L), and  
 (x) family welfare (FW).

#### Hypotheses for the Study

The present study was done in two phases.

Hypotheses of the study relate to these two phases. The

first phase proposes to test the following hypotheses:

1. That the Vocational Interest Inventory is a valid instrument.
2. That the said instrument is also reliable.
3. That the instrument can be used for both boys and girls.

The second phase of the study attempts to test the following hypotheses:

1. That the instrument constructed in Phase I is valid when administered on a different sample.
2. That the instrument constructed in Phase I is reliable when administered on a different sample.
3. That there is no significant difference

between boys and girls in respect of their vocational preferences.

The second phase of the study also proposes to test the following specific hypotheses:

1. That science students are more likely to differ from the non-science group of students in respect of their vocational preferences.
2. That science students are more likely to express their preference for Medicine as a vocation than the non-science group of students.
3. That science students are more likely to prefer Nursing as a vocation than the non-science students.
4. That science students are more likely to express their preference for Engineering as a vocation than the non-science group of students.
5. That non-science students are more likely to prefer Teaching as a vocation than the Science students.
6. That non-science students are more likely



to prefer Social Welfare as a vocation than the science group of students.

7. That non-science students are more likely to prefer Business as a vocation than the science students.

8. That non-science students are more likely to prefer Secretarial Science as a vocation than the science students.

9. That non-science students are more likely to prefer Accountancy as a vocation than the science students.

10. That non-science students are more likely to prefer Law as a vocation than the science students.

11. That non-science students are more likely to prefer Family Welfare as a vocation than the science students.

On the basis of the background information, this study proposes to test the following hypotheses:

1. That parents' income is likely to influence relative to the occupational preferences made by the students at the S.S.C. level.

2. That parents' educational level is likely to influence satisfaction with his vocation.

to influence the choice of vocations made by the students at the S.S.C. level.

3. That the respondents are likely to be realistic in their vocational preferences.

#### Definition of Terms

Interest - An interest is a persistent tendency to pay attention to and enjoy same activities. It is a subjective-objective attitude, concern or condition involving a percept or an idea in attention. It may be temporary or permanent and may be based on native curiosity conditioned by experience.

Inventory - A detailed questionnaire that provides specific information about a person's likes, dislikes, habits, preferences, and so on. It usually refers to a personality or interest test.

Vocation - The person-centred aspects of work: the psychological conception of work as the behaviour of individual persons.

Vocational Adjustments - The degree of efficiency, relative to his peer group with which a person has utilized his capacities in coping with and completing the vocational, developmental tasks of his life stage, as indicated by his satisfaction with his vocation.

Vocational Behaviour - Any interaction between an individual and his environment which is significantly related to preparation for, participation in, or retirement from work. More particularly, those interactions stimulated by the demands of the vocational developmental tasks.

Vocational Development - The process of growth and learning which subsumes all instances of vocational behaviour. The progressive increase and modification of a person's capacities and dispositions for particular kinds of vocational behaviour and of his repertoire of vocational behaviour. In this sense, vocational development encompasses all aspects of development which can be identified as related to work.

Vocational Life Stage - One of the periods, roughly corresponding to certain age-spaces, into which vocational development is divided. All individual in the life stage meet generally comparable vocational developmental tasks and manifest relatively similar kinds of vocational behaviour.

Guidance - The term guidance is used to designate the process of aiding the individual to choose, prepare for, enter upon, and progress in courses of action pertaining to definite groups of human activities.

Job - A set of activities performed by an individual worker. Several individuals, however, may do the same kind of work and be said to have the same job. A job is, thus, a group of similar positions in one establishment.

Job Analysis - The process of finding out what constitutes a particular job. It is carried out with a variety of different methods, according to the type of job being analyzed.

Job Description - A statement of the significant characteristics of a job and of the worker characteristics necessary to perform the job satisfactorily.

Career - The sequence of occupations, jobs, positions, throughout a person's working life. The structured sequence of events in the life of a person as he progresses in a job or as he changes from one job to another in the occupational structure.

Career Pattern - The sequence of changes in occupational level or field made by an individual during his working life.

Occupation - A category in the social structuring of work activity as seen from sociological or economical point of view. It is that specific activity with a market value which an individual continually pursues for the

purpose of obtaining a steady flow of income. It refers to a group of similar jobs in several establishments.

Aptitude - An aptitude is a condition or set of characteristics regarded as symptomatic of an individual's ability to acquire with training some (usually specified) knowledge, skill or set of responses such as the ability to speak a language, to produce music etc.

Population - The term population may be defined as the entire data from which sample is drawn if all of it were available. In this study the term refers to all individuals who were, are, and will be in the various secondary schools of Dacca City.

Sample - The term sample refers to each of the candidates in the S.S.C. examination for the year 1977 who belonged to the selected schools in Dacca City.

Total Group - It refers to all the individuals (subjects) selected from the various educational institutions for the purpose of the study.

Teaching - The art of giving instructions to students in formal educational organizations. This occupation includes teachers of Secondary and Primary schools, as well as teachers of higher academic institutions.

Medicine - The science and art dealing with the prevention, cure and alleviation of diseases. This occupation includes people such as doctor, medical practitioner, physician, pathologist and physiologist with M.B.B.S. degrees.

Nursing - The art of waiting upon sick people in hospitals or other clinical set up. This occupation includes jobs as certified nurse, maternity nurse, and male/female nurse.

Social Welfare - Social welfare is the organized system of social services designed to aid individuals and groups to attain satisfying standards of life and health. It also refers to personal and social relationships which permit individuals to develop their full capacities and to promote their well-being in harmony with the needs of their families and the community.

Engineering - The profession of one who is skilled in applying scientific laws pertaining to the relationships among matter and energy to develop devices such as engines, machines, tools and structures for utility. This occupation includes jobs such as chief engineer, marine engineer, civil engineer, electrical engineer, and mechanical engineer.

solicitors.

Business - Usually refers to the buying and selling of commodities and services and indicates a profit motive.

Secretarial Science - The nature of work involved in this area is varied and wide. Usually these are either clerical or executive jobs as is done by any legal secretary, medical secretary or secretarial stenographer. The secretary of the board of education evaluates academic records and maintains personnel data on school employees, compiles budget estimates, prepares reports and performs related duties. A secretarial stenographer schedules appointments, gives information to callers, takes dictation, and otherwise relieves officials of clerical work and minor administrative and business detail.

Accountancy - The art of practice of a person who is skilled in keeping and examining books and records which contain data pertaining to financial transactions and similar related information. This occupation includes jobs such as general office accountants, audit accountants, senior accountants, and chartered accountants.

Law - The profession dealing with the study and practice of judicial processes and rules. It includes jobs such as advocates, lawyers, attorneys, barristers and solicitors.

Family Welfare - As the name suggests, the area covers in its wider sense, the effort to help the families in solving their economic difficulties, poor living conditions, ill-health, marital and family conflicts, personality adjustments and disorders, poor parent - child relations, delinquency and adolescent problems, poor upbringing of children and several such problems.

occupational area. The occupational ability - pattern technique takes into account the profile of an individual's test scores which is then compared with the corresponding profile developed for members of different occupations. The occupational area in which the individual shows best intelligence in terms of certain traits are identified. The aim of this test is to match the youth to jobs. The trait-factor theory in differential psychology has proved valuable to vocational guidance in understanding the development of traits and abilities. Genetic psychology, however, was drawn upon to provide information about the roles of heredity and environment in the development of intelligence, aptitudes (general and special), interests and personality.

Super and Crites have made certain suggestions regarding vocational counselling which implied that (a) each individual is endowed with certain abilities,



## CHAPTER II

## REVIEW OF RELATED LITERATURE

In advanced countries like U.S.A. or U.K., research and practice in vocational counselling have made much extensive use of the occupational ability and interest of youth before they enter into any academic or occupational area. The occupational - ability - pattern technique takes into account the profile of an individual's test scores which is then compared with the corresponding profile developed for members of different occupations. The occupational areas in which the individual shows most inclination in terms of certain traits are identified. The aim of this act is to match the youth to jobs. The trait-factor-theory in differential psychology had proved valuable to vocational guidance in understanding the development of traits and abilities. Genetic psychology, however, was drawn upon to provide information about the roles of heredity and environment in the development of intelligence, aptitudes (general and special), interests and personality.

Super and Crites have made certain suggestions regarding vocational counselling which implied that (a) each individual is endowed with certain abilities,

interests, personality traits and other characteristics; and that (b) if he knows them and their potential values it will make him a comparatively happier man, a more effective worker, and a more useful citizen of his country.<sup>1</sup> An individual's education, among other abilities, includes various capacities, such as helping to get a better understanding of his aptitudes for various skills, his adaptability to types of situations, and also his interest in numerous activities in which he may engage himself. Ten propositions forming part of the monograph by Super entitled "A Theory of Vocational Development" also support the same suggestions as above.

While presenting a theory of vocational choice, Holland assumes that, at the time of vocational choice an individual is the product of the interaction of his particular heredity with a variety of cultural and personal forces.<sup>2</sup> These include peers, parents, significant adults, social class and physical environment. Out of this experience, the individual develops a hierarchy of habitual or preferred methods for dealing

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<sup>1</sup> Donald E. Super and John O. Crites, Appraising Vocational Fitness (New York: Harper and Row, 1962), pp. 1-5.

<sup>2</sup> James F. Adams, Counseling and Guidance (New York: The Macmillan Company, 1965), pp. 217-227.

with environmental tasks. From an ecological standpoint, too, these habitual methods are associated with different kinds of physical and social environments, and with differential patterns of abilities. The person making a vocational choice practically "searches" for situations which satisfy his hierarchy of adjustive orientation. These adjustive orientations, corresponding to six occupational environments are labelled as 'motoric', 'intellectual', 'supportive', 'conforming', 'persuasive' and 'aesthetic', methods or orientations. Each orientation represents a somewhat distinctive 'life-style' which is characterized by preferred methods of dealing with daily problems and includes such variables as 'values' and 'interests', preferences for playing various roles and avoiding others, inter-personal skills and other personal factors. In such cases for every person the orientations may be ranked, according to their strengths, in a serial order or hierarchy. The life-style heading the hierarchy then determines the major direction of choice.

(11) Ginzberg and his associates, comprising a team of an economist, a psychiatrist, a sociologist and a psychologist, may be credited with effectively introducing

D. G. Zytowski, *Vocational Behaviour*, (New York: Holt, Rinehart and Winston, 1968), pp. 121-129.

a developmental approach to the study of vocational behaviour.<sup>1</sup> They have summarized their views on occupational choice which contains four elements: (1) Occupational choice is a developmental process which typically takes place over a period of some ten years. (2) The process is largely irreversible, i.e. experience cannot be undone, for it results in investments of time, money, and ego; besides, it produces changes in the individual. (3) The process of occupational choice ends in a compromise between interests, capacities, values and opportunities. Frank Parsons (1909) also described vocational counselling as a process of helping the individual to study both himself and probable occupational opportunities, and to work out a compromise between his abilities, interests and opportunities. This process was labelled by Parsons as "true reasoning". Ginzberg's final theoretical formulation refers to three direct periods of occupational choices, which coincide fairly well with certain ages, e.g., (i) the period of fantasy-choice during latency, (ii) the period of tentative choice during the period of adolescence and (iii) the period of realistic choice

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<sup>1</sup>D. G. Zytowski, Vocational Behaviour, (New York: Holt, Rinehart and Winston, 1968), pp. 121-129.

during the period of early adulthood. The period of tentative choice can be divided into four stages, viz., interest, capacity, value and transition. The period of realistic choice (beginning at about age 17), has been split up into three stages, namely, exploration, crystallization and specification. The occupational choice of an individual is determined largely by fantasy, prior to pubescence. It is then followed by interest, capacity consideration and values. Finally, at the time of entry into the world of work, it is followed by reality considerations; i.e., consideration of an opportunity in relation to abilities, interests and values.

Another important problem faced by to-day's educators including parents and guardians has been mentioned by Roberts.<sup>1</sup> He is more concerned about the large number of youths who leave school before completing the usual courses of studies (tenth or twelfth grade as the case may be). As compared to the smaller schools, the large schools with a variety of course offerings have a higher holding power. As a solution to this serious problem of school drop-out the scope of programmes of

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<sup>1</sup> Roy W. Roberts, Vocational and Practical Arts Education, (New York: Harper and Row, 1965), pp. 27-29.

vocational education can be widened. Robert's suggestion is based on the assumption that youths leave school because of an uninteresting programme of studies and that vocational arts and industrial arts will interest them. In some instances statements have been received by school authorities that youths leave school because they find little or no interest in mental activity, but would likely stay in schools if more manual activities were provided. Thus, a comprehensive programme of education, both general and vocational, has chances of reducing the number of school drop-outs. The programme should be designed for in-school and out-of-school youths and adults including both the talented as well as the disadvantaged students. It can then be hoped that such a programme will enable each student to achieve his maximum knowledge, skills, and patterns of conduct befitting a successful and satisfying life.

Discussions regarding courses of offerings invite some information about the guidance personnel. The task of keeping abreast of changes in guidance and research results form an imposing challenge to guidance personnel. Naturally, with better practices currently evolving from the integration of education, sociology and psychology, it is becoming increasingly necessary for the guidance pract-

itioner to examine and extend his techniques. For, the variables dealt within a guidance situation are varied and myriad, complex and ever-changing. No doubt, the subject matter of guidance is the individual being, a person, possessing all the foibles inherent in being an individual. Kroll has stated that today, more than ever, human experience is essentially a process of choosing and deciding among possible stimuli and courses of action.<sup>1</sup> This raises the issue of self-awareness. With increasing self-awareness, individuals have become more insistent on choosing, even creating, the goals and the means they consider to be of value to themselves and to the society. It is with this aim that individuals endeavour to face situations around them. In order that they can manage the complexities of modern-day environment, it seems essential that individuals acquire the skills for choosing, whether the choice relates to partner, community, family or work; the latter being one of the many significant ways in which individuals interact with their environment. No wonder today's world presents obstacles that serve to hinder individuals from developing and expressing their

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<sup>1</sup>Kroll, Career Development: Guidance and Education, The Personnel and Guidance Journal. Special Issue, vol.53, No.9, May, 1975.

talents in their own unique ways. Here at each stage of life an individual is confronted by societal conditions and problems that create personal dilemmas which affect the person's ability to manage a career. The changing role of work, thoughtful challenges of the traditional work ethics, middle life career changes, and concerted efforts to balance among multiple life roles stand prominent among the factors that serve to influence an individual's life.

Froelich and Hoyt consider interests to be one of the forces that motivate activity.<sup>1</sup> They refer to a tendency of an individual to select one activity or thing in preference to something else. In this connection Jager and Froelich have pointed out that since interest is the tendency to give sustained attention to activity, be absorbed by it and persist in it, it is but natural that an individual will more likely excel in the activity that holds his interest. For, he tends to do the best in the subjects that he likes and, perhaps, in activities in which he can excel. Hence, school grades alone are only one source of clues; total success and failures are to be taken

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<sup>1</sup> Clifford P. Froelich and Kenneth B. Hoyt, Guidance Testing (Chicago: Science Research Associates, 1959), pp. 175-180.



into account while revealing one's interests.

Evans refers to a number of factor-analytical studies of the results of interest inventories which have been made with a view to determining basic interest factors.<sup>1</sup> One such case was that of Thurstone. The first application of his new method of factor analysis was to a list of inter-correlations of interests of eighteen professions supplied by Strong (Thurstone 1931). The result was the extraction of four factors. They were necessary in order to account for the correlations through postulates. These factors were named interest in science, interest in language, interest in people and interest in business.

Another related issue is regarding vocational behaviour of which occasional references have been made in industrial psychology or counselling psychology. Zytowski refers to this concept of vocational behaviour which has important development qualities. The idea of vocational behaviour has gained acceptance in studies on psychology after 1950.<sup>2</sup> Occupational choices are among

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<sup>1</sup>K. M. Evans, Attitudes and Interests in Education (London: Routledge and Kegan Paul, 1965), pp. 92-104.

<sup>2</sup>D. G. Zytowski, Vocational Behavior (New York: Holt, Rinehart and Winston, 1968), pp. 119-122.

some of the aspects of vocational behaviour.

The fact that several inventories of vocational interests used in U.S.A. were constructed in different ways, scored by different methods, and scores on different numbers of scales were reported differently led Nancy Cole and Gary R. Hanson make a comparison among them.<sup>1</sup> These writers compared the various scales on the basis of the internal structure relationships of scales from Strong Vocational Interest Blank, Kuder Occupational Interest Survey, Holland's Vocational Preference Inventory, the Minnesota Vocational Interest Inventory and the new American College Testing Programmes Vocational Interest Profile. The conclusions arrived at showed that the configurations of scales for all the inventories were found to be similar and all of them conferred to the circular configurations of interests proposed by Roe and Holland. This common configuration of vocational interests was used by research results about the comparability of interest scores obtained from various instruments. This fact was accepted as the basis for any counsellor's interpretation.

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<sup>1</sup>Nancy S. Cole and Gary R. Hanson, "An Analysis of the Structure of Vocational Interests", Journal of Counseling Psychology, vol. 18, No.5, 1971, pp. 193-199.

Counseling Psychology, vol.18, No.6, Nov. 1971, pp.503-508.

Peggy Hawley made an enquiry as to whether men's perception of the image of women affect the career choice by women.<sup>1</sup> The enquiry provides a strong positive answer to two questions as to (a) whether there is any relationship between women's career choice and their perceptions of significant men's views of the feminine ideal and (b) whether there is a relationship between the marital status of these women and their perceptions of male views. The findings of the study indicate at least two perceived models of femininity, one which could be labelled "dichotomous" and the other as "androgynous". In the first model, behaviour is viewed as appropriately sex-based, such as women are intuitive while men are analytical. In the androgynous model, however, the behaviour is seen as humanistic with no sex referent deemed necessary in the circumstances specified. Whether these perceptions are accurate or not, they, at least, seem to have an effect upon career behaviour.

Ansell and Hansen have made a study regarding the patterns in vocational development of urban youth.<sup>2</sup> In

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<sup>1</sup> Peggy Hawley, "What Women Think Men Think: Does it Affect Career Choice?", Journal of Counseling Psychology, vol. 18, No.3, 1971, pp.193-199.

<sup>2</sup> Edgar M. Ansell and James C. Hansen, "Patterns in Vocational Development of Urban Youth", Journal of Counseling Psychology, vol.18, No.6, Nov. 1971, pp.505-508.

this study the vocational maturity of lower and middle class adolescent boys was made. The subjects were 375 students in grades 8 through 12. Their mean scores show that the lower-class adolescents were slower in developing vocational maturity than the middle-class students. The writers hold that research have not been focussed directly on career development among subjects belonging to lower socio-economic level.

This study, aimed to investigate the rates and levels of vocational maturity in lower-and-middle-class adolescent boys. The results of this study show that disadvantaged high school students are slower than their middle-class counterparts so far as the maturity in selection of vocations is concerned. It is held that vocational maturity usually increases with age; but it is observed that the level is slightly lower for disadvantaged students.

An investigation of the rate and degree of vocational interest maturity of adolescent males was made by Miller.<sup>1</sup> He took boys ranging from 13 to 18 years as his samples. It was hypothesized that significant differ-

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<sup>1</sup>J. Miller, "An Investigation of the Rate and Degree of Vocational Interest Maturity," Dissertation Abstract, I. E.R., vol. 25, No.10, 1965, pp.5744-45.

ences exist between the ages 13 and 18 in that, during this time an individual's vocational preferences are more specific, more realistic and that vocational interest behaviour matures as the individual grows older. According to the writer, a scoring key can be developed from a comparison of measured interests with chronological age, and norms can also be derived for each age level.

The writer, with certain limitations, came to the following conclusions:

1. The major hypothesis of this study was confirmed since significant differences existed in vocational interest scores of 13 and 18 year old boys.
2. Between ages 13 and 18, boys become vocationally more mature in terms of measured interests. Degree of interest maturity showed positive gains each year, but not at the same rate. Between ages 13 to 14, and 17 to 18, the greatest increase in vocational interest maturity took place.
3. Areas of vocational choice, such as, Business Contact and Mechanical are related to vocational interest maturity. Conversely, vocational areas such as Scientific-Technical are related to immaturity.
4. A characteristic of increased interest maturity is a decided increase in "like" items.
5. The "percentage of difference" method was the most economical in time and labor and the most efficient in measuring vocational interest.

A comparison between influences of occupational preferences among black youth was made by Pallone and his

It was observed that as back as in 1970 there had been

team-mates. This study made an assessment of relative frequencies with which each of the nine specific "Key-figures" was self-reported by 161 black and 218 white adolescents from working class families who were supposed to have exercised a principal influence over them in their selection of occupations in which they aspired to enter. In an order of descending frequency, black males cited as "Key-figures" persons holding the preferred occupation, parent, teacher, peer or sister or brother, relative not of the immediate family or counsellor, and neighbour; black females, however, cited, in order of descending frequencies, mother, persons in preferred occupation, peer, brother or sister, relative not of the immediate family, teacher, father, counsellor, and neighbour. Rank-order coefficients reveal the greatest similarity in key figures influence between black and white males ( $r^s = .82$ ), the least similarity between male and female white ( $r^s = .48$ ), the greater similarity between male and female blacks ( $r^s = .68$ ) than black and white females ( $r^s = .59$ ).

A study was made by Ledbetter regarding current attitudes held in U.S.A. by selected top corporate management as to the role of women who hold executive posts.

It was observed that as back as in 1970 there had been

*Robert M. Ledbetter, "Current Attitudes Held by Women as Executives", Dissertation Abstracts, IBB, vol. 37, No. 5, Nov. 1970, pp. 2961-8.*

an increasing proportion of women entering the labour force, where nearly half of the females aged fourteen to sixty-five years were involved in some type of gainful employment. However, most of these women were holding routine menial, low-paying and low-status jobs. Relatively few women were, therefore, found in executive or managerial posts; that is, posts which were considered to be almost under masculine domain. The writer hypothesized that no change could be found in the attitude of the top corporate executives regarding the role of women in 1970 when compared to the results of 1964 study. It was further hypothesized that there would be no change in the number of females holding top executive positions as determined by the samples of the study as compared to those of 1964. Ledbetter found, on closer analysis of the results, that the study indicated continued prejudice toward women by top management, although there had been a slight tendency toward greater acceptance of women holding top positions. Moreover, though statistically there had been a significant gain in the number of women found in policy making positions in the top corporations, numerically their number remained low when it was compared with men in their positions.<sup>1</sup>

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<sup>1</sup> Roger B. Ledbetter, "Current Attitudes Held by Selected Top Corporate Management Regarding the Role of Women as Executives", Dissertation Abstract, IER, vol. 37, No. 5, Nov. 1970, pp. 2961-B.

Peters made a study regarding job satisfaction or absence of it among employed women as far back as in 1970.<sup>1</sup> He wanted to shed light on the constituents of happiness and unhappiness among a group of employed women and to compare the findings with the Herzberg satisfiers and dissatisfiers according to his theory of unidimensionality.

In his study it was observed that as constituents of job happiness, both male and female groups cited happiness in the total life situation (such as happy marriages, good friends), novelty and variety of experiences on the job, recognition and experienced motivation; whereas, more highly frequent female experiences were self-confidence, effective peer relationships, cognitive and professional growth, and feelings of respect and importance. As regards the constituents of job unhappiness, both sex groups referred to desire to leave the job, lack of meaning in the work, feelings of confinement, and lack of motivation. More often female experiences in job unhappiness periods were negative feelings toward the boss, interpersonal animosity in the job situation, lack of growth, and negative effects on the self and family. Thus,

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<sup>1</sup>Jeane Reeves Peters, "Constituents of Experience in Job Happiness and Unhappiness in Employed Women". Dissertation Abstract, I.E.R., Vol.31, No.3, Sept.1970, pp. 1580-81-B.



In general, the constituents of job happiness and unhappiness for the men appeared to be more related to tasks, or functional aspects of the job, while the female constituents were more related to the total job situation, i.e., supervisors, fellow workers, and being involved in all phases of the work.

Campbell made a study on the differential responses of male and female law students as was available through the Strong-Campbell Interest Inventory (SCII).<sup>1</sup> He analyzed the differential responses to Female and Male Lawyer scale items on the SCII for 67 male and 35 female law students. The issue was to find out data regarding the question of separate sex norms.

The analysis revealed that though there was systematic difference in responses between the sexes the pattern of differential response items unique to one or other of the scales indicated that this difference would not affect scores if these scores were combined. Besides, the nature of the relation between the occupational groups and between the occupational and in-general groups on these items suggested that combined scales were feasible.

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<sup>1</sup>Jean Campbell, "Differential Responses for Female and Male Law Students on the Strong-Campbell Interest Inventory", Journal of Counseling Psychology, vol.23, No.2, 1976, pp. 130-135.

As there was an implicit bias in maintaining separate sex scales, the author suggested that the SCII should be considered as an intermediate step toward having a combined instrument.

Thomas studied responses of 118 low socio-economic status black and white male high school students in an attempt to clarify certain definitional problems related to the assessment of occupational plans of low SES youth with reference to vocational choice realism.<sup>1</sup> The demonstration showed that when given the opportunity, the students were able to distinguish between their aspirations and expectations. Moreover, low SES blacks were significantly more unrealistic than the whites in their occupational expectations and both the blacks and the whites aspired to, preferred and expected to enter occupations at similar SES levels. The writer stressed the importance of distinguishing among different levels of vocational plans on a fantasy-reality continuum in respect of low SES subjects.

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Career developmental patterns of college women

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<sup>1</sup>Mark J. Thomas, "Realism and Socio-Economic Status of Occupational Plans of Low SES Black and White Male Adolescents", Journal of Counseling Psychology, vol.23, No.1, 1976, pp. 46-49.

Journal of Counseling Psychology, vol.19, No.3, Sept. 1972, pp. 404-410.

were studied by Wolfson who included in the study 306 college students in their mid-thirties.<sup>1</sup> It was a follow-up study where these students were assigned, after 25 years, to five vocational pattern groups on the basis of their work histories. Among the 29 characteristics that were analyzed statistically, 15 significantly discriminated among the five groups. Though a woman's career pattern could not be predicted from data obtained at the time of her entry into college, it could be predicted five years later from other known data. However, the most significant data were related to marital situation and education.

A question was raised by Johansson and Harmon on the SVIB regarding its form in the caption "Strong Vocational Interest Blank: "One Form or Two?"<sup>2</sup>. The writer held the view that occupational scales which appeared on both forms were likely to promote the idea that men and women in the same occupation do actually

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<sup>1</sup>Karen and P. Wolfson, "Career Development Pattern of College Women", Journal of Counseling Psychology, vol. 23, No.2, 1976, pp. 119-125.

<sup>2</sup>C. B. Johansson and L. W. Harmon, "Strong Vocational Interest Blanks: "One Form or Two?", Journal of Counseling Psychology, vol.19, No.5, Sept. 1972, pp. 404-410.

differ in interests and perform different tasks in their occupations. These writers made a study of problems in the use of separate forms of SVIB for males and females. They computed the response percentage differences between males and females in 14 occupations having 229 items which were common to the two forms of the inventory. Moreover, their effort was the reaction of the recent attack on SVIB by the women's liberation groups leading to an investigation by the President's Advisory Council on the status of women in U.S.A. The group of women raised queries as to whether two forms of SVIB would promote discrimination in vocational counselling.

The observation of the study was that although substantial differences appeared in the responses of males and females to the same item, the main consideration was whether or not these differentiating items incorporated into the Occupational Structure. The items that showed large sex differences were examined in this study in order to determine if they appeared on either male or female occupational scale.

The writers concluded that the best way to avoid sexual bias in the SVIB was to design one form of the inventory that controls sex differences. Some inter-

mediate steps had been considered necessary to counteract the existence of occupational sex differences in the real world. It was suggested by these writers that as an initial step male and female scales could be developed that would be based on totally common item pool and that another scale for each occupation with both male and female norms should also be developed. These steps would, then, facilitate the study of sexual differences in vocational interests.

Rayman made a study of sex bias in interest measurement.<sup>1</sup> Previous studies in this area have suggested that item sex bias is a necessary concomitant of inventory validity. Rayman's study provides empirical evidence in support of the hypothesis that it is possible to construct a valid interest inventory that will primarily consist of items which have been pretested for sex balance.

In this study potentially sex-balanced items were developed and pretested. Those items from the pretest that were sex-balanced and that showed "good" item characteristics were included on the sex-balanced Unisex

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<sup>1</sup> Jack R. Rayman, "Sex and the Single Interest Inventory: The Empirical Validation of Sex-Balanced Interest Inventory Items", Journal of Counseling Psychology, vol. 23, No. 3, 1976, pp. 239-246.

Interest Inventory (Uni-II). In the process of work, both the Uni-II and the American College Testing Interest Inventory (ACT - IV) were administered to a national sample of 1,902 students. Comparisons were made between two inventories on item and scale sex balance. Here the items on the Uni-II were found to be more sex-balanced than those on the ACT - IV. In the same way, the Uni-II exhibited superior scale sex balance. The concurrent and construct validity of the Uni-II were supported by item homogeneity, correlational analysis, and spatial configural analysis.

In this connection, Cole and Hanson referred to a concern relating to women which is applicable to America to-day, but which will be applicable to any nation fighting for women's liberation.<sup>1</sup> It states:

Because of the power that derives from a person's occupation in this society, both through money and status, one focal area of the women's movement has been the career opportunities of women. One specific concern in this area is the effect that interest inventories have on women's career choices and, in particular, the possibility of a negative limiting effect.

Strong Vocational Interest Blank (SVIB) was for many years the leading vocational interest inventory, a

<sup>1</sup> Cole N.S. and Hanson, G.R. "Impact of Interest Inventories on Career choice". Paper presented at the National Institute of Education Workshop on Sex Bias and Sex Fairness in Career Interest Inventories, Washington D.C., March, 1974. pp. 239-246.

The writer is of the opinion that though an inventory constructed solely of sex-balanced items would logically seem to exhibit somewhat lower predictive validity, it would be much more sex fair than existing instruments. In line with popular view it is equally important to realise that interest inventories stimulate career exploration and help users to think about alternative career options. There is no doubt that one of the goals of interest measurement should be to give people, regardless of sex, the opportunity of career options. The sex-restrictiveness of the interest inventories in the past has raised questions about their present value. Preliminary research results about them performed by Hanson and Rayman suggest that sex-balance can be achieved with little or no loss of predictive validity.

Two interest inventories which are considered to be extremely valuable as appraisal instruments are the Strong Vocational Interest Blank and the Kuder Preference Records: Vocational.

Strong Vocational Interest Blank (SVIB) was for many years the leading vocational interest inventory, a position it now shares with the Kuder records. The purpose of the SVIB is not to test interest in vocations, but to

discuss the extent to which a person's interests agree with those of persons in various occupational groups. The SVIB is an example of the methodology of the empirical direct approach in which the author stated that the interests of occupational groups do not result from people having experience in that occupation. Rather, these interests are present to a large degree before the individuals enter into different occupations. The occupational differences in patterns of interest were the basic discoveries made by Strong. Subsequently those discoveries made possible later studies of the nature and role of vocational interests. The author experimented with the vocational interest inventory technique and was successful in establishing the fact that the inventoried interests of men who were engaged in different occupations differed significantly from those of men-in-general. The SVIB is, thus, one of the most thoroughly studied and frequently researched psychological instruments.

Items: The latest form of the SVIB Form M (men) consists of 400 items grouped into eight parts, five of which include items concerning occupations, school/subjects, amusements, various activities and peculiarities of people. In the other three parts the subject ranks.



given activities in order of preference, and compares his interest in pairs of items.<sup>1</sup> The women's form (Form W), however has 263 items in common with the men's and a total of 400 in the revised form.

Scoring - For the purpose of scoring Strong devised different scoring keys for each occupation. Forty-seven occupational keys are available for the men's form while those for women number twenty-eight. The responses of persons successfully engaged in jobs are compared with those of men or women - in-general with the help of these scoring keys. New occupational keys are added as and when new data are available. Initially Strong based his keys on 150 cases in each occupation in order to gain occupational differentiation; but later on he increased the number of cases between 400 and 500 so that the discriminating powers of the items could be increased.<sup>2</sup>

Sample population - As regards the sample, the reference group in Strong's Blank consisted of a repre-

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<sup>1</sup> Donald E. Super and John O. Crites, Appraising Vocational Fitness. (New York: Harper and Row, 1962), pp. 420-431.

<sup>2</sup> Ibid., p. 426.

representative sample of individuals from professional and business circle of both the sexes.

Validation (Initial) - The SVIB was administered, in its initial stage, to men and women who were occupied in their jobs for at least three years. These men and women were taken to be leaders or experts in their fields.

Reliability - An even-odd reliability coefficient of .88 was reported regarding 36 of the revised men's scales on the records of 285 Stanford Seniors. The reliabilities of men who were originally tested in college have shown good stability as their coefficient averages .87 in a study by Burnam. Even after five years the reliability coefficients averaged .75. It is for this reason that Super concludes that the scales ( of SVIB) are reliable enough for use in individual diagnosis at least after age seventeen.

Validity - There have been considerable correspondences between initial interest scores and choice of occupations. Strong himself summarized eight studies correlating tests of intelligence with SVIB. Though the correlation of SVIB with intelligence was found to be low, it was found to be significant with scientific interests. The correlations of intelligence with linguistic, business

and social welfare interests were low enough to establish a negligible relationship.

Kuder Preference Record - This is a much widely used appraisal instrument in the area of vocational counselling. Though work on the Kuder-Vocational was initiated in early 1939, since then it has been revised and streamlined. The latest development in the Kuder series was the introduction of the Kuder-Occupational in 1956. This inventory closely resembles the Strong Blank in both its purpose and construction.

Kuder Preference Record: Vocational - The main purpose of this instrument was to indicate relative interest in a small number of broad areas instead of specific occupations.

Items - The items are of a forced-choice type which have been arranged in triads. The individual completing the record decides which of these three activities he likes best and marks it as his first choice. He then decides which activity he likes least and marks the item as his third choice. The remaining item, naturally, gets the intermediate position. The triads are so worded as to indicate three or more different types of interests.

There are in all 188 such items which were originally

formulated and grouped on the basis of content validity.

The interest scales under this instrument are: Outdoor, Mechanical, Computational, Scientific, Persuasive, Artistic, Literary, Musical, Social Service, and Clerical.<sup>1</sup>

Reliability - The Kuder Records showed high reliability. The reliabilities averaged around .90. For the Vocational Record Form C, the 'r's (Kuder-Richardson Formula) ranged from .84 to .90 (one hundred girls); from .85 to .93 (one hundred boys); from .87 to .90 (one hundred women); and from .85 to .92 (one hundred men). The stability for a span of about a year seemed to be satisfactory, though stability for longer periods do not indicate such satisfaction.

Validity - Though initially Kuder did not try to establish empirical validity for his instruments, later on he undertook the trouble to do so. Kuder scores have been related to various variables as part of his validation effort. The values of the Record in the areas of business, industry, employment and guidance need thorough study. Kuder scores are significantly related to completion of training and also to grade subjects,

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<sup>1</sup>A. E. Traxler, Techniques of Guidance (New York: Harper and Brothers, 1957), pp. 101-119.

especially, in scientific, mathematical and literary areas.

The Kuder scores were correlated with scores on SVIB in several studies. Peters reports on a study with twenty-four college women where the correlation coefficients ranged from .38 to .52.<sup>1</sup> The relationships between Kuder scientific and several of Strong's interest such as (i) physicians' interests, (ii) computational and office workers' interests, (iii) literary and authors' interests, (iv) social service and (v) lawyers' interests - were found to be significant. Even Cottle's study of 400 males generally supports these findings.<sup>2</sup>

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<sup>1</sup>Donald E. Super and John O. Crites, "Appraising Vocational Fitness", (New York: Harper and Row, 1962), pp. 461-473.

<sup>2</sup>Ibid., p. 473.

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### CHAPTER III

#### METHODS OF STUDY

The basic idea behind developing an interest inventory is to obtain a reliable picture of a person's interest pattern by asking him to express his likes and dislikes of a large number of diverse activities. Depending on the nature and style of the instrument, an individual's expression of indifference to any group of activities can also be known from such an interest inventory. The researcher has adopted a questionnaire method for designing the interest inventory in order to study the preferences of boys and girls in Dacca City who were candidates of the S.S.C. Examination for the year 1977.

#### Construction of Items

For the purpose of this study people from various occupational groups were interviewed. The interviewees were asked about the nature of their work, their preferences for various occupations and also about their impressions regarding the image in which different occupations were held in society. People who had been engaged in their jobs for at least three years and who expressed satisfaction in their jobs were considered to

TABLE 3 TEN MOST PREFERRED OCCUPATIONS ACCORDING TO STUDIES		
1.	Engineering	12
2.	Business	12
3.	Secretarial Science	10
4.	Accountancy	10
5.	Law	10
6.	Family Welfare	8

The information supplied in Table 1 indicates the most preferred occupational areas. The information supplied in Table 1 indicates the most preferred occupational areas.

A list of 20 occupational areas was prepared and copies of this were distributed to 50 experts. A sample of the list of occupational areas is given in Appendix C. The experts were drawn from different occupational or professional fields.

Each one of the above 50 experts who was given the list of twenty occupational areas was requested to rank the areas in order of priority. Before doing this the experts were briefed regarding the aims and objectives for developing the Interest Inventory designed by the researcher. An analysis of the responses of the experts was made and ten most preferred areas, arranged in a rank order, were retained for inclusion in the Inventory. The various occupational areas covered in the questionnaire are reported in Table 1.

TABLE 1

TEN MOST PREFERRED OCCUPATIONS ACCORDING TO EXPERTS

Sl. No.	Description of Areas	Reactions in favour	Percentage of Response
1.	Teaching	30	60
2.	Medicine	16	32
3.	Nursing	10	20
4.	Social Welfare	8	16
5.	Engineering	6	12
6.	Business	6	12
7.	Secretarial Science	5	10
8.	Accountancy	5	10
9.	Law	5	10
10.	Family Welfare	4	8

The information supplied in Table 1 indicates that in the opinion of the experts, teaching was the most preferred occupational area which was chosen by 60 per cent of them while the area of family welfare was the least preferred area which was liked by only 8 per cent.

Thus the top ten preferred occupational areas, which were retained, served as part of the interest inventory with the total number of 300 items in the questionnaire. The prevalent inventories were also consulted in order to get an idea about the types of items usually incorporated in different areas of interest. The above two efforts and a priori reasoning of the researcher were the main guiding factors in constructing the items which were of forced-choice type. The items were so worded as to indicate vocations with which the students might not be familiar but which involved activities of the type for which they might have likes or dislikes.

Thirty items were constructed for each of the ten most preferred occupational areas. The items were made in the form of statements and were expressive of activities related to each of the ten occupational areas. The statements also included descriptions of courses of study offered at educational institutions leading to different



specialized fields.

The respondents were instructed to indicate their likes, dislikes or indifferences to the descriptions stated in the items of the questionnaire. Care was taken to keep the language simple and explicit and at the same time to make the statements brief and precise. Moreover, attempts were made to have the items within the level of understanding of the respondents. An English rendering of the Bengali questionnaire is attached to the Appendix (Appendix B) along with the Bengali one (Appendix A).

#### Description of the Inventory

The interest inventory, as designed, followed a questionnaire method. The items in the questionnaire were arranged in a sequence in which one set of ten statements describing ten different occupations were followed by another set of ten items. In all there were thirty sets of such statements. Each set contained ten items each of which described one occupational area. For convenience of identifying the areas and ease of scoring, the serial numbers of items were so coded as to indicate specific occupational areas. For example, serial numbers ending with 1 (one) represented the area of teaching. Table 2 includes information about the sequence of items in

respective occupational areas and their coded serial numbers.

TABLE 2

ORDER OF PREFERENCE OF OCCUPATIONAL AREAS AND SERIAL NUMBER OF ITEMS

Order of Preference	Occupational Areas	Serial Number of items	Total No. of Items
First	Teaching (T)	1,11,21 ... 291	30
Second	Medicine (M)	2,12,22 ... 292	30
Third	Nursing (N)	3,13,23 ... 293	30
Fourth	Social Welfare (SW)	4,14,24 ... 294	30
Fifth	Engineering (E)	5,15,25 ... 295	30
Sixth	Business (B)	6,16,26 ... 296	30
Seventh	Secretarial Science (SS)	7,17,27 ... 297	30
Eighth	Accountancy (A)	8,18,28 ... 298	30
Ninth	Law (L)	9,19,29 ... 299	30
Tenth	Family Welfare (FW)	10,20,30 ... 300	30

The information given in Table 2 indicates that the items in the area of Teaching ended with number 1 while those in the area of Medicine, Nursing, Social Welfare, Engineering, Business, Secretarial Science, Accountancy, Law and Family Welfare ended with the coded

numbers 2, 3, 4, 5, 6, 7, 8, 9 and 0 respectively.

### Selection of Items

#### Criteria of Acceptance: Item Analysis

The discriminative ability of an item was considered an important criterion for acceptance of an item for its inclusion in the questionnaire. An item analysis was made of all the responses in each questionnaire to determine such discriminability. In this study this discriminative ability of an item was determined by two statistical techniques, namely (a) Chi-square and (b) DP (Discriminative Power).

#### Item Analysis by Chi-square

The Chi-squares were computed for each of the 300 items and are shown in Table 3 and Table 4 in Chapter IV. A  $\chi^2$  to be significant at .05 level with 2 degrees of freedom shall have to be equal to or greater than 5.99. That is, items having obtained  $\chi^2$  - values of 5.99 or more shall be retained for inclusion in the questionnaire. However, this measure alone is not sufficient to determine the discriminative power of the items. It may be seen from Tables 3 and 4 that an unusual piling up of scores in one category will make the  $\chi^2$  significant. This does

decided that items having DP of 1.50 or more would be

not necessarily indicate that such items could discriminate between the high and low scorers. Hence, the items were also analyzed by the DP technique.

#### Item Analysis by DP

In an effort to separate the items having high discriminative power from items having low DP's, an item analysis was made of each item by the DP technique. This item analysis was made to obtain an internally consistent scale with the help of obtained DP. For this study the Discriminative Power means the measurement of the ability of any item to separate the "highs" from the "lows".

In calculating the DP of the scores, the total weights of items for each response were summed up and were placed in an order from the lowest to the highest score. The ranges above the upper quartile and those below the lower quartile were then compared. The purpose of this comparison was to see whether any item discriminated significantly 25 per cent of the high and low scoring respondents. A computing technique was then constructed for each item. An example of the use of this technique is given in Appendix D. The DP's of all 300 items were computed by the above technique and the results have been shown in Table 3 and Table 4 of Chapter IV. It was arbitrarily decided that items having DP of 1.50 or more would be

retained for their inclusion in the instrument.

of the respondents. The primary sampling unit in this

#### Description of the Criterion Group

The criterion group consisted of 100 experts chosen at random from various occupational areas or professional fields, such as, teaching, medicine, nursing, social welfare, engineering, business, secretarial science, accountancy, law and family welfare. These experts are different from the 50 experts drawn at random and chosen for their opinion regarding selection of items of the questionnaire. The experts who participated in this study were holding their jobs for three or more years in their own occupations and expressed satisfaction with their present job. These experts responded to the questionnaire consisting of 100 selected items. This group was used as a criterion group for the purpose of validating the instrument and also determining its reliability.

#### Sampling Technique

The present study was conducted in two phases. The purpose of Phase I was to construct an inventory while the aim of Phase II was to test this inventory on a sample other than those selected in Phase I. In both the phases a two-stage sampling technique was used for the selection

of the respondents. The primary sampling unit in this study consisted of all schools of Dacca City and the secondary unit comprised the students from those schools.

In the first phase, two schools for boys, namely, the West End Boys' High School and the Nabakumar Boys High School and also two school for girls, namely, the Agrani Balika Bidyalaya and the Azimpur Girls High School were selected at random. One hundred boys and one hundred girls were drawn at random from these two categories of schools.

In the second phase, six schools were selected at random. They are: (i) the Government Laboratory School, (ii) the Segun Bagicha High School, (iii) the Naya Paltan High School, (iv) the Central Government Girls' High School, (v) the Siddheswari Girls' High School and (vi) the Dhanmandi Government Girls' High School. Fifty students were drawn at random from each of the above schools.

Though effort was made to select equal number of boys and girls from the science and non-science groups, it could not be done due to practical difficulties. This stratification of the sample was, however, necessitated to make the sample representative and also to test the hypotheses 1, 2 and 3 of the present study (Chapter I).

### Procedure of Administering the Questionnaire

Having completed the selection of samples, the next step was to administer the questionnaire to the students. The respondents were given the questionnaire and were requested to read the instructions given on the cover page where two illustrations were supplied regarding the mode of responses to the items. The researcher, with the assistance of the teachers-in-charge, helped the respondents when they were faced with any difficulty in answering the items. These teachers were earlier briefed regarding the process and purpose of administering the questionnaire.

### Instructions

On the cover page instructions were given to the respondents regarding their mode of reactions to the questionnaire. The instructions were very simple. There was no time limit for answering the items in the questionnaire. The respondents were asked to indicate their preferences by checking one of the three choices given against each of the items. They were asked to cross out 'প' if they liked, 'অ' if they disliked and 'ন' if they were indifferent to the activities expressed by the

items. Thus, each item had to be responded on a three-point scale.

Illustrations of Responses to Items of the Questionnaire

The instructions with two illustrations on the cover page were meant to guide the respondents with the procedure for answering the questionnaire. The cover page also included space for collecting background information about the respondents such as (a) parents' occupation, (b) parents' income (c) parents' educational level, (d) number of children in the family, and (e) position of the respondent among the siblings (in the case of families having more than one child). It also included questions designed to elicit information about choice of elective subjects and occupational preferences.

There was no right or wrong answer to the items to be responded. Hence no strict vigilance was necessary. Nor was there any time-limit for answering the items. The respondents were, however, requested to answer each item of the questionnaire.

Though there was no time limit for answering the questionnaire, approximately 30 to 50 minutes were set aside for the purpose. As a matter of doing justice to

than their scores in other areas.



the respondents and avoiding any disruption of the normal routine of the schools involved, the questionnaires were distributed before recess hour. This arrangement saved the students who were slow in completing the questionnaires from any discontinuity of daily work or any embarrassment which might result from being late in answering the questionnaires.

#### Scoring Key for the Questionnaire

The responses, of both the experts and the students, to the items of the questionnaire, were measured on a three-point scale. The reactions of like, indifferent and dislike were given weights of 3, 2 and 1 respectively. While computing the total scores of any respondent, the weighted scores of each item in each occupational area were summed up.

#### Measures of Validity

The most important step in construction of an inventory is to determine its validity. The following criteria were adopted for the purpose of testing validity of the instrument:

- (a) Scores of the experts in the areas of their special interest will be significantly higher than their scores in other areas.

(b) Of the 200 respondents (100 boys and 100 girls) in the first phase and 300 respondents (150 boys and 150 girls) in the second phase, high-scorers in a specific area of interest will tend to score low in other areas. For this purpose, 10 per cent of the high-scorers (scoring 20 or above) were selected from each of the ten occupational areas. Scores of these respondents in other areas were noted.

A comparison was then made between the means of scores obtained by high-scorers in a specific area of interest with the means of scores obtained by the same individuals in other areas. The following hypotheses were tested for determining the validity of each sub-test in the Instruments:

- (a) That the population means of different areas of interest corresponding to their sample means were equal.
- (b) That the means of the scores obtained by the high scorers in a specific area of interest were equal to the means of scores obtained by the same individuals in other areas.

An Analysis of Variance technique was used to test  
 R. J. Winer, *Statistical Principles in Experimental Design* (New York: McGraw-Hill, 1962), pp. 77-84.

not influence the occupational choice of hypothesis (a) while Multiple Means Comparison technique (Studentized Range Statistic)<sup>1</sup> was used to test hypothesis(b).

### Testing Other Hypotheses

The following hypotheses were also tested in the present study:

- i. That the means of scores of boys and those of girls were equal (Phase I). This hypothesis was tested by the technique of Simple Analysis of Variance.
- ii. That the means of scores of boys and those of girls and also the means of scores of science group and those of non-science group were equal (Phase II). This hypothesis was tested by the technique of a Two-way Analysis of Variance.
- iii. That the mean scores of science students and those of non-science students were equal in respect of their vocational preferences (hypotheses numbering 1 to 11 in Chapter I, pp. 30-31). These hypotheses were tested by the t-test technique.
- iv. That parents' income or educational level did

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<sup>1</sup>B. J. Winer, Statistical Principles in Experimental Design (New York: McGraw-Hill, 1962), pp. 77-84.

not influence the occupational choice of their sons or daughters (hypotheses numbers 1 and 2 in Chapter I, p. 31). These hypotheses were tested by the Chi-square technique.

v. That the respondents were likely to be unrealistic in their vocational preferences (hypothesis number 3 in Chapter I, p. 32). This hypothesis was tested by the Chi-square technique.

#### Fulfillment of Conditions for Using F and t-tests.

It may, however, be noted that the F-values and the t-values could only be relied upon if it could be demonstrated that the sample selected were random samples from a normally distributed and equally variable population.

Normality of the distribution was satisfied by the largeness of the sample. It was found that with a large enough sample selected at random scores would tend to remain normally distributed. Besides, the F-test being insensitive to the form of distribution of criterion area, it is not worthwhile to apply any

statistical test to the data to detect normality.

The assumption of homogeneity of variance is a difficult one; but in educational and psychological experiments this assumption is practically never strictly satisfied. In such experiments the investigators become worried only when the heterogeneity of variances tends to be quite marked. In this study, though no test was made to see whether the variances were homogeneous, a careful look at the variances of different areas shows that they are not markedly variable (Tables 6, 9 and 12).

It was, therefore, assumed that the conditions for the F- and t-tests were satisfied to a great extent.

#### Measures of Reliability

After having tested the validity of the instrument, an effort was made to determine the extent of its reliability. The split-half technique was used for the purpose. Each sub-test of the instrument was split into two equivalent halves taking the odd-numbered items in one half and the even-numbered items in the other half. Scores obtained by the sample in these two equivalent halves of each sub-test were correlated by the use of the Product Moment Method. The resulting co-efficients of correlations provide measures of reliability of the Instrument. These

co-efficients were tested for significance at the five per cent level.

#### Treatment of the Background Information.

Background information in respect of certain specific areas, as indicated in the cover pages, were not adequate. However, analyses were made of the background data relating to (a) father's income level, (b) father's educational level and (c) reasons for the choice of elective subjects. Results of these analyses are reported in Chapter IV.

#### Choice of Level of Significance.

The choice of level of significance was an arbitrary and subjective judgement. The level used for testing the hypotheses in this study was at the five per cent as this is one of the most commonly used and suitable value.

Items having Chi-square values of 3.84 or more (11%) significant at the five per cent level) and also having DF values of 1.50 or more were retained for inclusion in the inventory. Tables 3 and 4 report the analysis done on the basis of Chi-square and DF. By applying these two techniques jointly, 100 items - 10 from each occupational area - were retained. The items thus selected are given in Appendix B.

## CHAPTER IV

### PRESENTATION AND ANALYSIS OF DATA

Analyses of data for the present study were made in different phases. The first phase of the analysis of data involved (i) selection of items for the inventory, (ii) determination of sex differences in respect of responses to the items of the inventory and (iii) assessment of validity and reliability of the inventory. The second phase of the study tested the validity and reliability of this Instrument. Certain hypotheses were also tested in this phase.

#### Selection of Items of the Inventory

Discriminability of items was the main criterion in the selection of items of the Inventory. This discriminating ability was tested by the Chi-square and DP techniques. Test scores of 100 boys and 100 girls were subjected to such analyses. Items having Chi-square values of 5.99 or more (i.e., significant at the five per cent level) and also having DP values of 1.50 or more were retained for inclusion in the Inventory. Tables 3 and 4 report item analyses done on the basis of Chi-square and DP.

By applying these two techniques jointly, 100 items - 10 from each occupational area - were retained. The items thus selected are given in Appendix E.

TABLE 3 CONTINUED

TABLE 3

MEDICINE

CHI-<sup>2</sup> AND DP VALUES OF 300 ITEMS (BOYS; N=100)

Items	TEACHING			Chi- <sup>2</sup>	DP
	weight				
	3	2	1		
1	42	31	27	3.62	2.00
11	56	28	16	25.31	1.64
21	56	30	14	26.99	1.56
31	94	3	3	163.79	.36
41	74	20	6	77.44	1.24
51	81	15	4	104.16	.92
61	51	23	26	14.19	2.00
71	66	27	7	54.07	1.28
81	77	19	4	39.27	1.08
91	39	36	25	3.26	2.00
101	61	20	19	34.49	1.76
111	52	38	10	27.47	1.40
121	52	30	18	17.86	1.72
131	62	24	14	38.52	1.56
141	44	26	30	5.37	2.00
151	58	27	15	29.57	1.60
161	62	20	18	37.07	1.72
171	68	10	22	56.30	1.88
181	70	23	7	64.40	1.28
191	95	4	1	171.43	.24
201	53	37	10	28.37	1.40
211	65	32	3	57.80	1.12
221	73	23	4	76.30	1.16
231	92	7	1	155.58	.36
241	75	15	10	78.58	1.40
251	62	23	15	37.98	1.50
261	81	15	4	104.16	.92
271	32	31	37	.62	2.00
281	40	35	25	3.50	2.00
291	37	34	29	.98	2.00



TABLE 3 CONTINUED.

MEDICINE

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
2	57	29	14	28.61	1.56
12	58	27	15	29.57	1.60
22	59	19	22	29.81	1.38
32	56	31	13	28.01	1.52
42	58	22	20	27.47	1.80
52	31	33	36	.38	2.00
62	48	27	25	9.75	2.00
72	42	28	30	3.44	2.00
82	72	24	4	73.35	1.16
92	40	27	33	2.54	2.00
102	71	23	6	68.25	1.24
112	65	29	6	53.11	1.24
122	55	36	9	32.09	1.36
132	57	27	16	27.05	1.64
142	52	38	10	29.02	1.40
152	43	27	30	4.34	2.00
162	60	27	13	34.98	1.52
172	59	27	14	32.21	1.56
182	59	32	9	37.62	1.36
192	40	35	25	3.50	2.00
202	50	37	13	21.16	1.52
212	43	27	30	4.34	2.00
222	36	30	34	.56	2.00
232	79	17	4	96.48	1.00
242	41	26	33	3.38	2.00
252	39	34	27	2.18	2.00
262	65	31	4	56.12	1.16
272	41	29	30	2.66	2.00
282	64	24	12	44.52	1.48
292	34	35	31	.26	2.00

TABLE 3 CONTINUED

NURSING

Items	Weight			Chi <sup>2</sup>	DP
	3	2	1		
3	89	10	1	140.80	.48
13	40	27	33	2.54	2.00
23	68	24	8	57.98	1.32
33	55	29	16	23.68	1.64
43	46	35	19	11.07	1.76
53	71	26	3	71.85	1.12
63	56	16	28	25.31	2.00
73	38	32	30	1.04	2.00
83	42	24	34	4.88	2.00
93	60	31	9	39.30	1.36
103	60	29	11	36.90	1.44
113	82	13	5	107.65	.92
123	63	24	13	41.46	1.52
133	53	31	16	20.80	1.64
143	66	31	3	59.84	1.12
153	57	25	18	25.97	1.72
163	50	28	22	13.05	1.88
173	55	32	13	26.57	1.52
183	38	29	33	1.22	2.00
193	40	27	33	2.54	2.00
203	57	33	10	33.17	1.40
213	33	35	32	.14	2.00
223	38	27	35	1.94	2.00
233	50	30	20	14.01	1.80
243	56	34	10	31.79	1.40
253	75	21	4	82.54	1.16
263	54	34	12	26.50	1.48
273	60	21	19	32.09	1.76
283	71	23	6	68.25	1.24
293	38	27	36	1.94	2.00

TABLE 3 CONTINUED

SOCIAL WELFARE

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
4	37	30	33	5.74	2.00
14	41	27	32	3.02	2.00
24	40	35	25	3.51	2.00
34	41	35	24	4.46	1.96
44	33	39	28	1.82	2.00
54	78	17	5	92.03	1.08
64	59	25	16	30.89	1.64
74	81	17	2	105.73	.84
84	41	36	23	5.19	1.92
94	73	17	10	71.61	1.40
104	59	26	15	31.49	1.60
114	75	20	5	81.58	1.20
124	51	28	21	14.79	1.84
134	88	10	2	135.58	.56
144	45	29	26	6.27	2.00
154	40	37	23	4.93	1.92
164	49	23	28	11.43	2.00
174	82	16	2	109.63	.80
184	61	21	18	34.61	1.72
194	57	25	18	25.97	1.72
204	86	9	5	125.18	.76
214	79	19	2	98.28	.92
224	56	26	18	24.10	1.72
234	40	24	36	4.17	2.00
244	56	37	7	36.65	1.28
254	55	25	20	21.52	1.30
264	81	16	3	104.88	.88
274	52	29	19	17.20	1.76
284	82	16	2	109.63	.80
294	57	20	23	25.37	1.92

TABLE 3 CONTINUED

ENGINEERING

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
5	38	37	25	3.14	2.00
15	40	36	24	4.16	1.96
25	65	30	5	54.55	1.20
35	63	22	15	40.38	1.60
45	92	5	3	155.10	0.44
55	51	38	11	25.01	1.44
65	60	22	18	32.27	1.72
75	68	21	11	55.64	1.44
85	66	15	19	48.31	1.76
95	39	30	31	1.46	2.00
105	64	29	7	49.63	1.28
115	63	23	14	40.86	1.56
125	57	29	14	28.61	1.56
135	53	41	6	35.82	1.24
145	59	31	10	36.29	1.40
155	46	46	8	28.91	1.32
165	32	35	33	.14	2.00
175	55	32	13	26.57	1.52
185	60	25	15	33.53	1.60
195	55	32	13	26.57	1.52
205	61	35	4	48.91	1.16
215	54	42	4	40.92	1.16
225	75	15	10	76.58	1.40
235	39	33	28	1.82	2.00
245	35	38	27	1.94	2.00
255	68	15	17	54.19	1.68
265	57	30	13	29.57	1.52
275	68	28	4	62.78	1.16
285	54	36	10	29.39	1.40
295	33	33	34	.02	2.00

TABLE 3 CONTINUED

BUSINESS

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
6	60	26	14	34.19	1.56
16	58	27	15	29.57	1.60
26	40	32	28	2.24	2.00
36	40	36	24	4.16	1.96
46	55	25	20	21.52	1.80
56	71	21	8	66.45	1.32
66	42	33	25	4.34	2.00
76	41	35	24	4.46	1.96
86	41	31	28	2.78	2.00
96	59	25	16	30.89	1.64
106	54	32	14	24.10	1.56
116	53	35	12	25.37	1.48
126	41	32	27	3.02	2.00
136	60	34	6	43.80	1.24
146	40	29	31	2.06	2.00
156	62	24	14	38.52	1.56
166	37	34	29	.93	2.00
176	60	30	10	38.04	1.40
186	33	42	25	4.34	2.00
196	66	19	15	48.31	1.60
206	37	30	33	.74	2.00
216	38	32	30	1.04	2.00
226	51	39	10	26.69	1.40
236	61	28	11	38.82	1.44
246	63	27	10	43.98	1.40
256	55	30	15	24.52	1.60
266	43	30	27	4.34	2.00
276	63	19	18	39.66	1.72
286	52	30	18	17.86	1.72
296	51	38	11	25.01	1.44

TABLE 3 CONTINUED

SECRETARIAL SCIENCE

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
7	62	28	10	41.88	1.40
17	51	29	20	15.28	1.80
27	63	27	10	43.98	1.40
37	83	5	12	111.85	1.16
47	71	23	6	68.25	1.24
57	58	25	17	28.37	1.68
67	55	26	19	21.88	1.76
77	44	45	11	22.48	1.44
87	41	33	26	3.38	2.00
97	60	23	17	32.57	1.68
107	62	33	5	48.79	1.20
117	65	32	3	57.80	1.12
127	26	37	37	2.42	2.00
137	59	20	21	29.69	1.84
147	55	39	6	37.50	1.24
157	55	24	21	21.28	1.84
167	60	34	6	43.80	1.24
177	52	34	14	21.70	1.56
187	50	32	18	15.46	1.72
197	80	35	25	3.50	2.00
207	55	23	22	21.16	1.88
217	36	36	28	1.28	2.00
227	86	10	4	125.49	.72
237	85	3	12	121.46	1.08
247	80	16	4	100.26	.96
257	73	15	12	71.01	1.48
267	63	32	5	50.59	1.20
277	81	5	14	103.56	1.32
287	57	27	16	27.05	1.64
297	44	30	26	5.37	2.00

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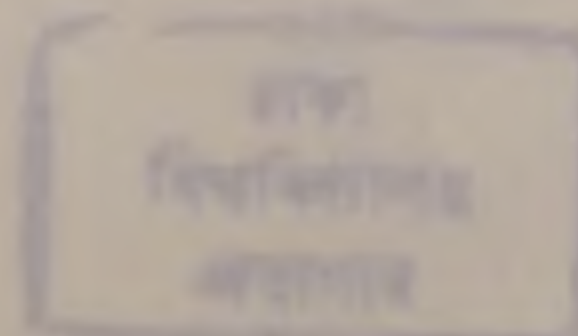


TABLE 3 CONTINUED

ACCOUNTANCY

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
8	58	18	24	27.95	1.96
18	58	25	22	17.56	1.88
28	51	32	17	17.44	1.68
38	40	36	24	4.16	1.96
48	41	30	29	2.66	2.00
58	55	18	27	22.36	2.00
68	58	25	17	28.37	1.68
78	55	26	19	21.88	1.76
88	43	31	26	4.58	2.00
98	52	27	21	16.24	1.84
108	41	34	25	3.86	2.00
118	40	38	22	5.85	1.88
128	40	32	28	2.24	2.00
138	43	31	26	4.58	2.00
148	38	32	30	1.04	2.00
158	40	38	22	5.85	1.88
168	40	32	28	2.24	2.00
178	40	35	25	3.50	2.00
188	55	26	19	21.88	1.76
198	38	27	35	1.94	2.00
208	37	30	33	.74	2.00
218	56	27	17	24.64	1.68
228	68	24	8	57.98	1.32
238	55	28	17	22.96	1.68
248	37	30	33	.74	2.00
258	61	28	11	38.82	1.44
268	60	31	9	39.30	1.36
278	40	26	34	2.96	2.00
288	34	31	35	.26	2.00
298	40	38	22	5.85	1.88

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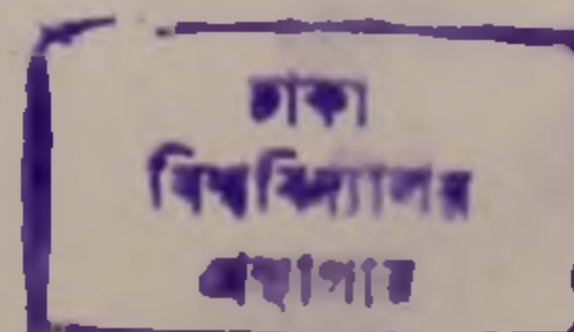


TABLE 3 CONTINUED

LAW

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
9	55	26	19	21.88	1.76
19	39	39	22	5.79	1.88
29	42	25	33	4.34	2.00
39	38	38	24	3.92	1.96
49	68	26	6	60.14	1.24
59	54	28	18	20.74	1.72
69	39	30	31	1.46	2.00
79	58	23	19	27.65	1.76
89	35	38	27	1.94	2.00
99	54	28	18	20.74	1.72
109	37	36	27	1.82	2.00
119	57	26	17	26.45	1.68
129	57	25	18	25.97	1.72
139	72	14	14	67.36	1.56
149	43	25	32	4.95	2.00
159	31	32	37	.62	2.00
169	33	39	28	1.82	2.00
179	63	20	17	39.78	1.68
189	35	26	39	2.66	2.00
199	33	35	32	.14	2.00
209	37	37	26	2.42	2.00
219	44	26	30	5.37	2.00
229	58	23	19	27.65	1.76
239	56	23	21	23.20	1.84
249	32	33	35	.14	2.00
259	41	34	25	2.86	2.00
269	34	40	26	2.96	2.00
279	44	30	26	5.37	2.00
289	38	39	23	4.32	1.92
299	28	39	33	1.82	2.00



TABLE 3 CONTINUED

FAMILY WELFARECHI-<sup>2</sup> AND DP VALUES OF 300 ITEMS (GIRLS; N=100)

Items	Weights			Chi- <sup>2</sup>	DP
	3	2	1		
10	40	36	24	4.16	1.96
20	31	38	31	.98	2.00
30	35	30	35	.50	2.00
40	29	38	33	1.22	2.00
50	42	30	28	3.44	2.00
60	37	26	37	2.42	2.00
70	36	32	32	.32	2.00
80	40	32	28	2.24	2.00
90	40	29	31	2.06	2.00
100	60	22	18	32.27	1.72
110	42	30	28	3.44	2.00
120	40	31	29	2.06	2.00
130	40	29	31	2.06	2.00
140	42	25	33	4.34	2.00
150	38	38	24	3.92	1.96
160	54	26	20	19.78	1.80
170	55	23	22	21.16	1.88
180	42	30	28	3.44	2.00
190	39	28	33	1.82	2.00
200	55	30	15	24.52	1.60
210	40	32	28	2.24	2.00
220	35	26	39	2.66	2.00
230	57	26	17	26.45	1.60
240	55	25	20	21.52	1.80
250	63	23	14	40.06	1.56
260	40	36	24	4.16	1.96
270	64	18	18	42.36	1.72
280	52	29	19	17.20	1.76
290	63	23	14	40.86	1.56
300	40	34	26	2.96	2.00
310	41	30	29	2.06	2.00
320	34	33	33	1.50	2.00
330	36	31	33	1.22	2.00
340	40	32	28	2.24	2.00

TABLE 4 CONTINUED

TABLE 4

CHI-<sup>2</sup> AND DP VALUES OF 300 ITEMS (GIRLS; N=100)

Items	TEACHING			Chi- <sup>2</sup>	DP
	3	2	1		
1	43	32	25	4.95	2.00
11	54	25	21	19.48	1.84
21	56	28	16	25.31	1.64
31	32	35	33	.14	2.00
41	36	39	25	3.26	2.00
51	39	28	33	1.92	2.00
61	61	24	15	35.70	1.60
71	25	35	40	3.50	2.00
81	42	28	30	3.44	2.00
91	32	32	36	.32	2.00
101	56	22	22	23.14	1.83
111	38	30	32	1.04	2.00
121	62	24	14	38.52	1.56
131	59	21	20	29.69	1.80
141	44	28	28	5.13	2.00
151	72	13	13	67.41	1.60
161	58	28	14	30.35	1.56
171	63	21	16	40.02	1.64
181	40	29	31	2.06	2.00
191	43	27	30	4.35	2.00
201	42	33	25	4.34	2.00
211	68	25	7	59.00	1.28
221	50	24	26	12.57	2.00
231	32	32	36	.32	2.00
241	37	31	32	.62	2.00
251	56	22	22	23.14	1.88
261	41	30	29	2.66	2.00
271	34	28	38	1.52	2.00
281	36	28	36	1.28	2.00
291	40	22	38	5.85	2.00

TABLE 4 CONTINUED

MEDICINE

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
2	59	27	14	32.21	1.56
12	64	22	14	43.32	1.56
22	46	27	27	7.23	2.00
32	26	45	29	6.27	2.00
42	54	28	18	20.74	1.72
52	48	22	30	10.65	2.00
62	55	27	18	22.36	1.72
72	48	26	26	9.69	2.00
82	44	24	32	6.09	2.00
92	40	25	35	3.50	2.00
102	34	31	35	.26	2.00
112	38	34	28	1.52	2.00
122	35	40	25	3.50	2.00
132	56	22	22	23.14	1.88
142	42	30	28	3.44	2.00
152	43	31	26	4.59	2.00
162	53	27	20	18.15	1.80
172	59	28	13	33.05	1.52
182	33	36	31	.38	2.00
192	30	34	36	.56	2.00
202	62	23	15	37.98	1.60
212	26	37	37	2.42	2.00
222	38	26	36	2.48	2.00
232	41	31	28	2.73	2.00
242	43	30	27	4.35	2.00
252	39	34	27	2.16	2.00
262	42	31	27	3.62	2.00
272	38	28	34	1.51	2.00
282	36	32	32	.32	2.00
292	40	25	35	3.50	2.00

TABLE 4  
TABLE 4 CONTINUED

NURSING

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
3	42	25	33	4.34	2.00
13	37	30	33	.74	2.00
23	39	27	34	2.18	2.00
33	52	20	20	16.66	1.80
43	54	32	14	24.10	1.56
53	42	28	30	3.44	2.00
63	60	22	18	32.27	1.72
73	41	35	24	4.46	1.96
83	37	29	34	.98	2.00
93	39	24	37	3.99	2.00
103	40	25	35	3.50	2.00
113	39	32	29	1.59	2.00
123	51	29	20	15.28	1.80
133	65	17	18	45.19	1.72
143	39	37	24	3.99	1.96
153	51	30	19	15.38	1.76
163	60	27	13	34.98	1.52
173	50	36	14	19.78	1.56
183	38	30	32	1.04	2.00
193	42	34	24	4.38	1.96
203	40	33	27	2.54	2.00
213	42	33	25	4.34	2.00
223	40	26	34	2.96	2.00
233	53	15	32	21.76	2.00
243	41	23	36	5.19	2.00
253	42	30	28	3.44	2.00
263	42	29	29	3.39	2.00
273	60	22	18	32.27	1.72
283	37	27	36	1.82	2.00
293	38	33	29	1.23	2.00

TABLE 4  
CONTINUEDSOCIAL WELFARE

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
4	42	27	31	3.62	2.00
14	36	34	30	.56	2.00
24	37	32	31	.62	2.00
34	40	25	35	3.50	2.00
44	41	28	31	2.78	2.00
54	42	32	26	3.92	2.00
64	38	35	27	1.94	2.00
74	37	33	30	.75	2.00
84	43	26	31	4.59	2.00
94	44	27	29	5.19	2.00
104	50	33	17	16.36	1.68
114	36	26	38	2.48	2.00
124	46	29	25	7.47	2.00
134	40	37	23	4.95	1.92
144	50	25	25	12.51	2.00
154	40	34	26	2.96	2.00
164	66	16	18	48.13	1.72
174	43	26	31	4.59	2.00
184	42	38	20	8.25	1.80
194	54	29	17	21.40	1.68
204	40	28	32	2.24	2.00
214	40	30	30	2.00	2.00
224	67	15	18	51.19	1.72
234	43	31	26	4.59	2.00
244	34	31	35	.26	2.00
254	51	28	21	14.79	1.84
264	36	29	35	.87	2.00
274	60	26	14	34.19	1.56
284	40	33	27	2.54	2.00
294	56	30	14	26.99	1.56

TABLE 4 CONTINUED

ENGINEERING

ITEMS	Weight			Chi <sup>2</sup>	DP
	3	2	1		
5	38	36	26	2.48	2.00
15	40	33	27	2.54	2.00
25	40	30	30	2.00	2.00
35	66	19	15	48.31	1.60
45	42	23	35	5.55	2.00
55	35	30	35	.50	2.00
65	53	26	21	17.80	1.84
75	43	27	30	4.34	2.00
85	58	28	14	30.35	1.56
95	39	30	31	1.46	2.00
105	42	27	31	3.62	2.00
115	61	26	13	37.02	1.52
125	68	15	17	54.19	1.68
135	40	33	27	2.54	2.00
145	41	26	33	3.38	2.00
155	39	28	33	1.82	2.00
165	41	32	27	3.02	2.00
175	60	20	20	32.03	1.80
185	57	25	18	25.97	1.72
195	56	28	16	25.30	1.64
205	40	35	25	3.50	2.00
215	39	34	27	2.18	2.00
225	42	25	33	4.34	2.00
235	39	28	33	1.82	2.00
245	40	34	26	2.96	2.00
255	56	21	23	23.20	1.92
265	53	30	17	19.96	1.68
275	37	28	35	1.34	2.00
285	41	32	27	3.02	2.00
295	40	24	36	4.16	2.00

**TABLE 4 CONTINUED**

**BUSINESS**

Items	Weight				Chi- <sup>2</sup> Value	DF Value
	3	1	2	1		
6		61	24	15	35.70	1.60
16	36	59	27	14	32.21	1.56
26	46	41	33	26	3.38	2.00
36	41	33	40	27	2.54	2.00
46	43	57	23	20	25.37	1.80
56	42	35	34	31	.26	2.00
66	57	40	38	22	5.85	1.88
76	58	39	39	22	5.79	1.80
86	43	34	39	27	2.18	2.00
96	42	59	21	20	29.69	1.80
106	59	60	26	14	34.19	1.56
116	34	39	39	22	5.79	1.83
126	41	40	35	25	3.50	2.00
136	41	39	37	24	3.98	1.96
146	51	35	37	28	1.45	2.00
156	37	53	34	13	24.04	1.52
166	58	33	40	23	3.50	2.00
176	42	39	31	30	1.46	2.00
186	56	40	37	23	4.95	1.92
196	52	56	26	18	24.10	1.72
206	40	36	36	28	1.28	2.00
216	53	38	37	25	3.14	2.00
226	40	33	34	33	.02	2.00
236	41	42	28	30	3.44	2.00
246	42	41	28	31	2.78	2.00
256	40	61	25	14	36.30	1.56
266	39	31	33	36	.38	2.00
276	40	54	28	18	20.74	1.72
286	43	61	20	19	34.49	1.76
296	49	41	33	26	3.30	2.00

TABLE 4 CONTINUED

SECRETARIAL SCIENCE

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
7	36	33	31	.38	2.00
17	66	18	16	48.13	1.64
27	41	30	29	2.67	2.00
37	42	27	31	3.62	2.00
47	42	25	33	4.34	2.00
57	57	20	23	25.37	1.92
67	58	29	13	31.25	1.52
77	43	25	32	4.95	2.00
87	42	33	25	4.34	2.00
97	59	21	20	29.69	1.80
107	34	33	33	.02	2.00
117	41	29	30	2.67	2.00
127	41	30	29	2.67	2.00
137	51	32	17	17.44	1.68
147	37	36	27	1.82	2.00
157	58	21	21	27.41	1.84
167	42	32	26	3.92	2.00
177	56	26	18	24.10	1.72
187	52	27	21	16.24	1.84
197	40	32	28	2.24	2.00
207	53	28	19	18.64	1.76
217	40	35	25	3.50	2.00
227	41	32	27	3.02	2.00
237	42	27	31	3.62	2.00
247	40	30	30	2.00	2.00
257	39	30	31	1.46	2.00
267	40	30	30	2.00	2.00
277	43	31	26	4.58	2.00
287	49	27	24	11.19	1.96
297	56	30	14	26.99	1.56



TABLE 4 CONTINUED

ACCOUNTANCY

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
8	54	29	17	21.40	1.68
18	50	26	14	34.19	1.56
28	56	28	16	25.31	1.64
38	40	38	22	5.85	1.88
48	42	27	31	3.62	2.00
58	54	26	20	19.78	1.80
68	52	30	18	17.88	1.72
78	53	25	22	17.58	1.88
88	40	37	23	4.95	1.92
98	52	27	21	16.24	1.84
108	39	34	27	2.18	2.00
118	40	27	33	2.54	2.00
128	41	31	28	2.78	2.00
138	39	34	27	2.18	2.00
148	40	28	32	2.24	2.00
158	42	30	28	3.44	2.00
168	40	35	25	3.50	2.00
178	41	30	29	2.67	2.00
188	57	24	19	25.61	1.76
198	41	32	27	3.02	2.00
208	42	30	28	3.44	2.00
218	51	22	27	14.43	2.00
228	40	33	27	2.54	2.00
238	56	25	19	23.68	1.76
248	40	35	25	3.50	2.00
258	42	30	28	3.44	2.00
268	40	28	32	2.24	2.00
278	42	35	23	5.55	1.92
288	27	38	35	1.94	2.00
298	40	36	24	4.16	1.96

TABLE 4 CONTINUED

LAW

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
9	66	14	20	48.61	1.80
19	61	34	5	47.11	1.20
29	40	33	27	2.54	2.00
39	40	32	28	2.24	2.00
49	78	20	2	94.73	.96
59	67	19	14	51.43	1.56
69	42	29	29	3.38	2.00
79	61	15	24	35.70	1.96
89	40	32	28	2.24	2.00
99	58	23	19	27.65	1.76
109	73	20	7	73.41	1.28
119	62	15	23	37.98	1.92
129	60	19	21	32.00	1.84
139	66	20	14	48.61	1.56
149	74	17	9	75.46	1.36
159	59	34	7	41.26	1.28
169	41	25	34	3.86	2.00
179	58	27	15	29.57	1.60
189	61	22	17	34.85	1.68
199	40	32	28	2.24	2.00
209	37	29	34	.98	2.00
219	72	23	5	72.21	1.20
229	55	27	18	22.36	1.72
239	56	24	20	23.38	1.80
249	39	39	22	5.79	1.88
259	80	16	4	100.26	.96
269	55	38	7	35.58	1.28
279	75	22	3	83.62	1.12
289	40	38	22	5.85	1.88
299	34	35	31	.26	2.00

TABLE 4 CONTINUED

FAMILY WELFARE

Items	Weight			Chi- <sup>2</sup>	DP
	3	2	1		
10	31	40	23	4.69	1.92
20	56	31	12	29.26	1.48
30	65	24	11	47.71	1.44
40	60	24	16	32.99	1.64
50	70	29	1	72.33	1.04
60	66	29	5	56.72	1.20
70	65	26	9	49.51	1.36
80	37	35	28	1.34	2.00
90	56	37	7	36.66	1.28
100	51	19	30	15.88	2.00
110	66	31	3	59.84	1.12
120	51	39	10	26.69	1.40
130	69	23	8	60.68	1.32
140	67	25	8	55.40	1.32
150	40	35	25	3.50	2.00
160	50	30	20	14.01	1.80
170	50	37	13	21.16	1.52
180	53	39	8	31.85	1.32
190	76	20	4	85.85	1.12
200	53	30	17	19.96	1.68
210	62	30	8	44.28	1.32
220	67	26	7	56.48	1.28
230	66	20	14	48.61	1.56
240	57	26	17	26.45	1.68
250	53	30	17	19.96	1.68
260	55	36	9	32.09	1.36
270	62	24	14	38.52	1.56
280	57	25	18	25.97	1.72
290	55	30	15	24.52	1.60
300	69	23	8	60.68	1.32

Not. Gr.	37.25	1	35.25
Within Gr.	2024.84	102	194.57
Total	2062.09	103	194.57

\* Not Significant.

The justifiability of using two techniques may be questioned. It may be asserted that items could have been selected by applying Chi-square technique alone. In answering this question, it may be said that the Chi-square used alone is not a reliable measure of discriminating ability. Unusual piling up of scores in one category may make the Chi-square significant without being able to discriminate between the high-scorers and the low-scorers. The DP technique can, however, very faithfully discriminate between the high-scoring and low-scoring respondents. Hence, these two techniques were used for final selection of items.

Determining Sex Differences

In order to determine whether sex had any influence on the vocational interests of the respondents, a simple analysis of variance was done of the scores of 100 boys and 100 girls. Results of this analysis are given in Table 5.

TABLE 5  
ANALYSIS OF VARIANCE OF SCORES OF 100 BOYS AND 100 GIRLS IN RESPECT OF SEX

Source	SS	df	MS	F
Bet. Gr.	59.55	1	59.55	.31*
Within Gr.	38546.84	198	194.67	
Totals	38606.39	199		

\* Not Significant.

It may be seen from Table 5 that there is no significant difference between the means of the two groups implying that the boys and girls did not differ in their responses to the items of the Inventory (obtained  $F$  being .31 and tabled  $F_{.05}$  with 1 and 198 degrees of freedom being 3.89). This finding indicates that the Inventory could be used for both boys and girls.

#### Determining the Validity of the Instrument

As indicated in Chapter III, the criteria for determining the validity were: (a) scores of the experts in the area of their special interest will be significantly higher than their scores in other areas. That is, the experts will tend to score high in their own areas and will tend to score low in other areas; (b) of the 200 respondents (100 boys and 100 girls) in the first phase of this study and 300 respondents (150 boys and 150 girls) in the second phase of this study, respondents scoring high in a specific area of interest will tend to score low in other areas.

Means and standard deviations of scores obtained by 100 experts in each occupational area were computed and are reported in Table 6.

TABLE 6  
MEANS AND STANDARD DEVIATIONS OF 100 EXPERTS' SCORES

	T	M	N	SW	E	B	SS	A	L	FW
Mean	24.60	25.70	25.00	25.00	24.10	24.60	24.90	24.00	24.00	24.90
SD	4.04	3.71	3.61	1.82	2.91	3.42	2.69	2.75	3.01	2.75

A careful look at the Table 6 indicates that the variances of the ten occupational areas are not appreciably different.

An analysis of variance was then done to see whether means of scores of their special interest were significantly different from means of their (experts') scores in other areas. Results of such analysis are shown in Tables 7a to 7j.

TABLE 7a

ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN  
RESPECT OF TEACHING AND OTHER AREAS

Source	SS	df	MS	F
Between Groups.	706.20	9	78.47	7.62*
Within Groups	926.80	90	10.30	
Total	1633.00	99		

\*Significant at the .05 level.

TABLE 7b

ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN  
RESPECT OF MEDICINE AND OTHER AREAS

Source	SS	df	ms	F
Between Groups.	679.89	9	75.54	9.80*
Within Groups	694.30	90	7.71	
Total	1374.19	99		

\*Significant at the .05 level.

TABLE 7c

ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN  
IN RESPECT OF NURSING AND OTHER  
AREAS

Source	SS	df	ms	F
Between Groups	425.76	9	47.31	4.36*
Within Groups	876.40	90	9.74	
Total	1302.16	99		

\*Significant at the .05 level.

TABLE 7d

ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN SOCIAL  
WELFARE AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	217.96	9	24.22	19.22*
Within Groups	113.20	90	1.26	
Total	331.16	99		

\*Significant at the .05 level.



TABLE 7e

ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN RESPECT  
OF ENGINEERING AND OTHER AREAS

Source	SS	df	ms	F
Between Groups.	296.41	9	32.93	
Within Groups.	549.70	90	6.11	5.39*
Total	846.11	99		

\*Significant at the .05 level.

\* Significant at the .05 level.

TABLE 7f

ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN RESPECT  
OF BUSINESS AND OTHER AREAS

Source	SS	df	ms	F
Between Groups.	443.84	9	49.32	
Within Groups.	724.20	90	8.05	6.13*
Total	1168.04	99		

\*Significant at the .05 level.

\* Significant at the .05 level.

TABLE 7g

## ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN RESPECT OF SECRETARIAL SCIENCE AND OTHER AREAS

Source	SS	df	ms	F
Between Groups.	542.96	9	60.33	7.48*
Within Groups.	726.40	90	8.07	
Total	1269.36	99		

\* Significant at the .05 level.

TABLE 7h

## ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN RESPECT OF ACCOUNTANCY AND OTHER AREAS

Source	SS	df	ms	F
Between Groups.	311.20	9	34.58	7.00*
Within Groups.	444.80	90	4.94	
Total	756.00	99		

\* Significant at the .05 level.

TABLE 71

The statistical analysis of the scores of 100 experts in respect of law and other areas is presented in the following table:

**ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN RESPECT OF LAW AND OTHER AREAS**

Source	SS	df	ms	F
Between Groups	330.96	9	36.77	
Within Groups	574.80	90	6.39	5.75*
Total	905.76	99		

\* Significant at the .05 level.

TABLE 72

The statistical analysis of the scores of 100 experts in respect of family welfare and other areas is presented in the following table:

**ANALYSIS OF VARIANCE OF SCORES OF 100 EXPERTS IN RESPECT OF FAMILY WELFARE AND OTHER AREAS**

Source	SS	df	ms	F
Between Groups	311.49	9	34.61	
Within Groups	445.10	90	4.95	6.99*
Total	756.59	99		

\* Significant at the .05 level.

The obtained F-ratios of all the tables are significant at the .05 level. This indicates that there is a significant difference among the mean scores of the experts in different areas.

The above situation does not satisfy the requirement that mean scores of the experts in the specific area of interest are significantly greater or higher than their mean scores in other areas. In order to satisfy this requirement a multiple comparison of means was made. Means of the experts in different areas are arranged in an array and difference among the means is tested by the Studentized Range Statistic (q). Results of these statistical tests are reported in Tables 8a - 8j.

Table 8a

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by Teachers in Teaching and Other Areas.

Mean of Specific Areas of Interest (Teaching)	Means of Areas Compared.	Differences Between Means.	Obtained q - Value.	Tabled q-Value.	Remarks.
24.60	R	1.50	1.49	2.81	Not Significant.
24.60	SW	3.60	3.56	3.38	Significant.
24.60	SS	3.80	3.76	3.71	Significant.
24.60	FW	4.00	3.96	3.94	Significant.
24.60	B	5.20	5.15	4.12	Significant.
24.60	A	6.10	6.04	4.26	Significant.
24.60	L	6.50	6.44	4.39	Significant.
24.60	E	0.10	0.10	2.81	Not Significant.
24.60	N	1.50	1.58	3.38	Not Significant.

**Table 8b**

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by Doctors in Medicine and Other Areas.

Mean of Specific Area of Interest (Medicine)	Means of Areas Compared	Differences Between Means	Obtained q-Value	Tabled q-Value	Remarks
25.70	SU	0.10	0.11	2.81	Not Significant
25.70	T	0.20	0.23	3.37	Significant
25.70	SS	3.40	3.86	3.71	Significant
25.70	E	4.00	4.55	3.94	Significant
25.70	B	4.40	5.00	4.12	Significant
25.70	A	5.10	5.80	4.26	Significant
25.70	FW	5.40	6.14	4.39	Significant
25.70	L	6.50	7.39	4.42	Significant
25.70	N	1.20	1.36	2.81	Not Significant

Table 8c

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by Nurses in Nursing and Other Areas.

Mean of Specific Area of Interest (Nursing)	Means of Areas Compared	Differences Between Means	Obtained q-Value	Tabled q-Value	Remarks
25.00	T 24.60	0.40	0.40	2.81	Not Significant.
25.00	R 23.90	1.10	1.11	3.37	Not Significant.
25.00	SS 21.30	3.70	3.74	3.71	Significant.
25.00	E 21.00	4.00	4.04	3.94	Significant.
25.00	FU 20.80	4.20	4.24	4.12	Significant.
25.00	B 20.60	4.40	4.44	4.26	Significant.
25.00	A 20.50	4.50	4.55	4.39	Significant.
25.00	L 19.70	5.30	5.35	4.42	Significant.
25.00	SU 25.40	0.40	0.40	2.81	Not Significant.

Table 8d

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by Social Workers in Social Welfare & Other Areas.

Mean of Specific Area of Interest (Social Welfare)	Means of Areas Compared.	Differences Between Means	Obtained q-Value	Tabled q-Value	Remarks
25.00	T 23.50	1.50	5.00	2.81	Significant.
25.00	FW 22.80	2.20	6.29	3.37	Significant.
25.00	SS 22.60	2.40	6.86	3.71	Significant.
25.00	M 22.40	2.60	7.43	3.94	Significant.
25.00	E 22.40	2.60	7.43	4.12	Significant.
25.00	N 22.00	3.00	8.57	4.26	Significant.
25.00	B 21.90	3.10	8.86	4.39	Significant.
25.00	A 19.90	5.10	14.57	4.42	Significant.
25.00	L 19.70	5.30	15.14	4.47	Significant.



Table 6e

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by Engineers in Engineering and Other Areas.

Mean of Specific Area of Interest (Engineering)	Means of Areas Compared	Differences Between Means	Obtained q-Value	Tabled q-Value	Remarks
24.10	T 24.00	0.10	0.12	2.81	Not Significant
24.10	N 21.60	2.50	2.91	3.37	Not Significant
24.10	N 21.50	2.60	3.02	3.71	Not Significant
24.10	A 20.70	3.40	3.95	3.94	Significant
24.10	B 20.30	3.80	4.42	4.12	Significant
24.10	SS 20.20	3.90	4.53	4.26	Significant
24.10	FU 20.00	4.10	4.77	4.39	Significant
24.10	L 19.80	4.30	5.00	4.42	Significant
	SU 24.50	0.40	0.47	2.81	Not Significant

Table 8f

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by Businessmen in Business and Other Areas.

Mean of Specific Area of Interest (Business)	Means of Areas Compared	Differences Between Means	Obtained q-Value	Tabled q-Value	Remarks
24.60	M 23.70	0.90	1.00	2.81	Not Significant
24.60	E 23.60	1.00	1.11	3.37	Not Significant
24.60	SS 22.70	1.90	2.11	3.71	Not Significant
24.60	FW 20.40	4.20	4.67	3.94	Significant
24.60	N 20.30	4.30	4.78	4.12	Significant
24.60	T 20.10	4.50	5.00	4.26	Significant
24.60	A 19.70	4.90	5.44	4.39	Significant
24.60	L 18.80	5.80	6.44	4.42	Significant
<hr/>					
SW	24.70	0.10	0.11	2.81	Not Significant

**Table 8q**

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by Secretarial Service Holders in Secretarial Science and Other Areas

Mean of Specific Area of Interest (Secretarial Science)	Means of Areas Compared	Differences Between Means	Obtained q-Value	Tabled q-Value	Remarks
24.90	H	0.80	0.67	2.01	Not Significant
24.90	T	0.90	1.00	3.37	Not Significant
24.90	FU	3.40	3.78	3.71	Significant
24.90	H	3.70	4.11	3.94	Significant
24.90	E	3.80	4.22	4.12	Significant
24.90	B	4.20	4.67	4.26	Significant
24.90	L	4.30	4.78	4.39	Significant
24.90	A	5.90	6.56	4.42	Significant
	SU	2.00	2.22	2.81	Not Significant

**Table 8h**

A Multiple Comparison by Studentized Range Statistic (q) of Means; Mean Scores Obtained by Accountants in Accountancy and Other Areas.

Mean of Specific Area of Interest (Accountancy)	No. of Areas Compared	Differences Between Means	Obtained q-Value	Tabled q-Value	Remarks
24.00	T 23.80	0.20	0.29	2.81	Not Significant.
24.00	SU 23.20	0.80	1.14	3.37	Not Significant.
24.00	R 22.50	1.50	2.14	3.71	Not Significant.
24.00	N 21.20	2.80	4.00	3.94	Significant.
24.00	FU 20.90	3.10	4.43	4.12	Significant.
24.00	D 20.80	3.20	4.57	4.26	Significant.
24.00	SS 20.50	3.50	5.00	4.39	Significant.
24.00	L 18.70	5.30	7.57	4.42	Significant.
	E 24.40	0.40	0.57	2.81	Not Significant.

Table 81

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by Lawyers in Law and Other Areas.

Mean of Specific Area of Interest (Law)	No. of Areas Compared	Differences Between Means	Obtained q-Value	Tabled q-Value	Remarks
24.00	T 21.60	2.40	3.80	2.81	Significant
24.00	E 21.00	3.00	3.75	3.37	Significant
24.00	N 20.80	3.20	4.00	3.71	Significant
24.00	SS 20.80	3.40	4.25	3.94	Significant
24.00	FU 20.80	3.50	4.38	4.12	Significant
24.00	B 20.30	3.70	4.63	4.26	Significant
24.00	A 19.10	4.90	6.13	4.39	Significant
	SU 24.40	0.40	0.50	2.81	Not Significant
	R 24.50	0.50	0.63	3.36	Not Significant

**Table 81**

**A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by Family Welfare Workers in Family Welfare and Other Areas**

Mean of Specific Area of Interest (Family Welfare)	Means of Areas Compared.	Differences Between Means.	Obtained q-Value.	Tabled q-Value.	Remarks
24.90	N	2.00	2.86	2.81	Significant.
24.90	SU	2.40	3.43	3.37	Significant.
24.90	SS	2.90	4.14	3.71	Significant.
24.90	M	3.00	4.29	3.94	Significant.
24.90	T	3.20	4.57	4.12	Significant.
24.90	L	4.40	6.29	4.26	Significant.
24.90	A	4.70	6.71	4.39	Significant.
	E	0.30	0.43	2.81	Not Significant.
	B	0.40	0.57	3.38	Not Significant.

It may be seen from the above tables that, with the exception of a few cases, exports scored significantly higher in the specific areas of their interest than in other areas. It may, therefore, be argued on the basis of these findings that the inventory measures what it purports to measure. In other words, it may be said that the instrument discriminates between the sub-tests.

The same kind of analyses were repeated with the scores of 200 and 300 (high-scoring) respondents. Means and Standard Deviations of the scores of 200 respondents were computed and are shown in Table 9.

TABLE 9

Y	M	S	SD
22.45	25.19	21.96	21.54
4.30	4.55	4.50	4.81

A careful look at Table 9 shows that the scores of exports are significantly different from those of other areas. Analysis of variance and t-test of these respondents are reported in Table 10 and 11 respectively.

TABLE 9

MEANS AND STANDARD DEVIATIONS OF 200 RESPONDENTS' SCORES

	T	M	N	SW	E	B	SS	A	L	FW
M	21.65	22.19	21.96	21.84	22.02	22.03	21.82	22.80	22.30	21.46
SD	4.39	4.60	4.60	4.81	4.17	4.15	3.98	3.84	3.86	4.30

A careful look at Table 9 indicates that the variances of different occupational areas are more or less alike.

Analysis of variance and multiple comparison of means of the scores of these respondents are reported in Tables 10a - 10j and 11a - 11j respectively.



TABLE 10a

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS  
IN RESPECT OF TEACHING AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	978.6	9	108.73	7.20*
Within Groups	2869.9	190	15.10	
Total	3848.5	199		

\* Significant at the .05 level.

TABLE 10b

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS  
IN RESPECT OF MEDICINE AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	1087.80	9	120.87	7.31*
Within Groups	3142.35	190	16.54	
Total	4230.15	199		

\* Significant at the .05 level.

TABLE 10c

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS IN  
RESPECT OF NURSING AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	1979.98	9	220.00	18.61*
Within Groups	2245.70	190	11.82	
Total	4225.68	199		

\* Significant at the .05 level.

TABLE 10d

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS  
IN RESPECT OF SOCIAL WELFARE AND OTHER  
AREAS

Source	SS	df	ms	F
Between Groups	1638.48	9	182.1	11.59*
Within Groups	2986.40	190	15.71	
Total	4624.88	199		

\* Significant at the .05 level.

TABLE 100

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS  
IN RESPECT OF ENGINEERING AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	1196.82	9	132.98	
Within Groups	2283.10	190	12.02	11.10*
Total	3479.92	199		

\* Significant at the .05 level.

TABLE 101

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS  
IN RESPECT OF BUSINESS AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	995.62	9	110.62	
Within Groups	2452.25	190	12.91	8.57
Total	3447.87	199		

\* Significant at the .05 level.

TABLE 10g

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS IN  
RESPECT OF SECRETARIAL SCIENCE AND OTHER  
AREAS

Source	SS	df	ms	F
Between Groups	975.72	9	108.41	9.42*
Within Groups	2187.80	190	11.51	
Total	3163.52	199		

\* Significant at the .05 level.

TABLE 10h

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS  
IN RESPECT OF ACCOUNTANCY AND OTHER  
AREAS

Source	SS	df	ms	F
Between Groups	615.13	9	68.35	5.57*
Within Groups	2331.45	190	12.27	
Total	2946.60	199		

\* Significant at the .05 level.

TABLE 10i

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS  
IN RESPECT OF LAW AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	503.1	9	55.9	
Within Groups	2478.9	190	13.05	4.28*
Total	2982.0	199		

\* Significant at the .05 level.

TABLE 10j

ANALYSIS OF VARIANCE OF SCORES OF 200 RESPONDENTS IN  
RESPECT OF FAMILY WELFARE AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	1180.68	9	131.19	
Within Groups	2519.00	190	13.26	9.89*
Total	3699.68	199		

\* Significant at the .05 level.

**Table 11a**

A Multiple Comparison by Studentized Range Statistic (q) of Mean Scores Obtained by 200 Respondents in Teaching and Other Areas

Mean of Specific Area of Interest (Teaching)	Means of Areas Compared	Differences Between Means	Obtained q-value	Tabled q-value	Remarks
26.50	E	3.00	3.45	2.77	Significant
26.50	H	3.85	4.43	3.31	Significant
26.50	H	4.15	4.77	3.63	Significant
26.50	SU	4.40	5.06	3.86	Significant
26.50	SS	5.10	5.86	4.03	Significant
26.50	FU	5.90	6.78	4.17	Significant
26.50	B	7.10	8.16	4.29	Significant
26.50	L	7.40	8.51	4.39	Significant
26.50	A	7.60	8.73	4.47	Significant

Table 11b

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 200 Respondents in Medicine and Other Areas.

Mean of Specific Area of Interest (Medicine)	Means of Areas Compared:	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
27.25	N 24.15	3.10	3.41	2.77	Significant
27.25	E 24.00	3.25	3.57	3.31	Significant
27.25	SW 23.60	3.65	4.01	3.63	Significant
27.25	SS 21.55	5.70	6.26	3.86	Significant
27.25	T 20.90	6.35	6.98	4.03	Significant
27.25	A 20.30	6.95	7.64	4.17	Significant
27.25	FU 20.25	7.00	7.69	4.29	Significant
27.25	L 20.00	7.25	7.97	4.39	Significant
27.25	B 19.85	7.40	8.13	4.47	Significant

Table 11c

A Multiple Comparison by Studentized Range Statistic (q) of Mean Scores Obtained by 200 Respondents in Nursing and Other Areas.

Mean of Specific Area of Interest (Nursing)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
29.50	E	5.95	7.73	2.77	Significant
29.50	R	6.20	8.05	3.31	Significant
29.50	SU	6.70	8.70	3.63	Significant
29.50	SS	7.35	9.55	3.86	Significant
29.50	T	7.65	9.94	4.03	Significant
29.50	A	8.95	11.62	4.17	Significant
29.50	FU	9.75	12.66	4.29	Significant
29.60	L	11.35	14.74	4.39	Significant
29.50	B	11.50	14.94	4.47	Significant



**Table 11d**

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 200 Respondents in Social Welfare and Other Areas:

Mean of Specific Area of Interest (Social Welfare)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
28.15	H 24.10	4.05	4.55	2.77	Significant
28.15	M 23.75	4.40	4.94	3.31	Significant
28.15	E 23.65	4.50	5.06	3.63	Significant
28.15	SS 22.20	5.95	6.69	3.86	Significant
28.15	T 20.35	7.80	8.76	4.03	Significant
28.15	D 19.90	8.25	9.27	4.17	Significant
28.15	A 19.40	8.75	9.83	4.29	Significant
28.15	L 18.70	9.45	10.62	4.39	Significant
28.15	FJ 18.70	9.45	10.62	4.47	Significant

**Table 11a**

**A Multiple Comparison by Studentized Range Statistic (q) of Means; Mean Scores Obtained by 200 Respondents in Engineering and Other Areas.**

Mean of Specific Area of Interest (Engineering)	Means of Areas Compared.	Difference Between Means.	Obtained q-Value.	Tabled q-Value.	Remarks.
27.65	SU 23.40	4.25	5.45	2.77	Significant.
27.65	H 22.70	4.95	6.35	3.31	Significant.
27.65	H 22.68	5.00	6.41	3.63	Significant.
27.65	T 22.50	5.15	6.68	3.86	Significant.
27.65	SS 21.95	5.70	7.31	4.03	Significant.
27.65	FU 21.90	5.75	7.37	4.17	Significant.
27.65	L 19.35	8.30	10.64	4.29	Significant.
27.65	A 19.10	8.55	10.96	4.39	Significant.
27.65	B 18.95	8.70	11.15	4.47	Significant.

Table 11f

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 200 Respondents in Business and Other Areas.

Mean of Specific Area of Interest (Business)	Means of Areas Compared.	Difference Between Means.	Obtained q-value	Tabled q-value	Remarks
26.70	SU 24.70	2.00	2.50	2.77	Not Significant
26.70	E 23.10	3.60	4.50	3.31	Significant
26.70	H 22.55	4.15	5.19	3.63	Significant
26.70	M 22.10	4.60	5.75	3.86	Significant
26.70	T 21.40	5.30	6.63	4.03	Significant
26.70	SS 20.75	5.95	7.45	4.17	Significant
26.70	L 20.00	6.70	8.38	4.29	Significant
26.70	FU 19.80	6.90	8.63	4.39	Significant
26.70	A 19.15	7.55	9.44	4.47	Significant

**Table 11a**

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 200 Respondents in Secretarial Science and Other Areas.

Mean of Specific Area of Interest (Secretarial Science)	N	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
26.20	N	23.90	2.30	3.03	2.77	Significant
26.20	E	23.00	3.20	4.21	3.31	Significant
26.20	M	22.85	3.35	4.41	3.63	Significant
26.20	SU	22.80	3.40	4.47	3.86	Significant
26.20	FV	20.45	5.75	7.57	4.03	Significant
26.20	L	20.30	5.90	7.76	4.17	Significant
26.20	B	19.70	6.50	8.55	4.29	Significant
26.20	T	19.65	6.55	8.62	4.39	Significant
26.20	A	19.05	7.15	9.41	4.47	Significant

**Table 11h**

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 200 Respondents in Accountancy and Other Areas.

Mean of Specific Area of Interest (Accountancy)	Means of Areas Compared	N	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
26.15	N	24.70	1.45	1.86	2.77	Not Significant
26.15	N	24.20	1.95	2.50	3.31	Not Significant
26.15	SU	23.35	2.80	3.59	3.63	Not Significant
26.15	E	23.05	3.10	3.97	3.86	Significant
26.15	T	22.30	3.85	4.94	4.03	Significant
26.15	SS	21.75	4.40	5.64	4.17	Significant
26.15	D	21.35	4.80	6.15	4.29	Significant
26.15	L	20.65	5.50	7.05	4.39	Significant
26.15	FU	20.45	5.70	7.31	4.47	Significant

Table 111

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 200 Respondents in Law and Other Areas

Mean of Specific Area of Interest (Law)	N	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
25.90	N	22.95	2.95	3.64	2.77	Significant
25.90	N	22.90	3.00	3.70	3.31	Significant
25.90	E	22.75	3.15	3.89	3.63	Significant
25.90	SW	22.65	3.25	4.01	3.86	Significant
25.90	SS	22.25	3.65	4.51	4.03	Significant
25.90	FV	21.65	4.25	5.25	4.17	Significant
25.90	T	21.55	4.35	5.37	4.29	Significant
25.90	B	21.00	4.90	6.45	4.39	Significant
25.90	A	19.40	6.50	8.02	4.47	Significant

Table 11.1

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 200 Respondents in Family Welfare and Other Areas.

Mean of Specific Area of Interest (Family welfare)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
27.55	N 22.65	4.90	6.45	2.77	Significant
27.55	SW 22.35	5.20	6.42	3.31	Significant
27.55	R 22.10	5.45	6.73	3.63	Significant
27.55	T 21.85	5.70	7.04	3.86	Significant
27.55	SS 20.80	6.75	8.33	4.03	Significant
27.55	L 19.95	7.60	9.38	4.17	Significant
27.55	E 19.85	7.70	9.81	4.29	Significant
27.55	D 19.55	8.00	9.88	4.39	Significant
27.55	A 18.95	8.60	10.62	4.47	Significant

It may be seen from the above analysis, that, the hypothesis that the respondents scoring high in one area would tend to score low in other areas was borne out by the data. On the basis of this analysis it may be argued that the Inventory is a valid one. This again substantiates the assertion that the Instrument has the power of discriminating between the sub-tests.

Means and Standard Deviations of the scores of 300 (high scoring) respondents were computed and are shown in Table 12. Analysis of variance and multiple comparison of means of these scores are reported in Tables 13a - 13j and 14a - 14j respectively.

TABLE 12

MEANS AND STANDARD DEVIATIONS OF 300 RESPONDENTS' SCORES

	T	M	N	SW	E	B	SS	A	L	FW
M	22.53	22.82	23.50	23.37	23.80	24.13	23.84	24.34	24.30	23.63
SD	4.39	4.65	4.43	4.15	4.06	3.53	3.79	3.33	3.56	3.71

A careful look at the Table 12 indicates that the variances of the ten occupational areas are not appreciably different.



TABLE 13a

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS  
IN RESPECT OF TEACHING AND OTHER AREAS

Source	SS	df	MS	F
Between Groups	2272.13	9	252.46	20.85*
Within Groups	3512.54	290	12.11	
Total	5784.67	299		

\* Significant at the .05 level.

TABLE 13b

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS IN  
RESPECT OF MEDICINE AND OTHER AREAS

Source	SS	df	MS	F
Between Groups	3027.20	9	336.36	28.10*
Within Groups	3472.44	290	11.97	
Total	6499.64	299		

\* Significant at the .05 level.

TABLE 13c

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS  
IN RESPECT OF NURSING AND OTHER AREAS

Source	SS	df	ms	F
Between Groups.	2290.66	9	254.52	20.59*
Within Groups.	3584.34	290	12.36	
Total	5875.00	299		

\*Significant at the .05 level.

TABLE 13d

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS IN  
RESPECT OF SOCIAL WELFARE AND OTHER AREAS

Source	SS	df	ms	F
Between Groups.	1583.69	9	173.97	14.24*
Within Groups.	3584.24	290	12.36	
Total	5167.93	299		

\* Significant at the .05 level.

TABLE 13e

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS IN  
RESPECT OF ENGINEERING AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	1205.56	9	133.95	10.42*
Within Groups	3729.04	290	12.86	
Total	4934.60	299		

\* Significant at the .05 level.

TABLE 13f

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS  
IN RESPECT OF BUSINESS AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	575.36	9	63.93	5.87*
Within Groups	3160.57	290	10.90	
Total	3735.93	299		

\* Significant at the .05 level.

TABLE 13g

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS IN  
RESPECT OF SECRETARIAL SCIENCE AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	642.60	9	71.40	5.63*
Within Groups	3677.04	290	12.68	
Total	4319.64	299		

\* Significant at the .05 level.

TABLE 13h

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS IN  
RESPECT OF ACCOUNTANCY AND OTHER AREAS

Source	SS	df	ms	F
Between Groups	328.12	9	36.46	3.53*
Within Groups	2997.20	290	10.34	
Total	3325.32	299		

\* Significant at the .05 level.

TABLE 131

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS IN  
RESPECT OF LAW AND OTHER AREAS

Source	SS	df	MS	F
Between Groups	464.36	9	51.60	
Within Groups	3343.04	290	11.53	4.48*
Total	3807.40	299		

\* Significant at the .05 level.

TABLE 132

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS IN  
RESPECT OF FAMILY WELFARE AND OTHER AREAS

Source	SS	df	MS	F
Between Groups	1595.59	9	177.29	
Within Groups	2526.60	290	8.71	20.35*
Total	4122.19	299		

\* Significant at the .05 level.

Table 14a

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 300 Respondents in Teaching and Other Areas.

Mean of Specific Area of Interest (Teaching)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
27.40	E	2.63	3.37	2.77	Significant
27.40	M	2.94	3.77	3.31	Significant
27.40	SU	3.04	3.90	3.63	Significant
27.40	TN	3.80	4.87	3.86	Significant
27.40	SS	4.53	5.81	4.03	Significant
27.40	B	7.17	9.12	4.17	Significant
27.40	FU	7.73	9.91	4.29	Significant
27.40	L	8.37	10.73	4.39	Significant
27.40	A	8.47	10.86	4.47	Significant

Table 14b

A Multiple Comparison by Studentized Range Statistic (q) of Mean: Mean Scores Obtained by 300 Respondents in Medicine and Other Areas

Mean of Specific Area of Interest (Medicine)	Means of Areas Compared	Differences Between Means	Obtained q-Value	Tabled q-Value	Remarks
28.57	N	2.24	2.91	2.77	Significant
28.57	E	3.87	5.03	3.31	Significant
28.57	SW	4.20	5.45	3.63	Significant
28.57	T	4.71	6.12	3.86	Significant
28.57	SS	6.60	8.57	4.03	Significant
28.57	FW	6.77	8.79	4.17	Significant
28.57	B	9.44	12.26	4.29	Significant
28.57	A	9.79	12.60	4.39	Significant
28.57	L	9.94	12.91	4.47	Significant

Table 14c

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 300 Respondents in Nursing and Other Areas.

Mean of Specific Area of Interest (Nursing)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
29.33	M 26.33	3.00	3.80	2.77	Significant
29.33	SW 25.20	4.13	5.23	3.31	Significant
29.33	E 25.03	4.30	5.44	3.63	Significant
29.33	T 23.47	5.86	7.42	3.86	Significant
29.33	SS 22.50	6.83	8.65	4.03	Significant
29.33	FW 22.30	7.03	8.90	4.17	Significant
29.33	A 20.60	8.73	11.05	4.29	Significant
29.33	B 20.50	8.83	11.18	4.39	Significant
29.33	L 19.70	9.63	12.19	4.47	Significant



Table 14a

Table 14d

A Multiple Comparison by Studentized Range

Statistic (q) of Means: Mean Scores Obtained by 300 Respondents in Social Welfare and Other Areas

Mean of Specific Area of Interest (Social Welfare)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
27.97	E 25.67	2.30	2.91	2.77	Significant
27.97	N 25.10	2.87	3.63	3.31	Significant
27.97	R 24.47	3.50	4.43	3.63	Significant
27.97	T 23.73	4.24	5.36	3.86	Significant
27.97	SS 23.23	4.74	6.00	4.03	Significant
27.97	B 22.10	5.87	7.43	4.17	Significant
27.97	FW 21.17	6.80	8.61	4.29	Significant
27.97	A 21.03	6.94	8.78	4.39	Significant
27.97	L 19.83	8.14	10.30	4.47	Significant

**Table 14a**

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 300 Respondents in Engineering and Other Areas.

Mean of Specific Area of Interest (Engineering)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
28.30	SW 25.10	3.20	4.00	2.77	Significant
28.30	N 24.83	3.47	4.34	3.31	Significant
28.30	M 24.63	3.67	4.59	3.63	Significant
28.30	SS 23.73	4.57	5.71	3.86	Significant
28.30	T 23.57	4.73	5.91	4.03	Significant
28.30	B 23.37	4.93	6.16	4.17	Significant
28.30	A 21.67	6.63	8.29	4.29	Significant
28.30	FW 21.43	6.87	8.59	4.39	Significant
28.30	L 21.33	6.97	8.79	4.47	Significant

Table 14f

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 300 Respondents in Business and Other Areas

Mean of Specific Area of Interest (Business)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
27.10	E E	1.43	1.93	2.77	Not Significant.
27.10	N	2.47	3.34	3.31	Significant.
27.10	SW	2.47	3.55	3.63	Not Significant.
27.10	SS	2.43	3.78	3.86	Not Significant.
27.10	A T	3.37	4.55	4.03	Significant.
27.10	M N	3.73	5.04	4.17	Significant.
27.10	L A	3.83	5.80	4.29	Significant.
27.10	T L	4.63	6.26	4.39	Significant.
27.10	F U	4.80	6.49	4.47	Significant.

Table 14g

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 300 Respondents in Secretarial Science and Other Areas.

Mean of Specific Area of Interest (Secretarial Science)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
26.57	E	1.24	1.55	2.77	Not Significant
26.57	SW	1.30	1.63	3.31	Not Significant
26.57	N	1.87	2.34	3.63	Not Significant
26.57	B	3.04	3.80	3.86	Not Significant
26.57	T	3.37	4.21	4.03	Significant
26.57	M	3.80	4.75	4.17	Significant
26.57	A	3.84	4.80	4.29	Significant
26.57	L	3.90	4.88	4.39	Significant
26.57	FW	4.90	6.13	4.47	Significant

Table 14h

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 300 Respondents in Accountancy and Other Areas.

Mean of Specific Area of Interest (Accountancy)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
25.93	E 25.80	0.13	0.18	2.77	Not Significant
25.93	SW 25.38	0.60	0.83	3.31	Not Significant
25.93	N 25.00	0.93	1.29	3.63	Not Significant
25.93	B 24.37	1.56	2.17	3.86	Not Significant
25.93	SS 23.70	2.23	3.10	4.03	Not Significant
25.93	M 23.57	2.36	3.28	4.17	Not Significant
25.93	L 23.53	2.40	3.33	4.29	Not Significant
25.93	FW 23.20	2.73	3.79	4.39	Not Significant
25.93	T 22.97	2.96	4.11	4.47	Not Significant

Table 14

A Multiple Comparison by Studentized Range Statistic (q) of Means; Mean Scores Obtained by 300 Respondents in Law and Other Areas.

Mean of Specific Area of Interest (Law)	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
26.23	E 26.00	0.23	0.30	2.77	Not Significant.
26.23	B 25.40	0.83	1.09	3.31	Not Significant.
26.23	N 24.80	1.43	1.88	3.63	Not Significant.
26.23	SW 24.23	2.00	2.63	3.86	Not Significant.
26.23	SS 24.13	2.10	2.76	4.03	Not Significant.
26.23	A 23.87	2.36	3.11	4.17	Not Significant.
26.23	T 23.20	3.03	3.99	4.29	Not Significant.
26.23	R 22.77	3.46	4.55	4.39	Significant.
26.23	FW 22.42	3.83	5.04	4.47	Significant.

Table 141

A Multiple Comparison by Studentized Range Statistic (q) of Means: Mean Scores Obtained by 300 Respondents in Family Welfare and Other Areas.

Mean of Specific Area of Interest (Family Welfare)	N	Means of Areas Compared	Difference Between Means	Obtained q-Value	Tabled q-Value	Remarks
27.83	N	25.77	2.06	3.12	2.77	Significant
27.83	E	24.97	2.86	4.33	3.31	Significant
27.83	M	24.73	3.10	4.70	3.63	Significant
27.83	SW	24.53	3.30	5.00	3.86	Significant
27.83	T	23.50	4.33	6.56	4.03	Significant
27.83	SS	22.50	5.33	8.08	4.17	Significant
27.83	B	21.90	6.93	10.50	4.29	Significant
27.83	A	20.80	7.03	10.65	4.39	Significant
27.83	L	19.77	8.06	12.21	4.47	Significant

Results of Analysis of Variance show that all the obtained F-ratios were significant at .05 level implying that means of scores obtained by high-scoring respondents in different areas were significantly different from one another. However, results of Multiple Comparison of Means give a somewhat different picture. Though in most of the areas the respondents scoring high in one area tended to score low in other areas, means of scores of these respondents in the area of Accountancy were not significantly different from one another. In the area of Law 7 out of 9 means were not significantly different, while in Business 3 out of 9 means were not significantly different. However, the trend of the high-scoring respondents scoring high in the specific areas of interests and scoring low in other areas was quite pronounced in all other areas. It may be said that the sub-test on Accountancy needs revision. With this exception it may be argued that analysis of results of 300 respondents too tested the validity of the Instrument, and <sup>this</sup> upheld the assertion that the Instrument discriminated between the sub-tests.



Determining Reliability  
of the Inventory

Reliability of the inventory was determined with the scores of 100 boys and 100 girls by the statistical technique of split-half reliability. It may be mentioned here that in computing such correlations, responses of both boys and girls were taken into consideration. Hence, there are 10 odd-numbered and 10 even-numbered items. Results of this analysis are presented in Table 15.

TABLE 15

SPLIT-HALF CORRELATIONS BETWEEN ODD NUMBERED AND EVEN-NUMBERED ITEMS (RESPONSES OF 100 BOYS AND 100 GIRLS)

Sl.No.	Occupational Areas	r	F*
1.	Teaching	.74	9.68
2.	Medicine	.91	38.54
3.	Nursing	.88	27.46
4.	Social Welfare	.90	34.11
5.	Engineering	.75	10.29
6.	Business	.75	10.29
7.	Secretarial Science	.88	27.46
8.	Accountancy	.67	6.52
9.	Law	.77	11.85
10.	Family Welfare	.92	44.08

\* F with 1 and 8 df is equal to or greater than 5.32

It may be seen from Table 15 that all the correlations, which ranged between .67 and .92, are positive and significant at the five per cent level. (The hypothesis being tested was that the population correlation is equal to zero). This indicates that the Instrument is a reliable one.

The reliability of the Instrument was also tested on a sample of 150 boys and 150 girls. This was done by the statistical technique of split-half reliability. The hypothesis tested in this case was same as the one mentioned in the preceding paragraph. Results of this test are given in Table 16.

TABLE 16

SPLIT-HALF CORRELATIONS BETWEEN ODD NUMBERED AND EVEN-NUMBERED ITEMS (RESPONSES OF 150 BOYS AND 150 GIRLS)

Sl.No.	Occupational Areas	r	F*
1.	Teaching	.71	8.13
2.	Medicine	.95	74.05
3.	Nursing	.73	9.13
4.	Social Welfare	.94	60.73
5.	Engineering	.71	8.13
6.	Business	.95	74.05
7.	Secretarial Science	.96	94.04
8.	Accountancy	.90	34.11
9.	Law	.80	14.22
10.	Family Welfare	.91	38.54

\* F with 1 and 8 df is equal to or greater than 5.32

It may be seen that all the correlations reported in Table 16 are significant at the five per cent level. These reliability coefficients were positive. They ranged between .71 and .96. It may, therefore, be concluded that the Instrument was substantially reliable as a device for measuring vocational interests.

#### Differences Between Sex and Courses of Study

An analysis of variance was made to see whether sex and courses of study produced any differential effect on the responses of the sample. At this stage the level of significance was set at .05. The column-differences to be significant at this level with 1 and 297 degrees of freedom, the obtained F-value for column shall have to be equal to or greater than 3.87.

Again, the row-differences to be significant at this level with 1 and 297 degrees of freedom, the obtained F-value for the row shall have to be equal to or greater than 3.87. A summary of this analysis is reported in Table 17.

It may be seen from Table 17 that the F-value for the Between - Column ( i.e. boys versus girls) source of variance (1.50) was not significant at .05

TABLE 17

ANALYSIS OF VARIANCE OF SCORES OF 300 RESPONDENTS  
IN RESPECT OF SEX AND COURSES OF STUDY

Source of variation	ss	df	ms	F
Between Column (Between Sex)	352.09	1	352.09	1.50
Between Row (Between courses of study)	4714.17	1	4714.17	20.07
Error*	69744.94	297*	234.83	-
Total	74811.20	299		

Obtained F with df of 1 and 297 at .05 level to be significant shall have to be equal to or greater than 3.87.

\*Interaction ss and Interaction df were added with Error ss and Error df respectively.

level. This implied that there was no difference between responses of boys and girls in respect of their vocational preferences. In other words, sex does not influence the occupational choices of boys and girls. These results may be interpreted as contrary to usual expectations. Vocational preferences are also expected to be influenced by sex differences. A closer look at the type of sample selected in this study, will reveal the underlying causes for the results obtained in this study. Boys and girls of S.S.C. level are not mature enough to have stability in their vocational preferences. They are also not quite conscious of their sex-roles. They express their preferences for any vocation in the light of status, desirability, and economic gains associated with the vocations concerned. These results, though contrary to common expectations, are quite consistent with the maturity levels of boys and girls of this study.

It may further be seen from Table 17 that the F-value 20.07 for the Between - Row (i.e. science versus non-science group of students) was significant at .05 level. It implied that the science and the non-science groups of students differed in respect of their

occupational choices and that courses of study influenced the students' preferences for specific areas of interest.

Courses of studies emerged as an important variable in influencing vocational preferences of the respondents. This is quite consistent with the expectation of the researcher. In Bangladesh students take up science courses with the expectation of entering into certain vocations. So is the case with those taking non-science courses of study. It is, therefore, expected that selection of courses of studies will produce differential effect in vocational preferences of the respondents.

#### Differential Pattern of Vocational Interests

Since sex did not make any difference in the vocational choice patterns, the hypotheses regarding differential pattern of vocational interests between boys and girls were not subjected to further analysis.

For testing the hypotheses regarding differential pattern of vocational interests in different occupational areas among science and non-science students, a statistical technique of testing difference between the means was adopted. Here for each pair of means, a 't'

statistic was computed. The level of significance at this stage was set at .05. The difference between means to be significant at this level shall have the obtained t-value equal to or greater than 1.96 (with df 298). Results of those analysis are reported in Table 18B.

Table 18A presents the means and standard deviations (SD) of the science and non-science groups of students in respect of different occupational areas. Table 18B reports the obtained t-value (difference between mean scores of science and those of non-science group) in respect of different occupational areas. Table 18B indicated that there was significant differences (at .05 level) between the mean scores of the science and non-science groups in respect of the areas of Medicine, Business, Accountancy, Social Welfare, Secretarial Science and Law.

Table 18B further indicated that the differences (at .05 level) between the mean scores of science and non-science students were not significant in respect of the areas of Teaching, Nursing, Engineering and Family Welfare.

Findings of Table 18B pose certain questions. It is expected that Science students would be more in

TABLE 18A

MEANS AND STANDARD DEVIATION OF SCIENCE AND NON-SCIENCE STUDENTS IN DIFFERENT OCCUPATIONAL AREAS

Area	Groups	Mean	SD
Teaching	Science	22.40	3.49
	Non-Science	21.92	2.83
Medicine	Science	23.53	3.44
	Non-Science	21.07	3.60
Nursing	Science	23.35	4.42
	Non-Science	22.69	4.58
Social Welfare	Science	22.96	3.24
	Non-Science	23.75	2.84
Engineering	Science	23.09	2.08
	Non-Science	23.04	1.57
Business	Science	18.36	3.81
	Non-Science	21.61	4.22
Secretarial Science	Science	20.27	2.79
	Non-Science	22.32	3.34
Accountancy	Science	18.14	3.67
	Non-Science	20.43	3.91
Law	Science	17.77	3.45
	Non-Science	20.12	4.26
Family Welfare	Science	20.31	5.67
	Non-Science	19.33	4.86



TABLE 100  
 DIFFERENCE OF YEARS BETWEEN SCIENCE AND NON-SCIENCE  
 GROUPS IN DIFFERENT OCCUPATION AREAS

Areas	t	Remarks
Medicine	3.04*	Significant
Engineering	.18	Not Significant
Business	6.81*	Significant
Secretarial Science	5.69*	Significant
Law	3.19*	Significant
Teaching	1.22	Not Significant
Nursing	1.23	Not Significant
Family Welfare	1.08	Not Significant
Social Welfare	2.00*	Significant
Accountancy	4.98*	Significant

\* Significant at the .05 level.

t with df/18 equal to or greater than 1.96

favour of choosing medicine than the non-science students. This expectation was substantiated by the findings. Similar was the expectations in respect of Engineering. However, this expectation was not substantiated. As a post-hoc argument it may be said that the students of Bangladesh ascribe higher status to the profession of Engineering. They are also fascinated by this profession because of the economic gain associated with it. Therefore, even the non-science students, though not qualified for the vocation, aspire for careers of engineers. Because of such an aspiration, there may be augmentation in their scores in respect of the area of Engineering. This artificial augmentation of scores might have minimized the differences between the responses of science and non-science group of students.

#### Testing of Hypotheses Relating to Background Information

Efforts were made in this study to collect certain background information about the respondents and relate them with the scores obtained by these respondents. One such case was the information about father's income. A father's income, for this purpose,

was divided into three categories, namely (a) Tk.100.00 to Tk.600.00; (b) Tk.600.00 to Tk.1200.00; and (c) Tk.1200.00 and above. These categories were identified as Low, Medium and High income groups respectively.

A comparison was made between the scores obtained by the students and the categories of income to which their fathers belonged. The scores obtained by the students were summed up and a Chi-square was made to see whether there was any relationship between father's income and student's responses (i.e. scores obtained by them).

Here the level of significance was set at .05 and the obtained Chi-square to be significant at this level with 2 df had to be equal to or greater than 5.99. Results of this comparison is reported in Table 19.

Table 19 indicates the results of the analysis made between the student's scores and their father's income group. The obtained Chi-square (.28) shows that there was no significant difference between the scores falling in different categories of father's income. It, therefore, implies that any difference in respect of father's income does not influence the occupational choice of their sons or daughter.

TABLE 19  
 PATHER'S INCOME LEVELS AND VOCATIONAL  
 INTEREST PATTERN OF STUDENTS

Father's Income Level

	High	Medium	Low
Respondents' Scores	211.92	211.15	222.96

Chi-square = .28\*

\* Not Significant

TABLE 20  
 FATHER'S EDUCATIONAL LEVEL AND VOCATIONAL  
 INTEREST PATTERN OF STUDENTS

Father's Educational Level

	Post-graduate	Graduate	Under-graduate
Respondents' Scores	195.35	211.50	199.81

Chi-square = .69\*

\* Not Significant.

It may be mentioned here that the information regarding mother's income was not adequate enough to obtain similar relationships between mothers' income and the students' occupational choices.

A relationship between father's educational level and students' responses was also analyzed. In this analysis father's educational level was divided into three categories, namely, (a) under-graduate implying one who has not obtained a Bachelor's degree; (b) Graduate, implying one who has obtained a Bachelor's degree; and (c) Post-graduate, implying one who has obtained any diploma or degree higher than the Bachelor's degree. The scores obtained by students whose fathers belonged to the respective categories of educational levels were summed up. A Chi-square test was made to see whether there was any relationship between the responses of the students and their father's academic levels. That is, efforts were made to see whether parent's educational levels had any influence on the student's responses regarding their occupational preferences.

The results of this analysis regarding any relationship between parents' academic levels and the

student's responses is shown in Table 20. Here also the level of significance was set at .05 level. The obtained Chi-square, in order to be significant shall have to be equal to or greater than 5.99 (with 2 df).

Table 20 shows that there is no significant difference between the scores falling in different categories of parent's educational levels in respect of vocational choices of boys and girls at the S.S.C. level. That is, any difference in academic levels of their father did not influence the responses of the students.

It may be mentioned here that information regarding mother's academic levels was not adequate enough to allow any scope of obtaining similar relationships between mother's educational levels and the student's occupational preferences.

It was expected that father's income and educational levels would influence the vocational preferences of their sons and daughters. The findings of the study have not substantiated this expectation. Quite a few post-hoc arguments may be given in favour of the findings of this study. (1) Firstly, there is no sharp economic stratification in Bangladesh. As such

income level may not be an important factor in producing differential effect upon choice of vocations of the students; (2) secondly, respondents of this study seem to be unaware of and unconcerned about their parents' income. This is reflected in the information supplied by them. Quite a large number of respondents did not say anything about their mother's income and quite a few failed to give information about their father's income. These two factors, taken jointly, would explain the ineffectiveness of parents' income in causing any differential effect on the vocational choice of the respondents.

In so far as parents' educational levels are concerned another factor is also to be taken into consideration. It may be mentioned that choice of courses of study do not necessarily depend upon the aptitude of the students. Parent's educational level is supposed to exert some influence upon the liking of the students. Had the students been able to select the subjects according to their aptitudes, influence of parent's educational level might have been reflected in the vocational choice pattern of the respondents. Since the respondents are to choose the subjects that

are available to them or are forced to select subjects having promise of coveted jobs, parents' educational levels do not make any difference in their vocational preferences.

An attempt was made to test the hypotheses that the respondents were realistic in their vocational preferences. Data collected through background information (cover page of Appendix A) in this respect were inadequate. In the cover page, the students were asked to indicate the reasons for selecting the elective subjects. The responses to this question were incomplete. However, information relating to the reasons for the choice of elective subjects indicated a fair relationship with the area of medicine and engineering. Though no statistical analysis was done of these data (for lack of information about other areas), means of scores for the total group and those for the areas of medicine and engineering are reported in Table 21.



TABLE 21

COMPARISON OF SCORES OF STUDENTS INDICATING CONSCIOUS PREFERENCE FOR MEDICINE AND ENGINEERING WITH THOSE OF THE TOTAL GROUP

Groups	Medicine		Engineering	
	Means of Scores of selected Respondent	Means of Scores of Total Group	Means of Scores of selected Respondents.	Means of Scores of Total Group
Boys	24.97	22.53	24.41	23.69
Girls	24.58	22.66	20.64	19.88

It may be seen from Table 21 that both boys and girls who supplied relevant information scored higher than the total group both in the areas of Medicine and Engineering. This lends partial support to the hypotheses of the researcher that the respondents were realistic in their preferences for different occupational areas.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The main purpose of this study was to develop an Interest Inventory for the Secondary School Certificate level students in Dacca City. The construction of this Interest Inventory was based on the assumption that a dependable picture of an individual's interest can be obtained by making him to respond to a group of diverse activities.

The purpose of developing the Interest Inventory was, in particular, to find out a valid and reliable instrument for measuring the vocational interest of the S.S.C. students who have not yet entered into any job, but who are expected to make a decision regarding their occupations on completion of their study.

In constructing this Inventory, the researcher collected information in respect of different occupational areas and also consulted related literature. On the basis of the above factors and a priori reasoning of the researcher, 300 items were prepared for inclusion in the questionnaire. Efforts were made to keep the

items simple, precise and unambiguous. These 300 items covered ten occupational areas with equal number of items in each area. The areas were (1) Teaching, (2) Medicine, (3) Nursing, (4) Social Welfare, (5) Engineering, (6) Business, (7) Secretarial Science, (8) Accountancy, (9) Law and (10) Family Welfare. Of the 20 occupational areas supplied to the experts for ranking, these were the ten most preferred ones.

The study was delimited to the candidates of the S.S.C. examination for the year 1977. It was also restricted to the students of Dacca City. The researcher, with the help of teachers of the selected schools administered the questionnaires on the sample with instructions on the cover page about the mode of responding to the questionnaires. The cover page also contained some questions to elicit background information about the respondents.

The study was conducted in two phases. The first phase involved: (i) selection of items for the Inventory, (ii) determination of sex differences in respect of responses to the items of the Inventory, and (iii) assessment of validity and reliability of the Inventory. The second phase of the study tested the validity and

reliability of the Instrument. Certain hypotheses were also tested in this phase.

### Sampling Technique

A two-stage sampling technique was adopted for selection of respondents in both the phases of the study. The primary sampling unit consisted of all the schools of Dacca City and the secondary unit comprised the students from these schools. In the first phase four schools were selected at random and 100 boys and 100 girls were randomly selected from these schools. In the second phase six schools (beside the four schools already selected) were selected at random and 50 students were randomly drawn from each of these schools. Thus, in this phase there were 300 respondents in all, 150 of whom were boys and the other 150 were girls. An attempt was made to select equal number of boys and girls from the science and non-science group. It could not be done due to practical difficulties. However, the finally selected sample consisted of 115 boys from the science group, 35 boys from the non-science group, 75 girls from the science group and 75 girls from the non-science group.

### Selection of Items of the Inventory

A list of 20 occupations was prepared by the researcher and copies of these lists were given to 50 people who were drawn from different occupational areas and who were holding their jobs for at least three years. These people were requested to rank the jobs in order of their preferences. Ten most preferred areas were retained for inclusion in the Inventory. Thirty items were constructed for each of the ten most preferred occupational areas. Related literature were studied and a priori reasonings of the researcher were used for construction of these items of the questionnaire.

Discriminating ability of items was the main criterion in selection of items of the Inventory. Chi-square and DP techniques were used to determine the discriminating ability of the items. Items having Chi-square values of 5.99 or more and having DP values of 1.50 or more were retained for inclusion in the Inventory. By applying these two techniques jointly 100 items, ten in each occupational area, were finally selected for the Inventory.

### Determining Sex Differences

A simple analysis of variance was done to see

whether boys and girls reacted to the items of the questionnaire differently. Results of this analysis showed that (Table 5) there was no significant difference in the responses made by boys and girls, implying that the instrument could be used for both boys and girls.

### Measures of Validity

The following criteria were adopted for the purpose of determining and testing the validity of the instrument:

(a) Scores of 100 experts (different from 50 experts mentioned earlier) in their own areas of special interest will tend to be significantly higher than their scores in other areas.

(b) Of the 200 respondents (100 boys and 100 girls) in the first phase of the study and 300 respondents (150 boys and 150 girls) in the second phase, high-scorers in a specific area of interest will tend to score low in other areas. For this purpose, 10 per cent of the high-scorers (scoring 20 or above in each area) were selected from each of the 10 occupational areas. The scores obtained by these high-scorers in any specific area were then compared with their scores in other areas.

An analysis of variance was done to test the validity of each sub-test of the Instrument with reference to the fact that the sub-tests have the power to discriminate one from the other. The analyses, in case of the experts and the respondents indicate that the F-ratios were significant (Tables 7a - 7j; Tables 10a - 10j; Tables 13a - 13j).

Moreover, comparisons of multiple means by the Studentized Range Statistic (q) were made to see: (i) whether mean scores of experts in their own areas were significantly different from their mean scores in other occupational areas; (ii) whether mean scores of the respondents who scored high in a specific area were significantly different from their mean scores in other occupational areas.

The comparisons indicated that the obtained q-values in all the cases with the exception of the area of Accountancy were significant (Tables 8a - 8j; 11a-11j; 14a - 14j).

Thus, it may be said that the obtained data determined and tested the validity of the Instrument and, hence, it may be concluded that the Instrument for assessing the reliability of the Inventory. These correlations ranged between .77 and .96. All these correlations

the vocational interests of the S.S.C. level students is a valid one.

#### Determining Reliability of the Inventory

The reliability of the Inventory was determined by the statistical technique of split-half reliability. Each sub-test of the Instrument was split into two equivalent halves, taking odd-numbered items in one half and the even-numbered items in the other half. Scores obtained by the sample in these two equivalent halves of each sub-test were correlated by the use of the Product Moment Method. The resulting co-efficients of correlation provide measures of reliability of the Instrument. These co-efficients were tested for significance at the five per cent level.

The correlations between odd and even-numbered items of the responses from 200 respondents ranged between .67 and .92. All these correlations were significant at the five per cent level, implying that the Inventory was reliable.

Correlations between the odd and even items of the responses from 300 respondents were also computed to test the reliability of the Inventory. These correlations ranged between .71 and .96. All these corre-



lations were significant at the five per cent level. The obtained results, therefore, tested the reliability of the Instrument.

### Testing of Specific Hypotheses

In order to test the specific hypotheses, as mentioned in Chapter I, results (reported in Chapter IV) were analyzed by F and t-tests. An analysis of variance (or F - test ) showed (Table 17) that there was a significant difference between the responses of the science and non-science students. This implies that vocational preferences of these two groups of students were different. This table also indicated that there was no significant difference between the responses of boys and girls implying that the Instrument could be used for both boys and girls.

In order to see the pattern of vocational preference of the science and non-science students regarding different occupational areas, mean scores of science and non-science groups in each occupational area were compared. Difference of means was tested by a t-test. Results of this test showed (Table 18B ) that there was no significant difference between the mean scores of the science and non-science groups of students in respect of their vocational

preferences in the areas of Teaching, Nursing, Engineering and Family Welfare. However, there was a significant difference between the mean scores of science and non-science groups of students in the areas of Medicine, Social Welfare, Business, Secretarial Science, Accountancy and Law. Here, as compared with the non-science students, science students were more in favour of choosing Medicine as a profession. The non-science students, however, were more in favour of choosing Social Welfare, Business, Secretarial Science, Accountancy and Law as vocations than the science students.

Influence of Parents' Income and Education on the Respondents' Vocational Preferences

A Chi-square test was done to see whether fathers' income or educational level made any difference in the vocational preferences of their sons or daughters.

Results showed (Tables 19 and 20) that neither fathers' income, nor their education had any thing to do with the occupational choices of the respondents. Since data supplied by the respondents on mothers' income and educational level were not adequate, no analysis could be done to see the influence of mothers' income and edu-

ational level on the vocational preferences of their sons and daughters.

Realistic Approach of the Respondents to their Vocational Choices

Adequate data were not available to test the hypotheses regarding the realistic approach of the respondents to their vocational choices. However, those students who consciously gave their opinion in favour of Medicine and Engineering were the ones who scored high in the areas of Medicine and Engineering. A comparison of their mean scores with the mean scores of the total group indicated (Table 21) that their scores were higher than those of the total group. This lends a partial support to the hypothesis that the respondents were realistic in expressing their vocational preferences.

Conclusions

Results reported in Chapter IV and summarized above, led to the following conclusions:

1. The instrument designed to assess the vocational preference of the S.S.C. level students in Dacca City is a valid one.
2. The said instrument is also reliable.

3. The said Instrument could be profitably used by teachers, counsellors, and guidance workers for measuring vocational preferences of both boys and girls.

4. The Instrument is found to be valid when applied to a sample of 150 boys and 150 girls (Phase II).

5. The Instrument is found to be reliable when applied to a sample of 150 boys and 150 girls (Phase II).

6. The Instrument is also capable of discriminating vocational preferences of science and non-science group of students (Phase II), that is, responses of the science and non-science students to the items of the instrument are different.

7. The Instrument is also capable of discriminating the patterns of vocational choice of the science and non-science students. It is found, that,

(a) Science students were more in favour of choosing Medicine as a vocation than the non-science students;

(b) Non-science students were more in favour of choosing Social Welfare, Business, Secretarial Science, Accountancy and Law as vocations than the science students.

8. The Instrument further shows that fathers'

income or educational level did not make any difference in matters of vocational preferences of their sons or daughters.

### Recommendations

In view of the experiences of the researcher in developing the present Interest Inventory and the problems faced in course of conducting the study, the following recommendations are submitted:

1. In order to enhance the validity of any instrument designed in line with the present study, the number of experts in each occupational area may be increased.
2. Attempts may be made to tap more occupational areas for inclusion of such areas in the Inventory.
3. Efforts may be made to prepare a dictionary of occupational titles with detailed occupational information relevant to occupational fields existing in Bangladesh.
4. Attempts may also be made to develop an interest inventory of this type covering the entire nation. Special emphasis on stratified sampling may be given in respect of ecological, sub-cultural and socio-

economic variables.

5. Efforts may also be made to see whether an instrument of this type could be used for both males and females when extended to a larger sample.

6. Attempts may further be made to see whether vocational interests change at different age levels. Studies may be so designed as to incorporate respondents belonging to schools, colleges or universities.

7. Efforts may be made to design such studies as would enable a comparison of vocational preferences between the respondents of the age level of the present study and those of a higher age level, preferably above 17 years of age.

8. Efforts may be made to design such studies as would enable a comparison of the vocational interest patterns of students from the urban and rural areas. If necessary, expressions suited to the vocabulary of rural people may be included in the inventory.

9. A longitudinal study may be made in respect of the sample covered in the present study.

10. Efforts may be made to see how the vocational preferences of women are influenced by men's evaluation of different occupations (men's ascription of status to

different jobs) by including appropriate questions in the background information.

11. Studies may be designed to explore the possibilities of having clusters of occupational interests in course of developing any vocational interest inventory.

12. Studies may be made regarding the feasibility of constructing any valid single interest inventory in the line of the sex balanced Unisex Interest Inventory (Uni-II).

পরিষ্কার বিষয়ে নির্দেশনা (সংস্করণ ১৯৭৩)

সংস্করণ ১৯৭৩ (১৯৭৩ সাল)

ক্রমিক নং

১. প্রতি বছর পরিষ্কার কার্যে অংশগ্রহণ করা হবে কিনা

হ্যাঁ  না

নিয়মিত  স্থগিত

২. পরিষ্কার কার্যে অংশগ্রহণের ক্ষেত্রে কোনো সমস্যা হলে তাৎক্ষণিকভাবে পরিষ্কার কর্মসূচি চালানো হবে কিনা

- হ্যাঁ
- না
- হ্যাঁ
- না
- হ্যাঁ
- না
- হ্যাঁ
- না
- হ্যাঁ
- না
- হ্যাঁ
- না
- হ্যাঁ
- না

পরিষ্কার



[ঐচ্ছিক বিষয় নির্বাচন সূত্রক্রান্ত তথ্য]  
(যথাযথ ঘরে X চিহ্ন দাও)

নাম \_\_\_\_\_ শ্রেণী \_\_\_\_\_ স্কুল \_\_\_\_\_

- ১। তুমি নবম শ্রেণীতে কোন বিভাগে যোগ দিয়েছ?
- মানবিক  বিজ্ঞান  গার্হস্থ্য অর্থনীতি  বাণিজ্য
- শিল্প কলা  কৃষি

২। উপরোক্ত বিভাগগুলি বেছে নেবার ক্ষেত্রে তুমি কেন বিশেষ বিষয়টি বেছে নিলে?

- আমার ভাল লেগেছে বলে
- আমার ভবিষ্যতে ডাক্তার হবার ইচ্ছা আছে
- আমার ভবিষ্যতে ইঞ্জিনিয়ার হওয়ার ইচ্ছা আছে
- আমার ভবিষ্যতে ব্যবসায়-প্রশাসন সূত্রক্রান্ত বিভাগে কাজ নেবার ইচ্ছা আছে।
- আমার ভবিষ্যতে গার্হস্থ্য অর্থনীতি সূত্রক্রান্ত কোন পেশায় যোগ দেবার ইচ্ছা আছে।
- আমার অভিভাবক এর ইচ্ছা অনুযায়ী সেই বিষয় নিয়েছি
- সেই বিষয়ে শিক্ষণ লাভ করলে ভবিষ্যতে ভাল চাকরী পাবার সম্ভাবনা থাকবে।
- আমি সূত্রক্রান্তের কাজে আমার বিদ্যা কাজে লাগাতে চাই
- আমার যে বিষয়ে আগ্রহ সেই বিষয়ে শিক্ষণ লাভের সুযোগ সেই বিদ্যালয়ে কাই।

৩। নিম্নলিখিত বিশেষ বিষয় অথবা পেশা গুলিতে যে বিষয়ের কাজ করতে হয় সে সূত্রক্রান্তে তোমার কোন বিষয় আছে কি?

- শিক্ষকতা
- চিকিৎসা বিদ্যা
- প্রকৌশল (Engineering)
- সন্মাল কল্যান
- সেবা (nursing)
- ব্যবসা
- শিক্ষাব-সঞ্চন
- ওকালতি
- পারিবারিক সন্মল (Family Welfare)
- সরকারী চাকরী

100  
91  
79  
65  
50  
32  
13  
10  
7  
5

100  
91  
79  
65  
50  
32  
13  
10  
7  
5

সংস্কৃত শব্দভাণ্ডার

সংস্কৃত শব্দভাণ্ডার

এই সংস্কৃত শব্দভাণ্ডারটি সংস্কৃত ভাষার বিভিন্ন শব্দকে বাংলায় লিখিত হয়েছে।

সংস্কৃত শব্দ : পরিবার (Family welfare) ;  
বাংলা শব্দ : পরিবার ;  
সংস্কৃত শব্দ : চিকিৎসা (Nursing) ;  
বাংলা শব্দ : চিকিৎসা ;  
সংস্কৃত শব্দ : ইঞ্জিনিয়ারিং (Engineering) ;  
বাংলা শব্দ : ইঞ্জিনিয়ারিং ;

এই সংস্কৃত শব্দভাণ্ডারটি সংস্কৃত ভাষার বিভিন্ন শব্দকে বাংলায় লিখিত হয়েছে।

সংস্কৃত শব্দভাণ্ডার  
বাংলা শব্দভাণ্ডার

[ সংস্কৃত শব্দভাণ্ডারটি সংস্কৃত ভাষার বিভিন্ন শব্দকে বাংলায় লিখিত হয়েছে। ]

বিঃদ্রঃ তোমাদের নাম, পরিচয় এবং অন্যান্য যে সব তথ্য তোমরা সুবয়স্ক  
করাতে সে সম্বন্ধে সম্পূর্ণ গোপনীয়তা বক্ষা করা হবে।

নাম \_\_\_\_\_ জন্ম তারিখ- \_\_\_\_\_ স্ত্রী- \_\_\_\_\_  
 বিদ্যালয়ের নাম \_\_\_\_\_  
 পিতা/ অভিভাবকের নাম \_\_\_\_\_

- পিতার বয়স \_\_\_\_\_  
 পিতার পেশা :-  
 ১। শিক্ষকতা   
 ২। ডাক্তার   
 ৩। প্রকৌশলী-   
 ৪। সরকারী চাকুরে :-  
 (ক) অফিসার   
 (খ) কেরানী   
 (গ) অন্যান্য   
 ৫। ব্যাঙ্কের কর্মচারী  
 (ক) অফিসার   
 (খ) কেরানী   
 (গ) অন্যান্য   
 ৬। ব্যবসায় বা শিল্প প্রতিষ্ঠানের  
 চাকুরে-  
 (ক) অফিসার   
 (খ) কেরানী   
 (গ) অন্যান্য   
 ৭। স্বয়ম্ভাষী  
 ৮। অন্যান্য [কি কাজ করেন উল্লেখ কর]

- পিতার মাসিক আয় \_\_\_\_\_  
 ১। ৩০০ টাকার নিচে   
 ২। ৩০০ - ৬০০ টাকার মধ্যে   
 ৩। ৬০০ - ৯০০ টাকার মধ্যে   
 ৪। ৯০০ - ১২০০ টাকার মধ্যে   
 ৫। ১২০০ ও তার উপরে   
 পিতার শিক্ষাগত যোগ্যতা—

- মাতার বয়স \_\_\_\_\_  
 মাতার পেশা :-  
 ১। শিক্ষকতা   
 ২। ডাক্তার   
 ৩। প্রকৌশলী-   
 ৪। সরকারী চাকুরে :-  
 (ক) অফিসার   
 (খ) কেরানী   
 (গ) অন্যান্য   
 ৫। ব্যাঙ্কের কর্মচারী  
 (ক) অফিসার   
 (খ) কেরানী   
 (গ) অন্যান্য   
 ৬। ব্যবসায় বা শিল্প প্রতিষ্ঠানের চাকুরে  
 (ক) অফিসার   
 (খ) কেরানী   
 (গ) অন্যান্য   
 ৭। স্বয়ম্ভাষী  
 ৮। অন্যান্য [কি কাজ করেন উল্লেখ কর]

- মাতার মাসিক আয় \_\_\_\_\_  
 ১। ৩০০ টাকার নিচে   
 ২। ৩০০ - ৬০০ টাকার মধ্যে   
 ৩। ৬০০ - ৯০০ টাকার মধ্যে   
 ৪। ৯০০ - ১২০০ টাকার মধ্যে   
 ৫। ১২০০ ও তার উপরে   
 মাতার শিক্ষাগত যোগ্যতা—

পারিবারে ডাইনানের সংখ্যা \_\_\_\_\_  
 ডাইনানের ঋকে তোমার স্থান \_\_\_\_\_

10 \* 15 ----- 1 2 3 4 5 : 5 6 7 8 9 10  
1. 1 2 3 4 5 6 7 8 9 10 (X) 11 12 13 14 15 16 17 18 19 20  
20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40  
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60  
61 62 63 64 65 66 67 68 69 70 ----- 71 72 73 74 75 : 76 77 78 79 80  
81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20  
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40  
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60  
61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80  
81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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১।	দ্রব্যবিজ্ঞান পাঠ করা - - - - -	প	ন	অ
২।	যোগী পরীক্ষা করা ও যোগ নির্ণয় করা - - - - -	প	ন	অ
৩।	স্বাস্থ্য ও রোগ বাখার ব্যাপারে সাহায্য করা - - - - -	প	ন	অ
৪।	লোককে টাকা দিয়ে সাহায্য করা - - - - -	প	ন	অ
৫।	কৃৎ কৌশল (Mechanical) সংক্রান্ত যন্ত্রের উত্তর দেওয়া -	প	ন	অ
৬।	নিজের স্বাস্থ্যের ব্যবস্থা বানিয়ে সংক্রান্ত খোঁজ খবর রাখা প	প	ন	অ
৭।	নেত্রা নেত্রির কাজ করা - - - - -	প	ন	অ
৮।	টাকা পয়সা লেনদেনের হিসাব রাখা - - - - -	প	ন	অ
৯।	যদি তোমার সম্বন্ধে আর্থিক সমালোচনা করে তাদের বিরুদ্ধে অনতিবিলম্বে ক্ষান্তির ব্যবস্থা করা	প	ন	অ
১০।	জনসংখ্যা সম্পর্কিত তথ্যাবলী সংগ্রহ করা - - - - -	প	ন	অ
১১।	ব্রহ্মচর্য শাস্ত্র অধ্যয়ন - - - - -	প	ন	অ
১২।	এক-বে মোস্তিন চালানো - - - - -	প	ন	অ
১৩।	সাংস্কৃতিক ও মানসিক অবস্থার উন্নতিবিধান সাহায্য করা - - - - -	প	ন	অ
১৪।	লোককে পরামর্শ দিয়ে সাহায্য করা - - - - -	প	ন	অ
১৫।	নকশা ও চার্ট তৈরি করা - - - - -	প	ন	অ
১৬।	অর্থনীতি পাঠ করা - - - - -	প	ন	অ
১৭।	চিঠি পত্রের তদারক করা - - - - -	প	ন	অ
১৮।	বিপুল পরিমাণ নগদ টাকা লেনদেন করা - - - - -	প	ন	অ
১৯।	নীতি নির্ধারণের জন্য সিদ্ধান্ত নেওয়া - - - - -	প	ন	অ
২০।	আর্থিক জনসংখ্যার কুলম্ব সম্বন্ধে জানানো - - - - -	প	ন	অ
২১।	নৃ-বিদ্যা (Anthropology) পাঠ করা - - - - -	প	ন	অ
২২।	নিজের অসুস্থতা সম্বন্ধে আলোচনা করা - - - - -	প	ন	অ
২৩।	প্রাথমিক সাহায্য প্রদান - - - - -	প	ন	অ
২৪।	গরীব দুঃখীদের সাহায্য করা - - - - -	প	ন	অ
২৫।	জনশক্তি ও অন্যান্য শক্তি কাজে লাগানো - - - - -	প	ন	অ
২৬।	ক্রেতাকে খুশী রাখার চেষ্টা করা - - - - -	প	ন	অ
২৭।	টেলিফোন ডাক এনে তদারক করা - - - - -	প	ন	অ
২৮।	বিক্রয় সংক্রান্ত হিসাব রাখা করা - - - - -	প	ন	অ
২৯।	অন্যের কাজে প্রয়োজনবোধে হস্তক্ষেপ করা - - - - -	প	ন	অ
৩০।	আর্থিক সম্ভান থাকার অসুবিধা সম্বন্ধে আলোচনা করা	প	ন	অ
৩১।	শিক্ষা বিষয়ক জীব দেখা - - - - -	প	ন	অ
৩২।	জাল্য চিকিৎসা করা - - - - -	প	ন	অ
৩৩।	স্বতন্ত্র্য বোঝা ও পরিষ্কার করার সাহায্য করা	প	ন	অ
৩৪।	মানুষের প্রতি আন্তরিক সম্মানভূতি পোষণ করা - - - - -	প	ন	অ
৩৫।	জ্যামিতি পাঠ করা - - - - -	প	ন	অ
৩৬।	বিক্রয়যোগ্য পণ্যের প্রতি ক্রেতার আগ্রহ লাগানো - - - - -	প	ন	অ

১	১৬	--- -- -- -- --	১৯২০-২১-এ	১০৬
১	১৬	--- -- -- -- --	১৯২১-২২-এ	১০৬
১	১৬	--- -- -- -- --	১৯২২-২৩-এ	১০৬
১	১৬	--- -- -- -- --	১৯২৩-২৪-এ	১০৬
১	১৬	--- -- -- -- --	১৯২৪-২৫-এ	১০৬
১	১৬	--- -- -- -- --	১৯২৫-২৬-এ	১০৬
১	১৬	--- -- -- -- --	১৯২৬-২৭-এ	১০৬
১	১৬	--- -- -- -- --	১৯২৭-২৮-এ	১০৬
১	১৬	--- -- -- -- --	১৯২৮-২৯-এ	১০৬
১	১৬	--- -- -- -- --	১৯২৯-৩০-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩০-৩১-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩১-৩২-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩২-৩৩-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩৩-৩৪-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩৪-৩৫-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩৫-৩৬-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩৬-৩৭-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩৭-৩৮-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩৮-৩৯-এ	১০৬
১	১৬	--- -- -- -- --	১৯৩৯-৪০-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪০-৪১-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪১-৪২-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪২-৪৩-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪৩-৪৪-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪৪-৪৫-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪৫-৪৬-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪৬-৪৭-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪৭-৪৮-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪৮-৪৯-এ	১০৬
১	১৬	--- -- -- -- --	১৯৪৯-৫০-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫০-৫১-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫১-৫২-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫২-৫৩-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫৩-৫৪-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫৪-৫৫-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫৫-৫৬-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫৬-৫৭-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫৭-৫৮-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫৮-৫৯-এ	১০৬
১	১৬	--- -- -- -- --	১৯৫৯-৬০-এ	১০৬
১	১৬	--- -- -- -- --	১৯৬০-৬১-এ	১০৬

৭৩/	সাহিত্য পাঠ করা	পা	ন	অ
৭৪/	কোন নমুনা পরীক্ষা করার জন্য আইকোফোপ ব্যবহার করা	পা	ন	অ
৭৫/	যোগীকে নিয়মিত পত্র্য ব্যবহার করা	পা	ন	অ
৭৬/	যথ: জ্যেষ্ঠদের অনুগ্রহ থাকা	পা	ন	অ
৭৭/	নির্ধারিত কাজ চানু রাখা	পা	ন	অ
৭৮/	তৈরী-জিনিষের প্রচার করা	পা	ন	অ
৭৯/	পারামর্শদাতা হিসাবে কাজ করা	পা	ন	অ
৮০/	আফিসের টাকা পয়সার দায়িত্ব গ্রহণ ও সংরক্ষণ	পা	ন	অ
৮১/	সকলের প্রয়োজনীয় ও উপযোগী তথ্য ব্যবহার করা	পা	ন	অ
৮২/	ছোট পরিবারের সুবিধা সম্পর্কে বস্তু উল্লেখ্য প্রচারপত্র বিলি করা	পা	ন	অ
৮৩/	নিজের ওনারের আর্থিক ভাবে জানার জন্য বিশেষ পরীক্ষায় অধ্যয়ন	পা	ন	অ
৮৪/	খাদ্য ও পুষ্টি সম্বন্ধে অধ্যয়ন করা	পা	ন	অ
৮৫/	কটিয়া যাওয়া জায়গায় শ্রমী নাগারনা	পা	ন	অ
৮৬/	লোকজনদের সহিত কর্মসূচন বা আর্থিক পরিবেশে সাহায্য করা	পা	ন	অ
৮৭/	অন্যান্য কর্মচারীদের নির্মাণকাজ তদারক করা	পা	ন	অ
৮৮/	জানল কেনার জন্য অর্ডার দেওয়া	পা	ন	অ
৮৯/	আফিস সহক্রান্ত কার্যবলীর বিবরণ দেওয়া	পা	ন	অ
৯০/	আয় ব্যয়ের বিবরণী তৈরী করা	পা	ন	অ
৯১/	সকলের সহিত উন্নততর সামাজিকতা বলায় রাখা	পা	ন	অ
৯২/	ছোট পরিবার ও বড় পরিবার এর আর্থিকতা ব্যাখ্যা করা	পা	ন	অ
৯৩/	বস্ত্র রচনা নেখা	পা	ন	অ
৯৪/	স্বাস্থ্য পরীক্ষা করা	পা	ন	অ
৯৫/	জ্বরে আক্রান্ত যোগীর মাথা ষৌণ্ড্যনা	পা	ন	অ
৯৬/	ব্যক্তিগত সম্পর্ক উন্নত করা	পা	ন	অ
৯৭/	হস্তচালিত যন্ত্রের সাহায্যে কাজ করা	পা	ন	অ
৯৮/	ব্যবসা বানিজ্য বিষয়ে বই নেখা	পা	ন	অ
৯৯/	যে কোন কাজ চানানোর সহজোপায়ের তালিকা প্রস্তুত করন।	পা	ন	অ
১০০/	সহজা সহক্রান্ত কাজ যাচাই করা	পা	ন	অ
১০১/	নাগরিক ও পেঙ্গাদার লোকদের কাছে বক্তৃতা দেওয়া	পা	ন	অ
১০২/	পরিবার পরিচালনা ক্লিনিকে কাজ করা	পা	ন	অ

21	10	-----	1808
21	10	-----	1700
21	10	-----	1600
21	10	-----	1500
21	10	-----	1400
21	10	-----	1300
21	10	-----	1200
21	10	-----	1100
21	10	-----	1000
21	10	-----	900
21	10	-----	800
21	10	-----	700
21	10	-----	600
21	10	-----	500
21	10	-----	400
21	10	-----	300
21	10	-----	200
21	10	-----	100
21	10	-----	0



১৩৪/	স্বাস্থ্যকর লোকদের সাথে সম্প্রীতি বজায় রাখা	পা	ন	অ
১৩৫/	বায়ুর চাপ, তাপ ও ঘনত্ব পরিমাপ করা	পা	ন	অ
১৩৬/	কাঁচা মাংস ব্যবহার উপযোগী করে তোলা	পা	ন	অ
১৩৭/	বিলম্বিত প্রস্তুত করা	পা	ন	অ
১৩৮/	কারখানায় উৎপাদিত দ্রব্যাদির মূল্য বিশ্লেষণ করা	পা	ন	অ
১৩৯/	জনসংখ্যার বৃদ্ধি হ্রাস দেওয়া	পা	ন	অ
১৪০/	টেলিভিশনে জনসংখ্যা সীমিত করেন সরকারে প্রোগ্রাম করা	পা	ন	অ
১৪১/	কবিতা পাঠ করা	পা	ন	অ
১৪২/	উদ্ভিদ বিদ্যা পাঠ করা	পা	ন	অ
১৪৩/	আমেরিকা যুক্তিতে পানি পান করা	পা	ন	অ
১৪৪/	স্বাস্থ্য বিজ্ঞান পাঠ করা	পা	ন	অ
১৪৫/	বৈজ্ঞানিক সত্যের প্রাপ্তি নির্দেশকারী লিপিবদ্ধ করা ও মানিয়া চলা	পা	ন	অ
১৪৬/	পণ্য আমন্ত্রণের পরিকল্পনা ও উন্নয়ন	পা	ন	অ
১৪৭/	কোন কাজের অক্ষিপ্ত ব্যবহার প্রদান	পা	ন	অ
১৪৮/	ব্যক্তিগত জীবনের চিত্র করা রাখা	পা	ন	অ
১৪৯/	সকলের জন্য একই আইন প্রণয়ন করা	পা	ন	অ
১৫০/	টেলিভিশনে প্রচারের জন্য জন-সংখ্যা সীমিত করেন সরকারে গান্ধী, নাটক মেলা	পা	ন	অ
১৫১/	বিজ্ঞান বিষয়ক কাল্পনিক গান্ধী পাঠ	পা	ন	অ
১৫২/	শারীরিক বিজ্ঞান পাঠ	পা	ন	অ
১৫৩/	অসুস্থ ব্যক্তির কাগজ বদলাইতে আদেশ করা	পা	ন	অ
১৫৪/	উদ্ভিদ কলমের বন্ধুত্বপূর্ণ ব্যবহার লাভ	পা	ন	অ
১৫৫/	প্রত্নতাত্ত্বিক আবিষ্কার বিশ্লেষণ করা	পা	ন	অ
১৫৬/	পেশা সংক্রান্ত প্রবন্ধ রচনা করা	পা	ন	অ
১৫৭/	বিজ্ঞাপন মেলা	পা	ন	অ
১৫৮/	আয়ব্রের অধ্যয়ন বিশ্লেষণ করা	পা	ন	অ
১৫৯/	কোন আদেশ মানিয়া চলা	পা	ন	অ
১৬০/	বাজী বাজী ঘুরে জনসংখ্যা সরকারে আন্দোলন করা	পা	ন	অ
১৬১/	চাও ও কাওকলা অর্চন	পা	ন	অ
১৬২/	পানি বিদ্যা অর্চন করা	পা	ন	অ
১৬৩/	বৈজ্ঞানিক মূল আচরণ দেওয়া	পা	ন	অ
১৬৪/	একাকী কাজ করা	পা	ন	অ
১৬৫/	দুরবস্থা যন্ত্র ব্যবহার করা	পা	ন	অ
১৬৬/	উৎপাদন সংস্থা কার্যনির্বাহ পরিদর্শন করা	পা	ন	অ
১৬৭/	চিঠি পত্র	পা	ন	অ
১৬৮/	জমা খরচের হিসাবের বিপোর্ট পরীক্ষা করা	পা	ন	অ



২০৫/	বৈদ্যুতিক সরঞ্জামাদি তৈরী করা - - - - -	প	ন	অ
২০৬/	ব্যবসায়-প্রশাসনিক কাজে আশ্রয় করা - - - - -	প	ন	অ
২০৭/	স্মার্তনিসি স্মৃতনিসি নিয়ম - - - - -	প	ন	অ
২০৮/	আয়ব্রহ্মের সংশ্লিষ্ট বিবরণ দাখিল - - - - -	প	ন	অ
২০৯/	উৎপাদন সঙ্কর্কে নীতি প্রনয়ন - - - - -	প	ন	অ
২১০/	জনসংখ্যার ও ব্যবহৃত সঙ্কর্কে গণনা নেয়া - - - - -	প	ন	অ
২১১/	গবেষণা সংক্রান্ত প্রকল্প চালু রাখা - - - - -	প	ন	অ
২১২/	সামান্য চিকিৎসার বই পড়া - - - - -	প	ন	অ
২১৩/	বোম্বার কাঙ্ছে বসে তাকে আশ্রয় দেওয়া - - - - -	প	ন	অ
২১৪/	সমাজ কল্যাণ স্কুলক কাজে-অংশ গ্রহন করা - - - - -	প	ন	অ
২১৫/	কুৎকৌশল (Engineering) সংক্রান্ত পত্রিকা পাঠ করা - - - - -	প	ন	অ
২১৬/	ব্যবসা সংক্রান্ত সহবাদের গোপনীয়তা রক্ষা করা - - - - -	প	ন	অ
২১৭/	অফিসে প্রাপ্ত তথ্যগুলিকে বিভিন্ন বিভাগভাগ করা - - - - -	প	ন	অ
২১৮/	স্বাস্থ্যের খরচের হিসাব রাখা - - - - -	প	ন	অ
২১৯/	ডুবি ডাকাতি জানিত অপরাধের বিচার করা - - - - -	প	ন	অ
২২০/	জনসংখ্যা সীমিত করেন আশ্রয়ী লোকদের পরিবার পরিচালনা কেন্দ্র আনা - - - - -	প	ন	অ
২২১/	পরিষ্কার জন্য প্রস্তুত তৈরী করা - - - - -	প	ন	অ
২২২/	বসন্ত, কলেরা, টাইফয়েড প্রতিরোধার্থে সংক্রান্ত বই পড়া - - - - -	প	ন	অ
২২৩/	বোম্বার বোম্বার ক্রমোন্নতি উদারক করা - - - - -	প	ন	অ
২২৪/	সেনীও ছাত্রছাত্রীদের উপদেশ দেওয়া - - - - -	প	ন	অ
২২৫/	যন্ত্রপাতি ও মেসিনের খরচা প্রস্তুত করা - - - - -	প	ন	অ
২২৬/	কারখানার কাজের সার্বিক তদারক করা - - - - -	প	ন	অ
২২৭/	অফিসের নিয়ম অনুযায়ী কর্তব্য পালন করা - - - - -	প	ন	অ
২২৮/	জমার অঙ্কে গড়ান্নি খুঁজিয়া বাহির করা - - - - -	প	ন	অ
২২৯/	কোন কাজে সিদ্ধান্ত গ্রহণে বিশেষ করা - - - - -	প	ন	অ
২৩০/	জনসংখ্যা বিষয়ক ছড়া নেয়া - - - - -	প	ন	অ
২৩১/	পেমের যথাযোগ্য উত্তর দেওয়া - - - - -	প	ন	অ
২৩২/	বোম্বার শরীরের তাপ পরীক্ষা করা - - - - -	প	ন	অ
২৩৩/	বাপীবিদ্যা সংক্রান্ত পাঠ গ্রহণ - - - - -	প	ন	অ
২৩৪/	খেলারীনা সঙ্কর্কে জনসার্বিককে অবহিত করা - - - - -	প	ন	অ
২৩৫/	সেই অথবা গৃহ নির্মাণ কৌশল অধ্যয়ন - - - - -	প	ন	অ
২৩৬/	পেমোগত কাজে উপলক্ষে অকারিকার বিভিন্ন স্বয়ং গমন - - - - -	প	ন	অ
২৩৭/	খরচের কাগজ পড়া ও তত্ত্ব সূচক সহায়ক সংগ্রহ করা - - - - -	প	ন	অ
২৩৮/	জমার খাত অতিরিক্ত আদায়ের কারণ বিশ্লেষণ করা - - - - -	প	ন	অ
২৩৯/	সংকলকে আয়কর সঙ্কর্কে পরামর্শ দেওয়া - - - - -	প	ন	অ



২৭৪/	বিমান চলাকালে যাত্রীদের সেবা করা - - - - -	প	ন	অ
২৭৫/	যান্ত্রিক কাজে অনভিজ্ঞ লোকদের উপদেশ দেওয়া	প	ন	অ
২৭৬/	যান্ত্রিক বিষয়ে অর্জিত করা - - - - -	প	ন	অ
২৭৭/	কোন কাজের সময়সূচী স্থানীয় চলা - - - - -	প	ন	অ
২৭৮/	ঐচ্ছাসিক আয়তনের হিসাব করা - - - - -	প	ন	অ
২৭৯/	লোককে কোন ব্যাপারে সিদ্ধান্ত গ্রহণে আশ্রয় করা -	প	ন	অ
২৮০/	জনসংখ্যার ভূগোলিক সঙ্কেত নাটক লেখা	প	ন	অ
২৮১/	ছোট গান লেখা - - - - -	প	ন	অ
২৮২/	সাদাপিণ্ডের কাজ সঙ্কেত বর্ণনা রাখা - - - - -	প	ন	অ
২৮৩/	বোম্বের চিত্র বিশদভাবে তৈরি করে সংগ্রহ করা -	প	ন	অ
২৮৪/	অনুষ্ঠানের অংশ সঙ্কেত রাখা - - - - -	প	ন	অ
২৮৫/	কারিগরি বিদ্যার বই পড়া - - - - -	প	ন	অ
২৮৬/	বিক্রয় তালিকা প্রস্তুত করা - - - - -	প	ন	অ
২৮৭/	শ্রুতমিপি লেখানো - - - - -	প	ন	অ
২৮৮/	ঐচ্ছাসিক আয়তনের হিসাব রাখা - - - - -	প	ন	অ
২৮৯/	জনসংখ্যার ভৌগোলিক বস্তুত্ব দেওয়া - - - - -	প	ন	অ
২৯০/	গানের সঙ্কেত জনসংখ্যা সীমিত করণ প্রচার	প	ন	অ
২৯১/	করণ অর্জিত - - - - -	প	ন	অ
২৯২/	সারীর গঠনতন্ত্র সঙ্কেত জ্ঞানার্জন করা	প	ন	অ
২৯৩/	পীড়িত লোকের আয়ের জন্য আশ্রয় সঙ্কেত দেওয়া -	প	ন	অ
২৯৪/	নিজেকে পর্যাপ্ত হিসাবে দায়িত্ব নিয়োজিত করে স্বাধীন কোন সংস্থা স্থাপন করা - - - - -	প	ন	অ
২৯৫/	যন্ত্রপাতি সংরক্ষণ ও তৈরি করা - - - - -	প	ন	অ
২৯৬/	স্বাস্থ্যবিধির উচ্চমান বজায় রাখা - - - - -	প	ন	অ
২৯৭/	কাজপত্র তৈরি, সাজানো ও সঠিকভাবে করণ	প	ন	অ
২৯৮/	বৃত্তান্ত (Trial-Balance) প্রস্তুত করা - - - - -	প	ন	অ
২৯৯/	স্বাস্থ্য সংক্রমে ব্যবহৃত করা - - - - -	প	ন	অ
৩০০/	জনগণের মধ্যে ছোটপরিবার সঙ্কেত আলোচনা করা - - - - -	প	ন	অ

Appendix 1  
Schedules of studies of  
the ...  
...

- 1. ...
- 2. ...

**APPENDIX**

- 1. ...
- 2. ...
- 3. ...
- 4. ...
- 5. ...
- 6. ...
- 7. ...
- 8. ...
- 9. ...
- 10. ...

## APPENDIX B

## Information regarding choice of

## Elective Subjects

(Put 'X' mark in proper spaces)

Name \_\_\_\_\_ Class \_\_\_\_\_ School \_\_\_\_\_

1. Which group have you joined in class IX?

\_\_\_\_\_ Humanities; Science; \_\_\_\_\_

\_\_\_\_\_ Home Economics; Commerce; \_\_\_\_\_

\_\_\_\_\_ Industrial Arts; Agriculture. \_\_\_\_\_

2. Why have you selected the specific area while choosing the elective subject?

\_\_\_\_\_ I like it.

\_\_\_\_\_ In future I wish to be a doctor.

\_\_\_\_\_ In future I wish to be an engineer.

\_\_\_\_\_ I wish to take up any job in Business Administration.

\_\_\_\_\_ I wish to accept any job related to Home Economics.

\_\_\_\_\_ According to my parents' desire.

\_\_\_\_\_ Training in this area has scope for better job in future.

\_\_\_\_\_ I want to utilise my knowledge in house hold activities.

\_\_\_\_\_ This school does not offer training in the subject in which I have been interest.

3. Do you have any idea about the nature of work required for the following jobs or specific areas?

- 1. \_\_\_\_\_ Teaching
- 2. \_\_\_\_\_ Medicine
- 3. \_\_\_\_\_ Engineering
- 4. \_\_\_\_\_ Social Welfare
- 5. \_\_\_\_\_ Nursing
- 6. \_\_\_\_\_ Business
- 7. \_\_\_\_\_ Accountancy
- 8. \_\_\_\_\_ Law
- 9. \_\_\_\_\_ Family Welfare
- 10. \_\_\_\_\_ Government Service

(Seriality of jobs according to social status or personal preference)

Name . . . . . Class . . . . . Roll No. . . . .

School . . . . .

Given below is a list of occupational areas. Read them carefully and act according to the instructions given below:

- Teaching;      Medicine;      Engineering;      Social Welfare;
- Nursing;      Business;      Accountancy;      Law;
- Government Service;      Family Welfare.

Arrange the above mentioned occupational areas in the given columns according to your own preference and also according to your view of social status attached to each:

- 1. Medicine
- 2. Engineering



Areas of Occupation (according to social prestige)

Areas of Occupation (according to your preference)

- 1. (a) Clerk \_\_\_\_\_
- 2. (c) Others \_\_\_\_\_
- 3. Bank Official \_\_\_\_\_
- 4. (a) Officer \_\_\_\_\_
- 5. (b) Clerk \_\_\_\_\_
- 6. (c) Others \_\_\_\_\_
- 7. Service holder in a Bank or Industry \_\_\_\_\_
- 8. (a) Officer \_\_\_\_\_
- 9. (b) Clerk \_\_\_\_\_
- 10. (c) Others \_\_\_\_\_

- 1. (b) Clerk \_\_\_\_\_
- 2. (c) Others \_\_\_\_\_
- 3. Bank Official \_\_\_\_\_
- 4. (a) Officer \_\_\_\_\_
- 5. (b) Clerk \_\_\_\_\_
- 6. (c) Others \_\_\_\_\_
- 7. Service holder in a Bank or Industry \_\_\_\_\_
- 8. Officer \_\_\_\_\_
- 9. Clerk \_\_\_\_\_
- 10. Others \_\_\_\_\_

Personal Identity

N.B. Complete secrecy will be maintained regarding the information that you will supply in connection with your name and identity.

Name . . . . . Date of Birth . . . . . Class . . . . .

Name of School . . . . .

Name of Father/Guardian . . . . .

Age of Father \_\_\_\_\_

Age of Mother \_\_\_\_\_

Occupation of Father:

Occupation of Mother:

1. Teaching \_\_\_\_\_

1. Teaching \_\_\_\_\_

2. Medicine \_\_\_\_\_

2. Medicine \_\_\_\_\_

3. Engineering \_\_\_\_\_

3. Engineering \_\_\_\_\_

4. Government Service  
 (a) Officer \_\_\_\_\_  
 (b) Clerk \_\_\_\_\_  
 (c) Others \_\_\_\_\_

5. Bank Official  
 (a) Officer \_\_\_\_\_  
 (b) Clerk \_\_\_\_\_  
 (c) Others \_\_\_\_\_

6. Service holder in a Bank or Industry  
 (a) Officer \_\_\_\_\_  
 (b) Clerk \_\_\_\_\_  
 (c) Others \_\_\_\_\_

7. Businessman

8. Others (please mention the specific work in which he is engaged)

4. Government Service  
 (a) Officer \_\_\_\_\_  
 (b) Clerk \_\_\_\_\_  
 (c) Others \_\_\_\_\_

5. Bank Official  
 (a) Officer \_\_\_\_\_  
 (b) Clerk \_\_\_\_\_  
 (c) Others \_\_\_\_\_

6. Service holder in a Bank or Industry  
 (a) Officer \_\_\_\_\_  
 (b) Clerk \_\_\_\_\_  
 (c) Others \_\_\_\_\_

7. Businessman

8. Others (please mention the specific work in which she is engaged)

Monthly Income of Father

1. Below Tk.300.00
2. Between Tk.300.00 & 600.00
3. Between Tk.600.00 & 900.00
4. Between Tk.900.00 & 1200.00
5. Taka 1200.00 and above.

Father's educational qualification:

Number of siblings in the family . . . . .

Your position among the siblings . . . . .

Monthly Income of Mother

1. Below Tk.300.00
2. Between Tk.300.00 & 600.00
3. Between Tk.600.00 & 900.00
4. Between Tk.900.00 & 1200.00
5. Taka 1200.00 and above.

Mother's educational qualification:

An English Version of the Questionnaires in  
the First Phase (300 items).

Instruction: Some statements describing certain occupations have been listed below in order to find out which area you are mostly interested in. Read these statements carefully and mark against the letters 'L', 'I' and 'D' in each sentence. Each sentence has an indication of certain occupation. If you are interested in that occupation, put a cross-mark (X) on the letter 'L' standing for like (L), by the side of the statement. If you are not at all eager about any occupation, cross-out the letter 'D' standing for dislike (D); and if you are indifferent to the occupation, cross-out the letter 'I', standing for indifferent (I). You will understand by this that you are neither too eager about this occupation, nor do you have much dislike about it. There is no fixed time-limit for answering the questions; but do not take unnecessary length of time. Express your opinion about each statement. Read carefully the examples given below and arrange your answers.

Example No. 1: Listen to music . . . LID

If you like to listen to music then cross-out the letter L; if you do not like this work, cross-out D; and

If you are undecided about your opinion, then cross-out I.

19. To Example No. 2: Cook food . . . . . L ~~X~~ D

20. To If you are undecided about this work then you will  
cross-out I as is shown in the right side of the statement.

- |   |       |
|---|-------|
| 21. To study anthropology.  | L I D |
| 1. To study biology . . . . .   | L I D |
| 2. To examine patients and diagnose their diseases. . . . .               | L I D |
| 3. To assist in keeping sound health.                                     | L I D |
| 4. To help people with money . . . . .                                    | L I D |
| 5. To solve problems or puzzles related to mechanical issues.             | L I D |
| 6. To keep informed about business transactions in one's locality.        | L I D |
| 7. To carry on correspondence.  | L I D |
| 8. To keep an account of monetary transactions.                           | L I D |
| 9. To take immediate action against those who criticise you unreasonably. | L I D |
| 10. To collect information related to population problems.                | L I D |
| 11. To study chemistry.   | L I D |
| 12. To operate X-ray machines.  | L I D |
| 13. To help in improving mental and physical conditions of people.        | L I D |
| 14. To help people with suggestions.                                      | L I D |
| 15. To prepare designs and charts.  | L I D |
| 16. To study economics.   | L I D |
| 17. To take care of correspondence.                                       | L I D |

- |     |  |       |
|-----|--|-------|
| 18. | To transact huge amount of money.                                | L I D |
| 19. | To take decisions regarding policy matters.                      | L I D |
| 20. | To inform people about the ill effects of over population.       | L I D |
| 21. | To study anthropology.   | L I D |
| 22. | To discuss about one's own sickness.                             | L I D |
| 23. | To offer first-aid.  | L I D |
| 24. | To help the needy.   | L I D |
| 25. | To utilize water power and other resources.                      | L I D |
| 26. | To satisfy customers.  | L I D |
| 27. | To attend phone calls.   | L I D |
| 28. | To maintain accounts relating to sales.                          | L I D |
| 29. | To interfere in other's affairs when necessary.                  | L I D |
| 30. | To discuss about the difficulties of having many children.       | L I D |
| 31. | To watch educational pictures.                                   | L I D |
| 32. | To treat surgical cases.   | L I D |
| 33. | To help in cleaning or dressing wounds.                          | L I D |
| 34. | To have genuine sympathy for people.                             | L I D |
| 35. | To study geometry.   | L I D |
| 36. | To initiate interest of customers for salable goods.             | L I D |
| 37. | To follow instructions.  | L I D |
| 38. | To study the expenses involved in maintenance of produced goods. | L I D |

- |     |  |       |
|-----|--|-------|
| 39. | To participate in discussions on political and economic problems of the country. | L I D |
| 40. | To advise people on limiting the growth of population.                           | L I D |
| 41. | To study mathematics.  | L I D |
| 42. | To prepare X-ray reports.  | L I D |
| 43. | To nurse people at night.  | L I D |
| 44. | To help relations in their profession.   | L I D |
| 45. | To supervise construction work.  | L I D |
| 46. | To put price tags on commodities.  | L I D |
| 47. | To maintain neat and accurate records.   | L I D |
| 48. | To calculate cost of construction.   | L I D |
| 49. | To explain situations for convincing people.                                     | L I D |
| 50. | To explain to the villagers the dreadful consequences of population growth.      | L I D |
| 51. | To work in the laboratory according to fixed time schedule.                      | L I D |
| 52. | To fight diseases.   | L I D |
| 53. | To nurse injured people.   | L I D |
| 54. | To advise people who intend to join your profession.                             | L I D |
| 55. | To prepare models of buildings.  | L I D |
| 56. | To arrange attractive exhibitions.   | L I D |
| 57. | To take care of correspondence related to official matters.                      | L I D |
| 58. | To study accountancy.  | L I D |

- |     |  |       |
|-----|--|-------|
| 59. | To study political science.  | L I D |
| 60. | To make free distribution of medicine for birth control.             | L I D |
| 61. | To study history.  | L I D |
| 62. | To treat patients at unscheduled hours.                              | L I D |
| 63. | To prepare charts showing temperature of patients.                   | L I D |
| 64. | To listen with patience the emotional problems of certain people.    | L I D |
| 65. | To scrutinize and analyze electrical equipments.                     | L I D |
| 66. | To establish improved relationship with customers.                   | L I D |
| 67. | To work as consultant.   | L I D |
| 68. | To lend and borrow money.  | L I D |
| 69. | To stand on the dias for delivering speech.                          | L I D |
| 70. | To demonstrate through pictures the disadvantages of a large family. | L I D |
| 71. | To study literature.   | L I D |
| 72. | To use microscope for testing samples.                               | L I D |
| 73. | To supply medicine regularly to patients.                            | L I D |
| 74. | To obey superiors.   | L I D |
| 75. | To keep scheduled work running.                                      | L I D |
| 76. | To give publicity to ready made goods.                               | L I D |
| 77. | To act as consultants.   | L I D |
| 78. | To accept responsibility of maintaining official funds.              | L I D |

79. To supply necessary and suitable information for clients. L I D
80. To distribute leaflets in slum areas explaining advantages of small families. L I D
81. To participate in tests arranged for knowing one's own abilities. L I D
82. To study about food and nutrition. L I D
83. To apply medicine on cuts or injuries. L I D
84. To help people at home or at work. L I D
85. To supervise the construction work done by employees. L I D
86. To place orders for purchase of goods. L I D
87. To give a report of activities regarding official matters. L I D
88. To prepare a statement of income and expenditure. L I D
89. To maintain better relationship with clients. L I D
90. To explain the justification of having large and small families. L I D
91. To write humorous features and articles. L I D
92. To conduct health examinations. L I D
93. To wash the head of a patient attacked with fever. L I D
94. To improve personal relationships. L I D
95. To work with handtools. L I D
96. To write books on commerce. L I D
97. To make a list of equipments required for any work. L I D



98. To verify figure work. *In bills.* L I D
99. To deliver speeches to civil and professional people. L I D
100. To work in family planning clinics. L I D
101. To study philosophy. L I D
102. To prepare schemes for preventing diseases and accidents. L I D
103. To give medicine to patients regularly. L I D
104. To listen attentively to personal problems of people. L I D
105. To fly aeroplanes. *buyers.* L I D
106. To increase sale of produced goods. *approval.* L I D
107. To fix up time for interview and contact through telephone calls. *accounts of income and expenditure.* L I D
108. To prepare budgets. L I D
109. To protest against resistance to freedom of work. *state measures of population control through radio programmes.* L I D
110. To discuss about population control in slum areas. *topography.* L I D
111. To study physics. *talks for extra hours if possible.* L I D
112. To set broken pieces of bones and join them. *to apply massage to patients for their relief.* L I D
113. To bandage cuts and bruises. L I D
114. To meet different types of people. *in one's locality.* L I D
115. To prepare and use weather charts. *To measure pressure, temperature etc.* L I D
116. To contact people for acquainting them with new commodities. *To make new materials etc. for use.* L I D
117. To make correct enquires on actions at every stage. L I D

- |      |   |       |
|------|---|-------|
| 118. | To scrutinize defects in bills.                                       | L I D |
| 119. | To appear as witness in court cases.                                  | L I D |
| 120. | To draw pictures on dreadful effects of over population.              | L I D |
| 121. | To study psychology.  | L I D |
| 122. | To study history of medicine.   | L I D |
| 123. | To sponge sick people.  | L I D |
| 124. | To work till late hours at night.                                     | L I D |
| 125. | To make weather forecasts.  | L I D |
| 126. | To meet potential buyers.   | L I D |
| 127. | To prepare training programmes for apprentices.                       | L I D |
| 128. | To examine the estimated accounts of income and expenditure.          | L I D |
| 129. | To advise clients regarding income tax.                               | L I D |
| 130. | To circulate measures of population control through radio programmes. | L I D |
| 131. | To study geography.   | L I D |
| 132. | To work in hospitals for extra hours if required.                     | L I D |
| 133. | To apply massage to patients for their comfort.                       | L I D |
| 134. | To keep good relationship with the people in one's locality.          | L I D |
| 135. | To measure pressure, temperature or density of air.                   | L I D |
| 136. | To make raw materials fit for use.                                    | L I D |

137. To prepare bills, advertisements. L I D
138. To analyze costs of products from the factory. L I D
139. To give orders to the public. L I D
140. To arrange television programmes on population control. L I D
141. To read poems, and drafts. L I D
142. To study botany. L I D
143. To help the wounded person to drink water. L I D
144. To study sociology. L I D
145. To record and follow instructions received through radio. L I D
146. To prepare plans for improving standard of commodities. L I D
147. To prepare a short report on any activity. L I D
148. To maintain correct account in cash books. L I D
149. To frame rules that are applicable to all. L I D
150. To write stories or novels on population control for publicity through television. L I D
151. To read stories dealing with science. L I D
152. To study physiology. L I D
153. To help sick people to change their clothes. L I D
154. To receive friendly treatment from superior officer. L I D
155. To analyze archeological findings. L I D
156. To write articles relating to any profession. L I D
157. To collect signatures. L I D

- |      |  |       |
|------|--|-------|
| 157. | To compose for advertisements.                                 | L I D |
| 158. | To analyze the feasibility of income and expenditure.          | L I D |
| 159. | To obey orders.  | L I D |
| 160. | To visit homes and discuss about issues related to population. | L I D |
| 161. | To study arts and crafts.                                      | L I D |
| 162. | To study zoology.  | L I D |
| 163. | To comb the hair of a female patient.                          | L I D |
| 164. | To work alone.   | L I D |
| 165. | To use telescope.  | L I D |
| 166. | To supervise activities of income and expenditure.             | L I D |
| 167. | To deliver letters.  | L I D |
| 168. | To scrutinize records of income and expenditure.               | L I D |
| 169. | To apply rules.  | L I D |
| 170. | To prepare charts on population.                               | L I D |
| 171. | To tell stories in the class.                                  | L I D |
| 172. | To read articles related to medicine.                          | L I D |
| 173. | To wash the face of female patients every morning.             | L I D |
| 174. | To work with people.   | L I D |
| 175. | To prepare plans for building houses.                          | L I D |
| 176. | To conduct research for improving methods of production.       | L I D |
| 177. | To collect signature.  | L I D |

- |      |   |       |
|------|---|-------|
| 178. | To advise certain individuals on financial matters.                         | L I D |
| 179. | To stand criticism regarding actions.                                       | L I D |
| 180. | To inform the public about population of different regions.                 | L I D |
| 181. | To receive in-service training.   | L I D |
| 182. | To use blood pressure instruments.  | L I D |
| 183. | To wipe wounds of injured persons.  | L I D |
| 184. | To enjoy leave for a short period.  | L I D |
| 185. | To supervise stock.   | L I D |
| 186. | To discuss with people matters related to property.                         | L I D |
| 187. | To take down notes for shorthand typing.                                    | L I D |
| 188. | To submit detailed reports regarding income and expenditure.                | L I D |
| 189. | To put forth arguments in favour of one's own views.                        | L I D |
| 190. | To supply free medicine for birth control.                                  | L I D |
| 191. | To watch educational films.   | L I D |
| 192. | To suggest measures for recovery after diagnosing the cause of any disease. | L I D |
| 193. | To set the bed for the patient's comfort.                                   | L I D |
| 194. | To influence public opinion.  | L I D |
| 195. | To study calculus.  | L I D |
| 196. | To publish magazine related to business.                                    | L I D |
| 197. | To attend meetings.   | L I D |

198. To keep an account of monthly income and expenditure. L I D
199. To engage in extra study connected with day to day affairs. L I D
200. To compose folk songs related to population control. L I D
201. To learn drawing. L I D
202. To use X-ray machines. L I D
203. To help patients in taking food. L I D
204. To work in teams. L I D
205. To prepare electrical equipments. L I D
206. To help in business administration. L I D
207. To take down dictations for shorthand typing. L I D
208. To submit a short report on receipts and payments. L I D
209. To frame rules regarding productions. L I D
210. To write stories on the alarming effects of over population. L I D
211. To keep research projects running. L I D
212. To read books on surgery. L I D
213. To sit by patients to give them hope. L I D
214. To participate in social welfare activities. L I D
215. To read magazines related to mechanical engineering. L I D
216. To maintain privacy regarding business affairs. L I D

217. To classify official facts according to different heads. L I D
218. To keep an account of expenses on law suits. L I D
219. To take legal steps against offences related to theft or burglary. L I D
220. To bring to family planning clinics people interested in population control. L I D
221. To set question papers for examinations. L I D
222. To read books on communicable diseases like small pox or cholera. L I D
223. To watch the gradual progress of patients. L I D
224. To advise students in their classes. L I D
225. To prepare schemes for handling machines and tools. L I D
226. To carry on general supervision of factories. L I D
227. To perform duties according to office regulations. L I D
228. To detect discrepancies in receipt side of accounts. L I D
229. To defer in taking decisions in any affair. L I D
230. To compose rhymes on population planning. L I D
231. To give proper answers to questions. L I D
232. To record the temperature of patients. L I D
233. To attend lessons on nursing. L I D
234. To inform people regarding games and sports. L I D
235. To study the technique of building bridges and houses. L I D

236. To visit different places more than once in connection with professional work. L I D
237. To read news papers and collect important information. L I D
238. To analyze causes of excessive collection in the receipt side of accounts. L I D
239. To advise clients regarding income taxes. L I D
240. To write poems on severe effects of over population. L I D
241. To visit museums. L I D
242. To acquire knowledge in anatomy. L I D
243. To nurse sick patients. L I D
244. To collect factual information about certain localities. L I D
245. To analyze designs of bridges on houses. L I D
246. To be present at the place of work before scheduled hours. L I D
247. To prepare tomorrow's agenda after today's work. L I D
248. To analyze causes of excess expenditure in the payment side of accounts. L I D
249. To meet clients and listen to their problems. L I D
250. To write stories on the dreadful effects of over population. L I D
251. To study mathematics. L I D
252. To know how to use stethoscopes. L I D
253. To help patients to sit-up. L I D
254. To take measures to evaluate public opinions. L I D



255. To control and execute affairs of any factory. L I D
256. To discuss with buyers regarding finished products. L I D
257. To receive telephone calls. L I D
258. To arrange facts and figures regarding receipts or payments. L I D
259. To listen to arguments when debates are on. L I D
260. To write stories on population control. L I D
261. To participate in study tours by launch and speed boat. L I D
262. To be acquainted with the function of lungs in human body. L I D
263. To help a sick person to lie down in bed. L I D
264. To try to solve people's problems. L I D
265. To make designs on projects related to bridges or buildings. L I D
266. To buy goods for farms and deliver them. L I D
267. To write articles in newspapers. L I D
268. To keep an account of annual income and expenditure. L I D
269. To take decisions regarding urgent legal matters. L I D
270. To write articles on the severe effects of over population. L I D
271. To study algebre. L I D
272. To acquire knowledge about the circulatory system of the body. L I D

273. To give relief to injured persons by washing wounds. L I D
274. To render service to passengers on board the plane. L I D
275. To advise inexperienced people regarding technical work. L I D
276. To study commerce. L I D
277. To follow the time-table in any work. L I D
278. To keep accounts of quarterly income and expenditure. L I D
279. To help people in decision making. L I D
280. To write novels describing the gravity of over-population. L I D
281. To write short stories. L I D
282. To have an idea about the function of the heart. L I D
283. To chat with patients for their recreation. L I D
284. To maintain good terms with colleagues. L I D
285. To study books on technical education. L I D
286. To prepare price-list of commodities. L I D
287. To give dictations. L I D
288. To keep an account of half-yearly income and expenditure. L I D
289. To address the public. L I D
290. To give publicity on birth control through songs. L I D
291. To study grammar. L I D

- 292. To acquire knowledge about the structure of the body. L I D
- 293. To fan a sick person for his comfort. L I D
- 294. To establish an independent organization by undertaking the responsibilities of headship. L I D
- 295. To make tools and repair them. L I D
- 296. To observe the fluctuations in the cost of commodities. L I D
- 297. To sort out official papers, arrange them and file them properly. L I D
- 298. To prepare a trial balance. L I D
- 299. To argue about legal matters. L I D
- 300. To discuss with people about small families. L I D

- 1. Craftsman
- 2. Farmer
- 3. Businessman
- 4. Service holder
- 5. Carpenter
- 6. Engineer
- 7. Clerk
- 8. Accountant
- 9. Typist
- 10. Lawyer
- 11. Doctor
- 12. Social worker
- 13. Professor
- 14. Businessman
- 15. Family welfare worker

## APPENDIX C

Given below is a list of 20 occupational areas. These names of areas are part of a study regarding vocational interests of boys and girls at the secondary level. Please read them and arrange them in order of your preference.

	total (Score X number checking that score	Mean	(High weighted Mean-Low weighted Mean)
1. Air hostess	1.		
2. Teacher	2.		
3. Hair dresser	3.		
4. Farmer	70	3.00	1.72
5. Doctor	32	1.28	
6. Sales man	6.		
7. Crafts man	7.		
8. Nurse	8.		
9. Secretarial Service holder	9.		
10. Carpenter	10.		
11. Engineer	11.		
12. Clerk	12.		
13. Accountant	13.		
14. Typist	14.		
15. Lawyer	15.		
16. Mason	16.		
17. Social worker	17.		
18. Professor	18.		
19. Businessman	19.		
20. Family welfare worker.	20.		

APPENDIX D\*

Sample of Item Analysis by DP Technique

Group No.	Item No. 62 score	Weighted total (Score X number checking that score)	Weighted Mean	DP (High weighted Mean-Low weighted Mean)
High	25	75	3.00	1.72
Low	25	32	1.28	

\*Ref: William J. Goode and Paul K. Hatt. Methods in Social Research. International Student Edition. McGraw-Hill, Kogakusha, Ltd., Tokyo, 1952, p. 275.

Group No.	Item No. 62 score	Weighted total	Weighted Mean	DP
1	25	75	3.00	1.72
2	23	69	2.99	
3	43	129	2.98	
4	22	66	2.97	
5	62	186	2.97	
6	72	216	2.96	
7	82	246	2.95	
8	92	276	2.94	

## APPENDIX E

Area 100 Finally Selected Items of the Questionnaire

Area:	Final Number	Original number	Area:	Final number	Original number
T	1	171	M	2	2
E	11	11	E	12	12
A	21	21	E	22	22
C	31	61	D	32	32
H	41	101	I	42	42
I	51	121	C	52	62
N	61	131	I	62	132
G	71	151	N	72	162
	81	161	E	82	172
	91	251		92	202
Area:	Final Number	Original number	Area:	Final number	Original number
	3	33	S	4	104
N	13	43	O	14	124
U	23	63	C	24	144
R	33	123	I	34	164
S	43	133	A	44	184
I	53	153	L	54	194
N	63	163	L	64	224
G	73	173	F	74	254
	83	233	A	84	274
	93	273	R	94	294
			E		

100 Finally Selected Items of the Questionnaire

Area:	Final number	Original number	Area:	Final number	Original number
E	5	35	B	6	6
N	15	65	U	16	16
G	25	85	S	26	46
I	35	115	S	36	96
N	45	175	I	46	106
E	55	185	N	56	156
E	65	195	E	66	196
R	75	125	S	76	256
I	85	255	S	86	276
N	95	265		96	286
S	7	17	A	8	8
E	17	57	C	18	18
C	27	67	C	28	28
R	37	97	O	38	58
E	47	137	U	48	68
T	57	157	N	58	78
A	67	177	T	68	98
R	77	187	A	78	188
I	87	207	N	88	218
A	97	287	C	98	238
L			Y		
S					
C					
I					
E					
N					
C					
E					
N					
C					
E					

100 Final Selected Items of the Questionnaire

Area:	Final number	Original number	Area:	Final number	Original number
	9	9	F	10	100
	19	59	A	20	160
L	29	79	M	30	170
	39	99	I	40	200
A	49	119	L	50	230
	59	129	F	60	240
W	69	139	A	70	250
	79	179	R	80	270
	89	229	E	90	280
	99	239		100	290



## APPENDIX F (Contd.)

## APPENDIX F

Teachers' Scores in Different Occupational Areas

Experts	T	M	N	SW	E	B	SS	A	L	FW
1	28	28	30	21	27	20	23	15	18	21
2	20	25	28	20	27	16	20	18	14	20
3	27	23	30	23	16	14	20	15	14	18
4	20	22	20	20	29	26	22	20	15	20
5	16	20	20	16	25	16	15	13	18	21
6	22	23	29	21	26	18	21	20	18	20
7	25	23	30	22	25	22	22	20	21	20
8	29	25	26	22	26	17	21	25	18	23
9	25	20	27	23	20	25	22	20	22	21
10	26	22	22	22	26	20	22	19	23	22

## APPENDIX F (Contd.)

Doctors' Scores in Different Occupational Areas

Experts	T	M	N	SW	E	B	SS	A	L	FW
1	28	22	27	26	22	21	22	17	22	20
2	23	27	29	26	24	19	22	19	20	12
3	25	27	29	30	25	28	23	29	22	22
4	27	25	26	20	24	24	20	20	24	24
5	25	25	20	27	20	22	22	21	14	22
6	30	27	26	26	20	16	22	20	20	19
7	25	26	27	24	20	21	24	22	16	18
8	19	25	25	27	21	18	23	14	16	20
9	26	28	26	24	20	23	24	19	20	25
10	27	25	26	26	21	21	21	25	18	21

## APPENDIX F (Contd.)

*Social Workers' Scores in Different*  
**Nurses' Scores in Different Occupational Areas**

Experts	T	M	N	SW	H	B	SS	A	L	FW
1	22	25	26	24	19	17	18	22	22	15
2	27	22	20	24	17	19	22	18	13	18
3	25	26	27	27	20	14	18	19	15	23
4	22	26	25	22	23	23	25	20	20	19
5	25	24	23	26	22	17	23	23	25	25
6	26	21	20	29	21	24	18	18	21	19
7	25	23	28	24	22	28	19	22	20	22
8	23	23	24	24	20	25	24	17	18	23
9	23	23	28	26	23	16	23	21	22	27
10	28	26	29	28	23	23	23	25	21	17

## APPENDIX F (Contd.)

Social Workers' Scores in Different Occupational Areas.

Experts	T	M	N	SW	H	B	SS	A	L	FW
1	18	26	29	26	19	27	23	15	16	20
2	23	19	21	21	24	22	18	20	19	20
3	20	21	15	22	22	19	20	19	24	22
4	24	23	22	20	26	22	20	22	20	18
5	29	25	26	26	24	24	20	20	18	28
6	23	19	27	28	19	22	25	21	17	30
7	26	20	24	26	16	18	26	20	16	22
8	28	27	20	29	29	18	26	13	24	19
9	24	22	16	26	25	25	25	25	21	29
10	21	22	20	26	20	22	23	24	22	20

## APPENDIX F (Contd.)

Engineers' Scores in Different Occupational Areas

Experts	T	M	N	SW	E	B	SS	A	L	FU
1	25	26	20	21	24	22	23	22	16	23
2	20	24	25	26	27	21	20	20	16	16
3	23	19	20	27	24	19	22	20	20	22
4	26	17	20	25	24	18	19	21	20	22
5	28	22	22	26	20	21	21	22	24	20
6	29	23	23	23	23	22	20	21	19	24
7	26	20	20	26	24	16	21	22	21	20
8	21	18	24	25	22	20	16	22	19	20
9	25	23	21	24	25	21	24	22	21	13
10	17	27	20	22	28	25	21	18	22	20

## APPENDIX F (Contd.)

Businessmen's Scores in Different Occupational AreasDifferent Occupational Areas-

Experts	T	M	N	SW	E	B	SW	A	L	FW
1	20	22	20	25	24	27	23	28	20	20
2	21	23	24	27	24	25	24	20	27	17
3	20	22	21	20	24	27	25	26	20	19
4	20	25	22	23	22	23	25	22	23	20
5	23	26	24	22	23	26	23	20	12	22
6	20	26	21	26	24	24	23	15	17	16
7	20	26	22	25	24	24	22	15	18	20
8	17	24	15	26	24	22	21	22	19	24
9	20	22	20	27	24	23	25	13	15	25
10	20	21	16	26	23	25	16	16	17	21

## APPENDIX F (Contd.)

Secretarial Service Holders' Scores in  
Different Occupational Areas

Experts	T	M	N	SW	E	B	SS	A	L	FW
1	20	20	26	26	20	20	25	14	21	23
2	24	23	28	24	18	18	24	22	21	15
3	20	20	23	29	20	21	23	15	18	18
4	24	16	25	28	23	16	22	19	20	23
5	24	22	23	28	20	22	26	21	20	20
6	25	20	24	29	26	23	27	27	17	25
7	28	20	21	28	25	25	24	20	25	26
8	20	27	28	24	20	22	28	18	23	21
9	23	23	25	26	24	23	28	22	21	19
10	24	24	20	28	25	17	22	12	20	25

## APPENDIX F (Contd.)

Accountants' Scores in Different Occupational Areas

Experts	T	M	N	SW	E	B	SS	A	L	FV
1	24	20	21	26	25	22	19	22	20	24
2	26	20	22	25	24	24	22	21	19	20
3	20	23	21	23	24	22	24	23	20	24
4	24	23	20	20	20	20	23	27	20	16
5	29	25	21	25	25	24	20	25	21	20
6	25	25	22	23	25	22	20	26	16	18
7	24	24	22	21	23	15	20	24	19	21
8	26	20	23	25	23	16	20	24	19	20
9	20	25	20	20	24	23	18	22	17	25
10	20	20	20	24	25	20	19	26	16	21
11	20	25	20	25	22	21	21	11	26	18



APPENDIX F (Contd.)  
 APPENDIX F ( Contd.)

Lawyers' Scores in Different Occupational Areas

Experts	T	M	N	SW	E	B	SS	A	L	FU
1	18	25	19	24	20	20	17	22	27	18
2	20	25	21	25	22	19	22	15	23	22
3	24	24	22	23	20	22	22	20	22	25
4	26	28	23	24	20	20	23	16	24	15
5	23	27	22	25	23	22	22	19	26	28
6	23	24	20	24	22	20	20	25	25	26
7	20	22	22	25	21	20	17	20	21	17
8	20	25	20	23	20	19	21	24	23	15
9	22	20	19	25	20	20	21	19	23	21
10	20	25	20	26	22	21	21	11	26	18

## APPENDIX F (Contd.)

Family Welfare Workers' Scores in  
Different Occupational Areas.

Exparte	T	M	N	SW	E	B	SS	A	L	FW
1	26	19	20	20	24	24	22	16	14	22
2	18	25	20	23	24	25	22	23	21	25
3	24	21	24	22	26	25	19	20	23	25
4	20	24	23	20	25	24	21	21	18	23
5	22	23	24	25	25	27	23	20	23	24
6	22	24	23	25	26	25	24	16	18	26
7	25	24	25	25	26	27	22	18	21	23
8	17	23	20	22	25	24	23	20	24	25
9	20	16	24	23	26	26	23	26	23	28
10	23	20	26	20	25	26	21	20	20	28

## APPENDIX G

Scores Obtained by Boys in Different Occupational Areas.

(N =100)

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
1.	24	25	23	27	17	23	14	26	19	20
2.	20	20	29	21	23	19	23	15	16	22
3.	28	25	21	21	23	18	26	18	15	11
4.	22	24	27	25	25	21	19	16	21	20
5.	25	25	17	21	27	23	22	17	22	17
6.	18	26	29	21	21	15	19	20	20	15
7.	26	22	29	20	24	24	25	26	18	17
8.	24	19	17	20	15	24	22	16	11	25
9.	18	29	23	27	24	17	24	15	26	14
10.	21	25	20	29	28	15	25	11	20	19
11.	15	24	22	20	24	25	26	24	17	21
12.	23	20	30	19	27	13	21	22	19	20
13.	23	26	23	20	24	17	23	18	20	18
14.	24	19	25	25	20	15	19	23	21	16
15.	20	20	15	23	27	23	25	20	10	21
16.	16	24	26	22	23	18	18	10	15	23
17.	19	21	24	24	25	12	21	13	14	14
18.	18	17	28	22	22	22	26	15	17	16
19.	24	22	15	21	26	12	23	13	21	15
20.	23	25	21	25	24	24	25	15	25	15
21.	20	21	23	26	21	24	20	21	15	24
22.	23	23	29	21	27	10	22	27	22	22
23.	23	22	26	25	23	14	20	15	13	23
24.	18	17	28	24	26	25	23	18	18	17
25.	17	24	20	24	22	17	12	14	16	22

APPENDIX G ( Boys ) CONTD.

SI. No.	T	M	N	SW	E	B	SS	A	L	FW
26.	16	30	26	29	16	12	25	21	18	28
27.	22	20	26	22	21	23	23	17	16	28
28.	20	28	27	25	25	15	20	19	19	25
29.	23	15	23	27	22	17	21	19	13	20
30.	26	25	28	21	19	21	17	25	27	25
31.	19	24	20	18	25	24	26	13	18	24
32.	24	26	27	24	26	25	24	23	25	26
33.	26	24	20	23	22	16	20	12	24	28
34.	23	21	28	27	23	18	23	24	18	18
35.	25	22	24	20	18	17	23	20	20	13
36.	19	21	13	24	23	25	20	18	19	20
37.	23	25	24	24	24	16	22	13	19	20
38.	19	25	20	23	26	18	24	16	21	21
39.	23	20	19	28	26	14	15	21	13	25
40.	14	24	27	19	21	16	18	17	23	18
41.	23	25	30	26	16	25	24	22	21	16
42.	19	24	27	19	17	25	26	25	15	17
43.	18	24	24	27	26	22	21	26	13	18
44.	23	19	28	26	21	18	18	22	17	21
45.	16	20	23	19	27	18	20	20	25	26
46.	24	18	13	24	18	25	24	26	23	29
47.	20	28	19	24	24	26	24	17	18	25
48.	21	20	20	25	20	18	26	15	21	23
49.	26	23	22	22	27	25	25	23	21	18
50.	19	24	27	21	19	14	18	19	25	26

## APPENDIX G (Boys) CONTD.

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
51.	24	24	27	24	25	15	20	10	16	23
52.	27	25	29	21	24	20	22	26	18	20
53.	23	26	24	22	27	18	22	25	26	25
54.	19	22	30	19	25	13	26	19	17	24
55.	19	25	23	29	24	26	26	19	14	13
56.	22	24	25	21	19	24	25	25	20	22
57.	19	25	19	25	26	13	22	21	16	20
58.	18	20	12	28	23	23	18	17	22	17
59.	14	25	22	25	27	16	21	16	12	16
60.	26	24	20	18	25	16	23	26	25	23
61.	19	27	19	24	26	20	12	21	22	10
62.	20	25	20	27	23	22	25	23	19	16
63.	23	25	27	27	21	27	15	17	15	15
64.	24	17	30	25	23	21	21	20	15	22
65.	24	19	23	15	18	13	20	11	24	27
66.	22	17	25	24	20	17	19	22	22	19
67.	21	25	21	24	20	12	20	16	18	20
68.	18	16	20	19	25	27	19	15	25	18
69.	19	22	21	24	27	24	16	22	20	20
70.	24	26	19	24	27	21	23	11	24	25
71.	27	22	19	23	28	21	11	13	12	29
72.	23	22	18	25	25	13	24	15	19	17
73.	19	27	23	26	26	28	17	21	13	15
74.	24	25	26	24	21	19	24	19	18	16
75.	22	26	24	19	13	16	19	17	13	19

## CONTINUED APPENDIX G ( Boys ) CONTD.

## APPENDIX G

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
76.	18	23	17	23	18	15	22	21	25	21
77.	18	23	20	26	21	19	21	17	19	27
78.	16	20	25	23	21	20	19	15	23	20
79.	26	14	24	30	29	16	24	16	18	13
80.	23	19	23	26	21	18	25	13	18	24
81.	20	20	25	19	27	22	18	19	22	27
82.	19	26	28	27	25	22	20	25	24	22
83.	22	24	26	22	26	18	16	23	12	25
84.	23	22	21	21	26	21	24	27	18	16
85.	18	19	24	24	16	21	19	15	10	14
86.	16	25	27	25	17	17	22	29	19	20
87.	24	25	20	23	25	18	26	20	19	10
88.	22	20	26	22	21	21	23	18	25	15
89.	21	17	20	23	19	17	21	17	22	24
90.	19	24	20	22	16	27	24	15	23	22
91.	23	21	24	25	26	22	16	11	26	16
92.	21	29	19	21	26	20	25	13	27	25
93.	24	19	26	25	26	27	21	16	29	22
94.	22	23	18	24	25	13	27	19	18	20
95.	16	20	24	21	19	21	26	19	22	27
96.	17	24	25	29	18	24	28	21	25	18
97.	18	21	21	24	23	28	23	27	28	25
98.	19	28	26	27	28	28	19	25	17	17
99.	23	18	23	24	29	21	22	19	19	24
100.	25	25	20	26	30	16	20	20	19	23
23.	22	25	20	25	21	15	27	19	22	17
24.	19	17	24	20	16	17	18	21	18	20
25.	25	20	20	29	29	25	25	27	18	21

## APPENDIX G (CONTD.)

## APPENDIX G

Scores Obtained by Girls in Different Occupational Areas.

(N = 100)

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
1.	27	26	29	21	23	19	23	15	16	22
2.	25	24	23	22	17	23	14	26	19	20
3.	18	22	27	19	25	13	22	15	13	16
4.	22	19	21	25	21	24	20	15	15	23
5.	19	25	29	24	15	10	19	12	21	15
6.	26	18	17	27	16	25	24	20	12	26
7.	28	20	23	24	28	22	22	19	22	22
8.	16	20	30	27	26	20	12	16	14	20
9.	14	19	20	15	20	13	14	12	22	19
10.	19	24	25	22	27	22	18	17	13	24
11.	22	23	26	26	26	17	24	18	15	17
12.	23	17	24	21	23	18	26	18	20	11
13.	19	24	30	19	22	16	18	19	13	16
14.	14	17	23	24	27	14	20	14	15	22
15.	28	28	25	25	23	15	22	21	15	26
16.	27	25	28	19	24	22	21	17	16	25
17.	23	22	23	20	22	20	23	17	19	21
18.	19	20	26	15	24	27	15	22	20	20
19.	26	21	21	24	24	17	24	19	19	12
20.	24	20	17	24	25	18	16	11	17	16
21.	27	21	28	25	23	21	19	17	20	20
22.	22	23	30	21	25	23	22	19	21	17
23.	22	26	28	25	21	15	22	15	22	10
24.	19	17	24	20	16	17	12	21	18	28
25.	25	30	30	29	29	25	25	27	16	21

## CONTINUED APPENDIX G ( Girls ) CONTD.

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
26.	20	25	23	22	26	18	20	10	25	18
27.	26	24	26	17	27	23	23	19	21	21
28.	22	25	19	24	20	13	20	19	24	29
29.	23	25	26	22	18	19	22	20	21	21
30.	25	21	22	24	24	21	19	26	19	22
31.	23	26	22	24	19	14	23	15	12	15
32.	20	21	21	23	24	24	25	16	18	25
33.	25	24	26	21	20	15	25	17	17	17
34.	22	23	27	27	27	23	23	21	16	23
35.	20	25	22	24	20	17	23	13	13	17
36.	18	17	25	27	21	26	24	20	20	20
37.	21	24	24	20	22	18	22	17	16	22
38.	26	22	19	22	23	12	20	18	26	21
39.	20	24	26	25	21	18	21	22	19	19
40.	16	25	30	24	27	18	26	20	21	17
41.	22	23	26	21	20	15	19	20	17	12
42.	20	26	23	20	16	17	24	26	25	28
43.	26	17	13	22	18	18	21	10	20	15
44.	21	24	23	18	26	17	22	14	13	25
45.	19	25	25	25	19	12	19	18	15	23
46.	25	19	30	24	17	25	25	23	16	18
47.	20	25	25	23	22	21	25	19	13	18
48.	19	25	19	23	24	24	16	21	16	23
49.	18	21	21	24	24	15	26	22	18	24
50.	24	20	25	25	25	17	21	17	24	16



## CONTINUED APPENDIX G ( Girls ) CONTD.

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
51.	25	21	19	25	23	22	20	25	23	18
52.	16	25	21	20	27	25	26	19	20	20
53.	21	23	25	28	24	26	15	21	18	21
54.	22	20	26	23	18	24	26	15	26	25
55.	23	17	19	19	20	24	17	17	21	25
56.	23	28	24	22	23	15	20	21	24	29
57.	24	22	25	23	25	15	21	19	16	27
58.	22	15	27	26	26	21	11	25	25	18
59.	24	25	26	25	26	21	22	22	17	15
60.	22	19	25	25	18	22	16	27	19	16
61.	21	24	27	20	25	24	21	16	21	12
62.	29	25	21	23	20	17	24	22	28	25
63.	20	19	20	22	21	22	24	23	11	23
64.	16	21	26	20	23	16	21	26	21	29
65.	19	18	12	21	22	15	14	16	12	19
66.	21	25	24	29	22	18	25	28	22	18
67.	22	20	20	25	18	26	20	15	24	17
68.	24	27	27	19	22	28	16	18	22	27
69.	25	24	24	22	22	20	19	22	17	19
70.	22	20	25	21	24	27	21	20	18	20
71.	20	17	27	24	20	16	16	17	18	17
72.	24	25	17	24	27	23	26	19	26	20
73.	26	17	20	18	22	19	18	17	22	14
74.	19	22	29	24	25	17	26	23	24	25
75.	26	25	20	24	21	19	17	18	15	26

CONTINUED APPENDIX G ( Girls ) CONTD.

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
76.	22	24	23	25	26	26	20	21	20	23
77.	21	20	15	27	18	20	22	19	16	28
78.	19	25	22	26	27	16	22	25	14	21
79.	22	20	18	22	15	16	23	16	19	19
80.	18	24	23	24	19	21	21	22	21	20
81.	24	25	28	29	27	13	25	11	13	17
82.	22	27	29	23	25	12	26	21	17	25
83.	18	17	27	25	21	24	24	22	20	25
84.	22	25	26	20	20	16	23	26	19	19
85.	22	17	20	24	23	21	22	21	21	19
86.	16	19	19	29	22	14	25	11	19	21
87.	23	16	27	22	21	21	17	23	21	25
88.	21	25	21	19	23	16	21	20	26	23
89.	22	26	27	22	25	18	16	27	18	14
90.	20	22	20	21	27	21	23	15	24	18
91.	24	22	26	23	17	17	24	23	13	20
92.	21	27	23	20	24	18	26	17	26	25
93.	24	25	29	27	27	15	18	19	18	21
94.	18	26	22	23	24	17	25	22	20	22
95.	19	17	23	25	14	18	21	19	13	30
96.	24	25	25	22	19	23	24	13	17	29
97.	22	23	28	23	19	20	27	23	20	21
98.	16	19	26	26	18	24	22	20	21	20
99.	16	20	24	26	24	20	20	20	19	12
100.	20	18	20	25	26	28	19	13	25	17

23. 21 14 17 20 19 22 22 18 12 13

24. 20 21 18 11 17 14 14 15 15 17

25. 17 22 23 25 26 20 23 17 18 15

## APPENDIX H

Scores Obtained by Boys (Science Group) in Different Occupational Areas  
(N=115)

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
1.	30	28	14	21	27	21	26	14	18	11
2.	23	20	24	22	24	16	16	17	19	22
3.	24	25	23	25	27	17	17	15	18	25
4.	23	23	21	20	24	19	22	17	20	17
5.	24	22	26	20	21	19	22	20	19	25
6.	28	25	21	29	27	25	20	24	26	23
7.	29	28	28	27	24	22	25	23	22	19
8.	27	19	25	22	23	22	22	19	17	21
9.	25	22	17	26	24	17	19	18	17	13
10.	27	23	19	20	24	20	24	18	18	14
11.	21	20	16	25	23	24	20	16	28	24
12.	26	29	29	23	30	23	27	21	20	23
13.	29	29	29	20	24	20	26	19	19	29
14.	23	26	28	26	25	14	20	18	19	21
15.	18	24	23	26	16	12	14	13	10	12
16.	28	23	24	23	27	22	23	22	18	18
17.	25	28	27	19	26	18	23	22	17	16
18.	15	26	22	20	20	12	14	13	14	12
19.	23	21	21	24	25	18	25	18	20	21
20.	19	23	22	23	22	13	18	12	11	13
21.	23	20	23	23	25	24	22	21	21	26
22.	25	24	23	21	26	21	21	15	22	14
23.	21	14	17	29	19	22	22	13	12	13
24.	20	21	15	11	17	14	14	15	15	12
25.	27	22	23	25	26	20	23	17	18	15

## APPENDIX H (Contd.)

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
26.	24	26	27	26	26	22	21	18	19	18
27.	19	21	24	24	29	17	22	14	13	16
28.	24	24	23	24	23	17	20	17	19	24
29.	20	27	27	25	25	15	20	12	18	13
30.	24	22	15	19	23	16	21	13	16	18
31.	20	24	22	22	22	18	20	19	19	23
32.	24	23	23	21	24	18	19	20	19	21
33.	20	24	23	24	23	17	18	19	24	20
34.	19	19	12	20	22	12	12	13	12	22
35.	24	21	18	21	22	12	16	13	13	15
36.	23	23	24	19	23	13	19	14	14	17
37.	23	28	22	23	24	22	22	21	19	25
38.	20	26	26	25	26	18	21	21	19	27
39.	18	24	23	20	20	16	17	18	16	19
40.	20	19	21	25	26	20	26	24	18	13
41.	23	29	23	27	25	19	24	17	14	19
42.	23	26	30	26	26	17	21	18	16	16
43.	16	26	19	20	28	20	24	20	12	14
44.	22	29	28	24	27	21	22	17	17	20
45.	17	24	26	15	20	12	17	11	11	24
46.	20	25	22	24	25	27	22	22	22	12
47.	19	28	29	24	24	18	18	16	16	19
48.	26	25	27	24	28	15	15	12	15	20
49.	25	21	19	18	21	13	12	10	11	10
50.	27	22	21	27	27	20	22	22	16	14

## APPENDIX H (Contd.)

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
51.	24	27	24	24	25	19	21	17	24	20
52.	18	18	15	18	18	12	15	13	18	15
53.	24	23	22	24	26	20	22	20	21	25
54.	23	24	24	23	26	15	20	20	21	19
55.	25	23	21	22	27	20	24	19	20	25
56.	25	23	29	25	28	24	22	22	25	20
57.	23	20	19	23	25	18	17	17	16	17
58.	25	24	26	29	25	24	25	21	22	18
59.	19	24	25	19	16	13	17	14	15	18
60.	24	28	30	27	30	26	28	24	26	22
61.	21	16	21	25	27	18	20	20	21	23
62.	18	16	24	29	21	15	17	16	16	18
63.	23	20	26	23	23	16	19	22	20	20
64.	19	18	28	24	18	16	20	21	17	28
65.	26	29	28	27	26	19	23	22	18	24
66.	17	15	20	25	24	14	19	20	19	12
67.	22	29	28	28	24	19	23	22	19	13
68.	18	21	21	19	25	23	23	25	18	21
69.	22	24	26	21	24	25	20	22	18	20
70.	24	26	28	27	26	23	22	20	22	29
71.	22	27	26	27	27	26	24	23	12	28
72.	23	24	23	28	24	22	26	22	21	25
73.	18	20	22	19	16	16	15	17	20	17
74.	21	22	21	23	24	19	22	18	23	19
75.	19	22	20	24	19	18	19	15	13	16

## APPENDIX H (Contd.)

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
76.	26	30	26	24	26	17	24	23	22	25
77.	24	20	20	23	26	15	17	21	18	18
78.	26	25	20	27	29	26	21	25	25	28
79.	19	26	28	22	27	14	21	10	16	16
80.	28	24	26	25	19	17	21	17	20	10
81.	25	25	24	19	17	25	18	20	18	26
82.	n23	24	19	24	24	17	20	25	23	21
83.	20	16	15	19	20	16	21	13	13	13
84.	23	25	23	23	22	22	21	21	18	17
85.	22	24	25	21	20	20	24	20	21	20
86.	24	26	20	22	23	18	16	21	19	14
87.	19	19	19	26	27	24	20	22	20	19
88.	25	25	18	20	27	21	20	22	20	20
89.	27	23	20	25	24	22	20	17	19	19
90.	19	25	22	19	16	17	16	15	12	13
91.	27	23	18	27	28	28	23	23	22	20
92.	22	18	18	22	24	17	20	17	11	22
93.	14	22	19	20	15	14	11	11	13	17
94.	21	28	30	26	26	16	18	14	17	29
95.	26	27	24	25	24	17	20	16	18	21
96.	19	22	27	23	21	15	17	18	13	21
97.	22	18	15	30	30	19	22	18	17	15
98.	16	28	25	22	21	14	16	19	21	22
99.	23	27	23	27	26	20	21	20	19	27
100.	20	20	20	22	21	16	21	17	19	19

## APPENDIX H (Contd.)

## APPENDIX H

Sl. No.	T	M	N	SW	E	S	SS	A	L	FW
101.	22	21	21	22	22	20	26	23	20	17
102.	24	26	21	23	26	24	19	21	18	21
103.	23	25	22	24	29	22	23	18	20	27
104.	27	19	20	19	20	20	15	15	17	19
105.	21	23	21	18	22	21	21	23	22	20
106.	19	23	24	23	27	18	16	17	17	13
107.	17	26	20	23	28	19	20	20	20	21
108.	19	20	19	16	16	13	14	13	12	17
109.	20	26	20	23	26	21	22	21	17	27
110.	16	18	18	22	22	18	17	17	14	23
111.	27	24	23	20	28	25	19	24	20	20
112.	20	28	24	22	16	18	22	23	19	25
113.	18	29	24	23	18	12	16	11	12	21
114.	19	19	21	24	20	15	19	22	19	19
115.	22	28	21	25	25	17	17	18	17	14
117.	21	18	15	20	16	15	13	13	11	12
118.	22	21	21	19	22	20	14	17	24	20
119.	23	20	21	21	22	26	25	20	22	19
120.	21	19	20	22	24	23	25	16	17	23
121.	20	19	17	19	22	19	14	13	16	12
122.	18	21	25	18	21	22	21	15	21	16
123.	25	22	25	27	27	17	21	19	23	19
124.	27	25	25	26	24	17	23	16	12	11
125.	21	22	21	24	22	24	22	24	20	27
126.	24	20	20	18	21	24	23	16	24	20
127.	22	17	21	24	24	21	22	13	13	19
128.	23	20	22	25	25	22	25	22	19	27
129.	19	19	21	23	20	21	24	21	22	20
130.	20	20	25	26	25	22	22	21	22	22

## APPENDIX H

Scores Obtained by Boys (Non-Science Group) in Different Occupational Areas  
( N = 35 )

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
116.	19	12	11	21	24	23	19	16	22	22
117.	22	25	24	25	19	25	26	14	23	15
118.	24	11	10	21	19	12	19	19	17	10
119.	23	18	26	25	25	28	26	23	26	21
120.	18	17	24	22	26	27	29	22	30	19
121.	26	19	20	24	26	24	24	22	27	24
122.	19	16	15	20	26	16	16	16	11	10
123.	26	21	19	22	25	18	16	18	14	20
124.	22	24	19	24	27	22	24	20	13	16
125.	16	23	12	25	25	12	21	17	22	21
126.	20	19	18	20	21	22	22	27	26	29
127.	21	18	15	20	16	15	13	10	11	12
128.	22	21	21	19	22	29	24	19	24	20
129.	22	20	21	21	22	26	25	20	23	19
130.	21	19	20	22	24	23	25	16	17	23
131.	20	18	17	19	23	15	14	13	16	12
132.	18	21	25	13	21	12	21	15	21	16
133.	26	22	26	27	27	17	21	19	23	19
134.	27	25	26	26	24	17	23	16	13	11
135.	21	22	21	25	22	24	23	24	20	27
136.	24	20	20	18	21	24	23	19	23	28
137.	23	17	21	24	24	21	21	19	18	19
138.	23	20	23	25	25	22	28	23	19	27
139.	19	19	21	23	20	27	24	21	23	20
140.	20	20	25	26	25	30	26	27	29	22



APPENDIX H (Boys; Non-Science) CONTD.

APPENDIX H

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
141.	24	25	28	27	28	29	25	24	27	23
142.	26	19	26	26	24	21	22	25	29	24
143.	16	18	23	26	18	23	21	17	22	25
144.	16	14	19	12	19	29	20	21	24	19
145.	15	18	19	21	28	28	27	22	25	22
146.	17	20	27	26	28	30	26	26	28	29
147.	18	18	23	18	23	20	16	17	21	15
148.	23	24	25	26	24	21	23	19	19	27
149.	24	25	27	26	26	27	23	19	19	24
150.	23	23	27	24	29	20	26	29	28	26
151.	27	24	27	23	21	21	23	19	18	19
152.	29	26	23	24	21	21	22	17	18	21
153.	26	24	23	19	21	19	22	18	19	20
154.	29	21	23	18	24	21	19	20	15	19
155.	14	17	20	19	20	18	16	17	18	13
156.	21	24	27	16	22	20	22	22	19	19
157.	29	24	26	24	27	23	24	24	22	23
158.	22	23	25	26	24	17	24	18	20	16
159.	20	25	18	28	27	16	23	16	16	17
160.	19	20	16	19	22	21	17	20	17	15
161.	17	24	20	19	23	16	18	19	15	12
162.	23	18	23	23	22	18	21	19	18	16
163.	25	24	23	23	19	21	22	22	21	23
164.	28	28	25	25	23	15	22	12	16	20
165.	26	27	20	22	20	11	18	17	15	26

## APPENDIX H

Scores Obtained by Girls (Science Group) in Different Occupational Areas

(N = 75)

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
1.	26	22	20	22	20	21	22	13	17	19
2.	21	22	26	17	18	19	19	20	19	23
3.	27	26	29	21	23	19	23	15	16	22
4.	23	25	28	24	29	24	26	21	18	25
5.	29	25	28	27	25	15	18	17	15	27
6.	18	22	27	19	25	13	22	15	13	15
7.	23	20	25	19	20	13	17	17	16	13
8.	26	29	30	26	25	19	20	20	22	26
9.	19	25	29	24	15	10	19	12	12	15
10.	19	24	27	28	21	18	18	17	16	15
11.	27	24	27	23	21	21	23	19	15	13
12.	28	20	23	24	23	22	22	19	14	21
13.	26	24	25	19	21	19	22	18	19	20
14.	26	21	25	18	24	21	18	20	15	19
15.	14	19	20	15	20	13	14	12	13	13
16.	21	24	27	26	22	20	22	20	19	19
17.	25	24	26	24	27	23	24	24	22	25
18.	22	23	26	26	26	17	24	18	20	16
19.	30	26	18	28	27	16	22	16	16	17
20.	19	20	16	19	22	21	17	20	17	15
21.	19	24	30	19	22	16	18	19	15	12
22.	23	18	25	23	20	18	21	19	15	16
23.	25	24	23	22	19	21	22	22	21	25
24.	28	28	25	25	23	15	22	12	16	20
25.	26	27	20	22	20	11	18	17	15	26

## CONTINUED APPENDIX H ( Girls; Science Group) CONTD.

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
26.	20	24	28	22	19	18	18	18	19	23
27.	23	22	23	20	22	20	23	19	20	25
28.	27	23	19	22	20	19	19	17	17	21
29.	24	23	23	23	23	13	17	13	14	13
30.	26	21	21	24	24	17	24	17	17	16
31.	19	21	16	18	16	14	14	13	12	12
32.	23	29	20	21	23	21	22	17	13	18
33.	27	21	28	25	23	21	19	16	21	26
34.	26	19	25	22	24	18	22	23	26	11
35.	18	21	21	24	24	22	22	22	23	18
36.	28	27	26	24	25	25	29	26	26	23
37.	26	24	26	27	27	19	26	19	21	21
38.	26	25	29	26	25	23	23	21	25	28
39.	17	16	28	19	19	15	14	19	17	13
40.	23	25	26	22	18	14	20	20	12	21
41.	21	25	27	24	16	14	20	20	12	24
42.	21	22	28	24	16	16	17	15	15	21
43.	23	26	22	24	19	15	15	15	17	21
44.	25	28	26	21	20	16	15	12	15	24
45.	26	26	30	23	24	22	25	23	19	27
46.	25	24	26	21	20	17	17	17	13	15
47.	22	26	22	24	20	21	25	18	22	26
48.	25	25	27	23	24	17	24	12	19	21
49.	20	25	22	24	20	18	21	13	16	17
50.	21	23	27	23	20	13	18	13	13	15

## APPENDIX H (Girls; Science Group) CONTD.

## APPENDIX H

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
51.	20	27	20	24	18	13	19	15	15	15
52.	21	24	24	20	22	18	22	17	19	17
53.	27	26	26	26	27	17	25	24	19	27
54.	23	24	22	20	26	16	24	16	15	10
55.	20	24	26	27	21	15	20	22	17	22
56.	23	28	28	19	27	23	22	22	22	23
57.	23	25	25	22	24	24	21	26	23	17
58.	22	23	26	21	20	18	19	20	20	19
59.	20	17	29	26	25	19	22	20	20	23
60.	24	27	21	27	27	22	23	18	26	17
61.	26	17	13	22	18	12	16	10	15	12
62.	24	23	28	27	24	20	18	28	20	29
63.	22	19	22	23	21	17	20	15	15	13
64.	19	25	25	25	19	21	18	18	13	15
65.	22	25	26	23	26	18	24	20	17	18
66.	23	27	28	27	29	18	24	20	18	19
67.	20	25	25	23	22	11	17	19	18	23
68.	20	22	22	23	19	13	15	17	18	21
69.	22	28	28	24	27	20	22	14	19	29
70.	22	26	28	25	21	15	22	15	18	29
71.	16	14	21	18	16	11	14	11	10	10
72.	15	14	17	16	12	12	15	11	10	10
73.	25	30	30	29	29	25	25	27	21	18
74.	19	26	24	22	24	18	17	20	18	20
75.	24	29	29	27	27	19	25	19	22	20

76.	24	25	25	25	25	23	27	26	20	23
77.	21	21	19	26	24	24	27	23	22	21
78.	20	22	25	27	25	22	23	22	22	18

## APPENDIX H

Scores Obtained by Girls (Non-Science Group) in Different Occupational Areas

( N = 75 )

S1. NO.	T	M	N	SW	E	B	SS	A	L	FW
76.	24	24	27	25	24	24	21	21	21	25
77.	19	14	17	17	12	15	19	12	13	18
78.	25	21	19	25	23	26	25	25	18	24
79.	23	24	24	25	30	27	24	22	21	28
80.	23	25	29	25	24	25	19	28	22	23
81.	21	23	25	28	22	24	23	21	21	18
82.	24	24	24	26	25	29	24	22	20	21
83.	24	17	15	25	28	24	23	21	17	18
84.	23	17	19	19	20	15	22	17	16	21
85.	28	23	19	25	30	24	25	17	22	23
86.	23	24	24	23	23	22	20	17	23	27
87.	24	22	25	23	25	21	23	19	17	25
88.	25	25	29	27	26	27	23	24	20	25
89.	23	25	28	25	26	28	25	30	28	18
90.	24	25	26	25	26	26	25	22	21	27
91.	23	23	27	22	25	19	18	15	18	21
92.	28	21	23	27	24	24	23	17	22	22
93.	21	24	27	25	18	20	23	15	17	15
94.	19	16	23	23	22	20	22	22	16	28
95.	22	19	22	20	23	23	23	20	21	22
96.	20	19	20	22	22	16	22	22	18	17
97.	23	25	27	25	23	25	23	24	17	18
98.	24	25	29	29	26	23	27	26	20	23
99.	21	21	19	26	24	24	27	23	22	21
100.	20	22	25	27	25	22	23	22	25	18

## CONTINUED APPENDIX H (Non-Science Group, Girls.) CONTD.

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
101.	19	17	23	22	24	18	12	18	19	17
102.	22	23	29	22	17	20	20	16	13	12
103.	22	20	13	23	22	17	19	17	20	14
104.	19	18	12	24	20	19	21	17	22	16
105.	25	25	25	23	22	21	22	17	20	19
106.	19	12	18	21	18	22	26	25	23	17
107.	22	20	20	18	22	19	19	18	15	18
108.	21	20	21	23	20	17	19	20	21	17
109.	21	20	17	26	21	22	24	26	21	25
110.	25	24	24	24	21	20	22	19	16	21
111.	17	15	18	21	16	16	18	15	18	14
112.	19	23	28	29	19	23	23	17	21	16
113.	22	23	28	26	27	23	24	17	15	18
114.	20	23	28	21	23	19	14	21	21	20
115.	20	24	28	30	22	26	26	26	22	27
116.	20	17	27	27	18	16	19	16	19	17
117.	26	30	30	27	30	27	23	26	25	26
118.	24	23	24	23	25	22	22	19	20	19
119.	26	17	20	22	15	15	25	11	13	20
120.	28	29	30	25	29	25	27	26	24	28
121.	26	22	23	19	25	24	23	24	21	23
122.	26	25	20	29	27	24	23	22	20	18
123.	21	23	26	20	27.	29	20	27	29	19
124.	20	23	22	23	20	21	23	20	21	17
125.	21	23	19	24	24	25	23	19	18	18

## CONTINUED APPENDIX H (Non-Science Group, Girls.) CONTINUED.

Sl. No.	T	M	N	SW	E	B	SS	A	L	FW
126.	16	20	24	25	22	24	27	26	22	20
127.	21	20	15	25	21	21	25	21	21	15
128.	24	24	26	26	27	28	26	27	28	17
129.	22	22	26	24	23	20	24	23	20	18
130.	22	20	18	24	23	21	24	23	21	17
131.	19	23	28	28	22	21	28	22	21	25
132.	21	19	22	24	24	23	24	24	23	19
133.	24	25	28	22	27	18	22	27	18	29
134.	25	21	21	25	21	14	25	21	14	19
135.	22	16	18	25	20	22	25	20	22	15
136.	18	17	27	22	22	17	17	23	13	18
137.	21	19	21	22	25	22	22	25	18	25
138.	23	20	20	21	22	19	15	18	18	15
139.	22	17	20	23	24	15	21	19	18	20
140.	17	14	15	21	17	18	16	18	18	14
141.	20	20	15	17	19	15	16	17	11	11
142.	23	16	27	27	25	18	27	19	15	19
143.	23	29	28	27	27	19	24	22	20	20
144.	21	16	18	22	22	16	18	20	14	20
145.	22	26	27	25	24	20	22	23	20	22
146.	21	20	24	27	14	15	18	21	16	21
147.	24	28	28	25	21	18	21	21	21	20
148.	24	22	26	28	20	20	23	20	19	23
149.	22	28	25	23	19	14	21	18	16	30
150.	27	28	21	24	27	17	19	12	16	27



































































## Appendix KJ

Mean Scores Obtained by 300 Respondents in Family Welfare and Other Areas (Arranged in Order)

Area	Mean Score	FU	N	E	M	SW	T	SS	B	A	L
L	19.77	27.83	25.77	24.97	24.73	24.53	23.50	22.50	21.90	20.80	19.77
A	20.80	8.06	6.00	5.20	4.96	4.76	3.73	2.73	2.13	1.03	0.00
B	21.90	7.03	4.97	4.17	3.93	3.73	2.70	1.70	1.10	0.00	
SS	22.50	6.93	4.87	4.07	3.83	3.63	2.60	0.60	0.00		
T	23.50	5.33	3.27	2.47	2.23	2.03	1.00	0.00			
SW	24.53	4.33	2.27	1.47	1.23	1.03	0.00				
M	24.73	3.30	1.24	1.44	1.20	0.00					
E	24.97	3.10	1.04	0.24	0.00						
N	25.77	2.86	0.80	0.00							
FU	27.83	2.06	0.00								
		0.00									

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