A METHODOLOGICAL STUDY OF INTEREST ASSESSMENT

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ABSTRACT

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Research studies relative to the measurement of children's interests report inconsistent findings. In many cases when these inconsistencies were reported different interest measures were used. This gave rise to the question - do different interest measurement techniques measure the same interests? The purpose of this study was to determine if the various measures employed were consistent in their measurement of children's interests.

The subjects employed in this study were drawn from two Midwestern cities. A total of 254 fifth and seventh graders representing three socio-economic groups were selected to participate in the study. Each subject was administered four different types of interest instruments. The results were then analyzed to determine if the four techniques were consistent in their measurement of interests. The type of analysis selected was a correlational technique called the phi-coefficient.

The findings in general suggest that there is little consistency among instruments in the measurement of children's interest. The consistency among the measures did not vary with respect to the variables of sex and socioeconomic status. There was, however, a greater degree of consistency among the techniques in the measurement of seventh grade interests than in

the measurement of fifth grade interests. In no case did the correlations exceed .60.

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CHAPTER I

INTRODUCTION

Problem

It has been estimated that some 700,000 students drop out of school every year. Although the majority of these dropouts occur at the secondary level the problem begins early in the elementary grades. (Ringness 1968). Inability to do school work compounded with the lack of interest in school related activities build to the point where the student is no longer concerned about continuing on in school. If, however, the potential dropout's interest, or lack of it, in school related activities could have been determined earlier in grade school correctional kinds of measures could have been applied to prevent his dropping out. Obviously, to pursue this kind of action, methods which can effectively measure childrens' interests must exist.

Despite the fact that interest have been measured as early as childhood and pre-adolescent years, (Pressey et al, 1959) most of the earlier studies dealing with the assessment of interests have focused on adolescent and adult populations. In recent years, however, there appears to be more concern about the measurement of children's interests. This concern is evidenced by the increase in research studies reported in the journals in the last two decades. One possible reason for the paucity of studies in children's interests prior to the 1950's is that these interests were thought to be in a state of flux and could not be reliably measured. (Bledsoe and Brown 1965). Research studies, to be discussed later, indicate that young children's interests are stable for at least a short period of time.

This more recent concern or attention given to the measurement of children's interests has gained its impetus from two not totally unrelated sources; vocational and educational counseling. (Anastasi 1968). The first source come from that group of researchers and practictioners interested in the prediction of vocational interests. The second source is that group which is generally interested in the developmental and educational aspects of childhood. As an example of this distinction, Tyler (1964) has studied earlier childhood interests as antecedents of later vocational choices, whereas Jersild and Tasch (1949) studied age related childhood interests with concern for the implications it has for education. From these two groups there has begun to evolve a body of research data relative to the interests of children.

Previous Relevant Research Studies

The majority of the studies conducted on childhood interests, however, are by no means consistent. One author (Amatora, 1957) found that children in general are most interested in "objects". Another study (Jersild and Tasch 1949) found that children were interested in "people". In addition to the discrepancies found with respect to the interests of children in general, there were also some inconsistencies reported with respect to specific children related variables. For purpose of this study these studies were grouped under the following headings: sex related interests, age related interests and socio-economic status related interests.

Sex Related Interest Studies. The studies dealing with sex related interest patterns will be presented under two general groupings. Studies comprising the first group are those in which different interest areas were investigated. Studies of the second group are those in which more than one study has been conducted on the same interest area.

Studies representative of the first group are descriptive in the sense that they indicate those interest areas wherein sex differences have been found. Witty (1963) for example, has elicited sex differences in play interests. He has found in grades three through six that the play activities of girls are less active and less competitive than the preferred play activities of boys. Further support that sex differences in childhood interests exist is offered by Margolin and Leton (1961). In their work with kindergarten children these authors found significant sex differences in the children's preference for block or non block activities. Other specific interest areas where sex differences are found are reported by Rosenberg and Sutton-Smith (1960). These authors found that boys and girls, upon entering school, develop different preference for books of varying subjectmatter. Sex differences were also found in children's preferences for movies and radio programs.

The above studies serve to indicate that one might well expect to find sex differences in the various interests of children. Because these sex differences occur, the obvious concern would be to find out if there is any uniformity or consistency in these differences. That is, do the findings of the various studies on sex related interests report similar results. The following studies are addressed to this issue.

Maas and Michael (1964) using a standardized measure found sex differences in the general interest patterns of kindergarten children. Tyler (1951, 1955) also using a standardized interest measure, found sex differences to occur as early as early as the first grade. Also these differences become more pronounced as children move up through the grades. The findings of these two studies are not corroborated by the results of a study conducted by Miyamoto et al (1964).

In this study carried out in Japan, the authors found that second, third and fourth grade boys and girls differed very little in respect to their interests. It should be noted that this study incorporated a measurement technique called "theme analysis". The children were asked to "write freely" about things of which they were "curious" or "wondered about". The authors in turn reported as interests those things the children wrote about. Several reasons could be advanced which might account for the finding of no difference with respect to sex related interests.

One of the reasons could, in part, be attributed to the type of task the students were given. Second, third and fourth grade children were asked to "write freely" about things in which they were curious. It could be that children of this age do not have an understanding of the meaning of curiosity. Another possible reason for the finding of no difference in the Miyamoto et al study, could in part be related to the ability or inability of these young children to write fluently, and as a result they could not truly express their interests. Another possible reason for the discrepancies in the findings of these studies, could be attributed to the differences in the cultural backgrounds of

the subjects. The importance of sex differences may be emphasized earlier in one culture than in another. The children coming from a western culture may display sex related interests at a different age than children from an oriental culture.

The sex differences found in the interest patterns of children in the United States, tend also to be found in children of another "Western Country". Tyler (1956) in her studies with English children, concludes that in general the sex differences in interests follow the same patterns for English children as they do for American children. Another English study, this one by Carsley (1957), supports the findings of the Tyler study. There were no studies uncovered, however, which would indicate that the sex differences in interests found to occur in children of western countries also exist for children in eastern or oriental countries. However, the differences in the cultures could account for the differences in the findings.

Another possible explanation for the differences in the findings of these studies, and one which is germane to this project, relates to the type of measurement used in these studies. Both the Maas-Michael and the Tyler studies employed a standardized interest measure, while the Miyamoto study used a theme analysis technique. The studies in which similar measurement techniques were used similar findings were reported. When a different technique was employed, however, different results occurred. This contention, that different measures elicit different results gains some support from the findings of two other studies.

Bledsoe and Brown (1965), using a standardized interest technique measured the interests of eighth grade students. Their results show specific sex related interest differences. Girls, they reported were significantly more interested in art, music and home arts than were boys. Boys, on the other hand, were more interested in manual arts an active play. Using a technique wherein the students simply listed their school related interests Amatora (1961) found different results.

She reports that boys and girls in the eighth grade both list arithmetic as the subject that interests them the most. As a second choice boys tend to select history while girls list spelling. These results do not agree with the findings of Bledsoe and Brown. The discrepancy, however, could be attributed to the influences of the varying regional backgrounds in which the subjects reside. The Bledsoe and Brown study was conducted on subjects representative of a cross section of eighth graders from southeastern United States. Amatora's subjects were selected from widely separated geographical regions of the United States. Thus the differences in the findings of these two studies may only reflect the differences in interests of the boys and girls in southeastern United States as compared with the rest of the country.

The review of the literature relative to the sex differences of childhood interests, by no means answers the question posed earlier. That is: do all interest measures yield comparable results? What this review does do is point up the fact that sex differences in interests do occur. When, however, more than one study of the same interest area was conducted, some conflicting results appeared. Although several

explanations were offered for the discrepancy in the findings, it should be noted that in each case where discordant results have occurred different interest measures were also used.

Age Related Interest Studies. The studies reported in this section will be restricted to those studies in which findings relative to age related school interests have been presented. The reports, of the studies relative to the specific school related interests children of certain ages profess, are by no means conclusive. Instead there appear to be discrepancies in the findings relating to those school subjects which interest children the most.

Jersild and Tasch (1949) using the "Interest Finder", a short questionnaire yielding the child's wishes, likes, and dislikes at school, found that children in the earlier grades prefer Mathematics and English. As these children move up through the grades and into junior high there is an increase in interest in nature studies. Mathematics and English, however, are still the subjects in which they are most interested. Of special note is the finding that the most unpopular field of study for all ages is that of social studies.

Employing a measurement technique similar to that employed by Jersild and Tasch, Amatora (1960) found that the results of her study were also similar to those reported by these two authors. Fourth grade students were asked to state the school subjects which interested them the most. She found that mathematics was that subject which they most often reported, while spelling was the next most often cited subject. She further found, as did Jersild and Tasch, that mathematics maintained its popularity well into junior high, as it was the most

often cited subject by eighth grade students (Amatora 1961). The findings presented by Amatora seem to agree with those in the Jersild-Tasch study. But when other investigators, employing different measurement techniques, report their findings relative to school related interests of children, different results appear.

Bledsoe and Brown (1965) using a standardized interest measure, report that fourth graders select science as their greatest interest. At first this appears to be in disagreement with the findings reported by Jersild-Tasch and Amatora. Closer inspection, however, reveals that included in the science category of the Bledsoe-Brown study, is the subject area of mathematics. Thus the findings of the above mentioned studies tend to find support in the results of this study; at least in respect to the school interests of fourth grade students. But major differences occur when sixth and eighth graders are measured. Sixth graders tend to select social studies first, and active play (sports etc.) secondly, as their most interesting subjects. By the time children reach the eighth grade, active play is their first choice, with social studies and science dropping to second and third respectively. It will be remembered that Jersild and Tasch reported that students uniformly listed social studies as that subject which interested them the least.

All of the above studies in this section point out the fact that age differences do occur with respect to those school subjects which interest children the most. What the above studies also point out is that there is lack of agreement as to which subjects interest children the most at any given age level. Several things may account for

the differences in the findings. First of all each of the studies employed the use of students from different parts of the country. As a result the differences in findings may reflect the difference in interests and attitudes of the various regions in which the subjects live. A second explanation which could be advanced to explain the differences in the findings is the difference in the "times" during which the studies were conducted.

It should be noted that Jersild and Tasch study was reported in 1949. Their findings relative to the likes and dislikes of school related activities by students, differ with the findings of a study conducted in 1965 (Bledsoe and Brown 1965). The difference in the time that the two studies were conducted represents sixteen years. The question then is do the "times" have an effect on the development of interests? Although not providing a conclusive answer Harris (1959) sheds some light on the question.

In a repeat of the Symonds (1936, 1936A) study, Harris found that adolescents in 1957 did not place interests in the same order as did the adolescents of 1935. This, it was suggested, is an indication that the "times" do dictate the types of interests and concerns that a child may have.

A final explanation that could be advanced to account for the differences in the findings of age related interests, centers around the types of interest measures used in the various studies. In the studies where discrepancy was found different interest measures were used. Thus it seems reasonable to suggest that different measures measure different interests. One other explanation to be discussed

later in this text relates to the stability of interests in young children.

School Related Interests and Socioeconomic Status. Despite the general belief that socioeconomic class has a profound and lasting effect on children very little has been done in the area of school related interests and how they relate to social class. No studies have been uncovered which indicate that socioeconomic status is related to childhood school-interests. · There are nevertheless plenty of indications which would suggest that social class and the type of school subject selected are highly associated with varying scoial classes, it would seem that children would select school interests directly related to those characteristics.

Of the thirteen values suggested by McCandless (1967) which distinguish lower class children from middle class children, three appear to have direct relevancy as indicators of which subject areas children of lower social class might choose: Church related values; values toward aggression; learning for learning's sake. Further these three values also coincide with that which Riesmann (1962) considers characteristics of the lower classes and their concern for education. It is his belief that the lower classes are more concerned about those things that have immediate relevancy or worth than they are about those things which require postponement in their use. Thus the benefits from education must be obvious and immediate.

McCandless suggests that lower class people are less likely to belong to or attend a church than are middle class people. This might indicate that the study of formal religions as a school subject is not

one of the prime interests of lower class children. Middle class students, on the other hand, would be more likely to select it as a subject of interest than would their lower class counterparts.

The second value of interest here, is the method in which people in the various classes handle aggression. Lower class children are more likely to express aggression openly and in a physical manner, whereas the middle class child will express it verbally or in other indirect forms. As a result more lower class than middle class children will select sports, physical activities, music etc., as their favorite school subjects. Finally, McCandless (1967) suggests that the lower class child is not as interested in learning for learning's sake as is his middle class brethren. Thus one might expect lower class children to shun the purely intellectual subjects for those wherein some practical and immedicate application is involved. As a result, manual arts or home economics would be selected more often by lower class children than by middle class children.

The above discussion is not offered as a prediction as to which school subjects lower and middle class students will select. Rather it is offered as a possible explanation as to why one could expect that social class may have an influence on the school subjects the students choose as having interest for them.

Summary and Critique of the Research Findings

From the various studies reported in the foregoing review of the literature one rather consistent finding has evolved. That is: children's interests patterns differ with respect to the demographic factors

of age and sex. Although there were no specific studies uncovered which indicated that school related interests were influenced by social class, there appears to be sufficient indication that the socioeconomic status of the student may very well influence his preference for various school subjects.

Just as there was consistency in the findings also there was a great deal of inconsistency. For example, there was little agreement across studies as to which school related activities interested children the most.

It was suggested that the discrepancies in the findings, relative to those school subjects most often cited by children as interesting, could be accounted for by the following two factors: A. The students comprising the samples in all of the studies came from different regions of the country. B. In the cases where different results were found, different measuring techniques.

In respect to those studies where discrepancies in the results were found the students comprising the sample were from different regional areas. As a result these discrepancies could be accounted for by the differences in attitudes and interests in these varying regions. This in turn would have an influence on the interests of the children in these areas. There was also in each of the studies, wherein conflicting results were reported, different interest measures employed. Thus it might be that different interest measures elicit different interest patterns. The discrepancies, therefore, could be a function of the different interest measures used.

Of the two explanations offered to account for the discrepancies earlier alluded to, one explanation enjoys a "hint" of research support. Jersild and Tasch (1949) in their earlier cited study, report that interests tend to vary with respect to the area of the country being studied. They state it as follows "We have also taken the liberty of dwelling at greater length on some of the findings presented in the tables than on others. We have not, for example, singled out for separate discussion each detailed comparison that might be made, say, ... between children in different parts of the country."

There isn't even a hint of evidence, however, to indicate whether or not different types of interest measures do measure the same thing. Before any conclusions can be drawn about the discrepancies reported in the literature, this question must be answered.

Different interest techniques are structured differently. Some allow the students "free response" while others provide the answers from which the student is to choose. The question then is does the structure of the measure in any way influence the response given by the subject? Before embarking upon this topic, it should first be decided if children's interests can indeed be reliably measured.

The Stability of Children's Interests

Of great concern in the measurement of any behavior is the stability of that behavior being measured. If for instance, a child's interest were subject to constant change, a measure taken on one day would not necessarily equal a measure taken on the next day. If indeed differences were found, they could in part be explained by the lack of

stability of the interest itself. Further, if one were to give a certain type of interest measure on one day and then give another type on a different day, very little could be said about the differences in interest the two measures elicited if indeed the interest themselves were not relatively stable. Thus when comparing interest measures the question of stability or instability of interest must first be answered.

Reliability is a measure of consistency. Reliability studies then, give information about the consistency or stability of an individual on a series of measures (Cronbach 1960). Two pertinent studies relating to the stability of children's interests have been conducted.

In a recent study, McKinney (1968) found that children's choices of school subjects, occupations, as well as seven other choices, became more stable as age increased. The students were asked to give their choices in response to the nine different items. Two weeks later, they were again to respond with their choices to the same nine different items. Reliability coefficients were computed yielding the following results: grade four = .15, grade six = .53, grade eight = .70. Further girl's choices tended to be significantly more stable than boys.

In a study directly related to the measurement of the stability of children's interests, conclusive findings have evolved. Dreese and Mooney (1941) in the standardization constancy figures which indicate that interests in elementary school children are relatively stable for a short period of time.

The inventory was given to a group of fifty children. Reliability (constancy of responses) was computed by giving the same inventory,

after a lapse of a few days, to the same group of children. They then compared both measures for each child in an effort to determine how many of the group had no changes on each of the items. This was done for each individual in grades four, five and six. The reported constancy of responses are as follows: grade four = 86%, grade five = 85%, grade six = 83%. And an overall average of 85%

From this it would appear that interests in young children can be reliably measured. Thus it would seem that if inconsistent results were to occur when utilizing various interest measures, the problem would not be with the instability of interest itself but rather with other factors, not the least of which are the differences in the measures.

The Techniques Used in the Measurement of Children's Interests

There are many methods used to measure interests. Cattell et al (1950) for example, suggests twenty five different approaches, some of which have become standardized tests of interests. The majority of these measures, however, tend to be restricted to laboratory use. Certain of these invlove the need for rather sophisticated apparatus. Physiological measures such as psychogalvinomic responses and measures of metabollic rate change require rather large expenditures of money and are quite cumbersome to move about. Thus they become impractical as "field" instruments. Because of these and other problems with various measures there seems to have evolved four more commonly used techniques. All of which appropriate for use with adults and children as well.

These four major methods are listed as: Inventoried interests, Expressed interests, Tested interests and Manifest interests. (Super and Crites 1962)

Inventoried interests are measured through use of lists of activities to which the subject expresses a preference. In this kind of measure the subject must make a choice. For example, the subject must select whether he likes, dislikes, or doesn't know the category for each question on the inventory. Published interest inventories fall under this type of measure.

Adams (1964) concludes that the "inventoried interests" measure has the advantage of sampling larger areas of interest than do the other types of measures. In this technique the student can then react to all of these interest contained in the test. This method also affords comparison of the children in various parts of the country. This can be accomplished because the inventoried measures tend to be normed on representative samples of the population. This type of measure is the most commonly used technique in the research of children's interests.

Expressed interests are defined as that profession of interest wherein the subject states a liking for a particular activity. Simply asking the subject to state his interests would be a technique included in this category.

Representative of the "Expressed interest" measurement technique is the work done by Amatora (1957, 1960, a,b, 1961). It is Amatora's contention that free expression of school related interests can be and is elicited by directly asking the student to state those school

related activities which interest him the most. However, there has been some concern about asking a subject to state his interest. Fryer (1931) suggests that answers to direct questions tend to be superficial and unreliable. Anastasi (1968) further suggests that this is especially true for children.

Tested interests are measured through use of an indirect technique. An example of this would be to give the subject a specialized vocabulary test. Those areas in which his vocabulary is the highest would be the area of his greatest interest. Another example of this type of measurement would be to ask other indirect questions concerning the person's interests. E.g., ask what his wishes are.

In the research literature the monumental work of Jersild and Tasch (1949) probably best serves to illustrate this technique. As part of their study these researchers asked the subjects to list their wishes. It is assumed that the things children wish for are the things that interest them.

Manifest interests are said to be those interests which are evidenced through participation in a particular activity. This type of measurement necessitates the use of observation of an individual, over a period of time and in a variety of situations. If the person being observed spends more of his time engaged in one activity than in another, he is said to be interested in that activity.

Techniques in Current Use. Of the four types mentioned above three seem to have gained prominence through use, as evidenced by the research literature. Little or nothing is reported using the manifest interest measurement technique.

One possible reason for the absence of manifest interest measures in the research literature stems from the fact that this observational technique does not lend itself to research as easily as do the other three. Good observational techniques require that the individual be observed in a variety of situations over a period of time. This in itself is both time consuming and physically difficult if more than one individual is to be observed. The other three interest measures do not require the extensive use of time that the manifest measure requires and as a result tend to be used more.

Implications of the Previous Findings for this Study. In the review of the literature with respect to the findings on childhood interests, it was clearly demonstrated that discrepancies evolved when several researchers reported different findings relative to school subjects which most interested children. It was further demonstrated that studies involving sex or age related interests also reported conflicting findings. Although no data were presented, indication was given that the socioeconomic status of the child may also influence his choice of school subjects and one may very well expect to find conflicting results when anlayzing the data along this variable.

Two explanations were given which are thought to account for the discrepancies in the findings. The first explanation given to account for the discrepancies in findings centered on the differences in the measurement techniques. It is this explanation that is the concern of this project. A second explanation had to do with the differences in the geographic backgrounds of the subjects in the various studies. Although no conclusive evidence was brought to bear on this topic,

it was suggested by the Jersild and Tasch (1949) study that differences in interests did occur with students of varying regional origins.

In an effort to determine if different interest measures do indeed measure different interests, one must first hold constant the geographical backgrounds of the students to be measured. This can be done by measuring students from the same general geographic area. The next step then would be to vary the interest measures. This can be accomplished by selecting one measure representative of each of the four categories presented earlier in the discussion. Each of the four measures would then be given to the same subject. Differences or similarities in responses on each of the measures could then be noted.

Boys and girls from different age groups, representing varying socioeconomic backgrounds, would serve as subjects. In this way one can then determine the interactional effects of the different types of interest measures with respect to the demographic variables of age, sex and socioeconomic status.

CHAPTER II

METHOD

Subjects

Selection. The subjects for this study were drawn from the public schools of Lansing and Laingsburg, Michigan. In each of these cities, children from two different grade levels were selected. The two grades from which the sample was taken are the fifth and seventh grade.

There were several reasons for selecting these two specific grades. First of all, most of the studies previously cited included children of these two age levels. Secondly, because these two groups differ in age by two years, and if any differences in interests due to age occur, then they would most probably appear in these two samples. Whereas if the age groups selected were only a year apart the differences in age may not be great enough to reflect these differences in interest.

Another somewhat related reason for selecting these two age groups relates to the fact that children of these two ages are at different levels of cognitive development. Piaget (McCandless 1967) suggests that children from ages seven through ten (5th grade) are in the concrete operational stage while children at around eleven years of age (7th grade) are in the formal operational stage. Thus one might expect different kinds of intellectual interests at these two stages.

Care was given to the selection of schools which were to participate in the study. Their inclusion was dependent upon how well the students

in these schools represented the various social classes of the community. In the city of Laingsburg, the problem was easily resolved. All of the students enrolled in the fifth and seventh grades in the city's only grade and junior high school were included in the sample. Each grade, fifth and seventh, was made up of three classes.

Because the Lansing public school system is considerably larger than the Laingsburg system, the total population was not tested. Rather a sample of schools, representative of the population was selected to be measured. The selection of the schools, which were to participate in the study, was made by the Director of Research and Planning for the Lansing Public Schools. These selections were then discussed with the principals of the various schools. In only one situation was a school rejected because it did not correspond to the criterion of representativeness. A junior high school was selected to provide the seventh grade subjects. The fifth grade sample came from two different elementary schools in different parts of the city.

Of the original sample selected eighteen boys and twenty five girls had to be dropped from the study because they did not complete all three of the interest measures. A check of these fifty three students revealed that the majority, thirty one, were placed in category B in the socioeconomic scale to be discussed below. Six of the students were from category A and the remaining six were from category C. In addition to this twenty three girls and twenty three boys could not be included in the sample because their school records revealed no data relative to their socioeconomic status. In the final analysis, 254 students, representing 124 boys and 130 girls, constituted the subjects for this study.

The Classification of Subjects

The students who served as subjects for this study were classified according to three characteristics; age, sex and occupation of the head household. The classification of students into the first two categories was easily accomplished. The classification of subjects according to the occupation of the head of the household was a little more involved. Information relating to grade level, sex and occupation of the head of the household was taken from the child's cumulative record. The various occupations were then grouped into three categories. (appendix 1)

Several different grouping techniques were tried, but were subsequently discarded because they did not render meaningful occupational categories. Finally, it was decided that three categories would be used. Each of these categories represent a combination of several categories found in The Dictionary Occupational Titles (1965).

Category A represents that group which is commonly known as the semiskilled and unskilled worker. Some occupations representative of this category are: auto assembly line workers, construction workers, custodians, taxi drivers, dishwashers, etc. Occupations in category B are generally referred to as the skilled trades. Such jobs as carpenters, printers, construction foremen, policemen, firemen, are illustrative of this category. Category C is made up of professionals (teachers, physicians, lawyers) owners and operators of businesses, technicians, etc.

In category A there were forty boys and forty six girls. In category B there were forty three boys and forty two girls. Category C was comprised of thirty eight boys and forty two girls. Thus the difference

in ratio of boys to girls for each category was minimal.

Measuring Instruments

Four different measures of interest were used in this study. These measures were representative of each of the four types of interest measures suggested by Super and Crites (1962). These four types are: Inventoried Interest Measures, Expressed Interest Measures, Tested Interest Measures, Manifest Interest Measures.

Inventoried Interest Measures. The inventoried interest technique used in this study is the standardized interest measure called the "What I Like to Do" interest inventory (Thorp et al 1954) (Appendix 2). This inventory places school related activities into eight interest areas. These areas are: Art, Music, Social Studies, Active Play, Quiet Play, Manual Arts, Home Arts, and Science.

The authors report that the test was normed on a sample of 3803 subjects. The subjects in the norm group were representative of varying population characteristics. They came from different geographic regions of the country, they were of different ages and social classes, and represented both sexes. From this total norm group 800 subjects were selected for an analysis of reliability of each of the eight interest scores for boys and girls in each grade. The Kuder Richardson reliability coefficients for this interest measure ranged from .702 to .972 for the various interest areas.

The inventory has a total of 294 items ranging from 28 items for manual arts to 63 items in science. The subjects read the statement and mark the appropriate box which indicates his preference. For each

statement he is to mark only one of three boxes. These boxes are labeled yes, no and a question mark. His score is determined by counting the number yeses he has marked, and then totaling these for each interest area.

For the purpose of this study it was decided that a subject possessed an interest in a specific area if he scored higher in this area than did the majority of his classmates. Thus if the subject fell above the median in a specific interest area in his class he was scored as having that interest.

Expressed Interest Measure. In this study the measure used to represent this technique is of the same type employed by Amatora (1957, 60, a, b, 61). This measure (Appendix 3) requests the student to list the school subject he or she is most interested in. The subjects are free to list as few and as many interests as they would like.

Those school subjects or interests which the students listed were in turn transformed into the corresponding eight interest categories derived from the standardized measure employed in this study. This transformation, or scoring procedure, was conducted by the writer. It was performed so that the results gained by this and the other three techniques would yield the same information. For example, if a student were to list "drawing" as a stated interest, this interest would be scored under the category of "Art". This procedure was carried out for every response given by the subjects.

In an effort to determine if the transformation procedure was a reliable one, the same procedure was repeated on a sample of the subjects. The responses given by thirty three students, which represented 339 items,

were re-scored. Each interest response was again translated into one of the eight interest categories. This was completed without the knowledge of how the items were scored the first time. Out of the 339 items, 337 were scored identically the same way as they initially were. This represents a percent of agreement of 99.41. Thus it can be concluded that the transformation procedure (scoring procedure) was reliable.

Tested Interest Measure. Earlier it was suggested that one method of getting at a person's interests was to measure it in an indirect fashion (Super and Crites 1962). Jersild and Tasch (1949) suggests that asking children to state their wishes is an effective way of measuring their interests. This technique was used in their study and was adopted as the tested interest for this study. (Appendix 4)

In this measure the student is to respond in writing to the following question: if you had as many wishes as you wanted which subjects do you wish you could study in school. No restrictions were placed upon the number of responses the students could give. As in the case of expressed interest measure it was decided that if the student listed an interest (wish) he would be scored as having that interest.

The technique of scoring or transforming the results of this measure into the eight interest categories was identical to the technique used in transforming the responses yielded by the expressed interest measure. Interrater reliabilities were calculated on this transformation technique.

The responses from thirty three students, the fifth and seventh grades, representing 364 wishes were re-scored. Only four of the 364

wishes were scored differently the second time. This represents a percent of agreement of 98.90. Thus it can be concluded that the transformation of wishes into interest categories was reliably accomplished.

Manifest Interest Measure. Manifest interests are said to be those which are evidenced through participation in a given activity. (Super and Crites 1962). This technique necessitates the use of observation in a variety of situations. The school provided the best setting wherein one could observe school related interests as evidenced by the students' participation in various activities. The teacher was the observer in this setting and her opinions based upon her observations of the children constituted the data for this measure.

The use of opinions can be a valid and reliable measure provided they "...are based upon a large and representative sampling of observations." (Adams 1964, p.576) By conducting the study at the end of the school year, the teacher had a whole year of observation upon which to base her opinions. Thus the teacher had many opportunities to observe the students under varying conditions.

The teacher was asked to rate her whole class on each of the eight interest areas. Her instructions (Appendix 5 and 6) were to rate each student in the class relative to the other students on one interest area at a time. She was to assign a number of 1 through 4 to each of the students' names on each of the class lists. The number 1 corresponds to the upper quartile, the number 4 to the lower quartile. Numbers 2 and 3 represented the middle two quartiles.

In scoring the data, however, it was decided that a subject possessed an interest in a specific area only if the teacher rated him higher in

this area than she did the majority of his classmates. As a result if the subject was rated above the median for his class on a given interest he was scored as having that interest.

Originally, it was decided that the teacher would rate the child as to whether he fell above or below the median in his class with respect to a given interest. This plan was discarded, however, in an attempt to increase the precision of the teacher ratings. According to Cronbach (1960), the more units on a rating scale the finer the rater can discriminate on a given trait. Thus a four quartile unit rating scale was employed in lieu of the originally proposed two unit scale.

Testing Procedure

The testing for this project was conducted in the month of May. It took approximately three weeks to complete the total testing. It was concluded two weeks before the schools were recessed for the summer.

The first measure given was the manifest interest measure or otherwise known as the teacher rating. It was decided that if teachers were to rate the children prior to the administration of the other measures, her ratings would not be influenced by the results of these other measures. Once all of the teacher ratings were completed, the actual testing of the subjects began.

Each of the measures, with the exception of the teacher ratings, were group administered. A whole class took the same measure at one time. The tests were administered by the teacher of each class. The tests were given on a Friday, the following Wednesday and the following Monday. Everyone in the sample took the tests on these days and in

that order. The three days and the sequence of the three days was decided upon because it allowed for exactly five days between tests, with a weekend falling between the second and third testing days.

The Lansing sample started the testing sequence first and in the following week, the Laingsburg sample began. Thus all subjects in Lansing were tested on the same days as was the Laingsburg sample a week later. No problems were encountered with the testing schedule.

The order of taking the test was counterbalanced so as to minimize the effects of sequencing (Winer 1962, p. 301), that is: the effect that the taking one test has on the taking of another test. If the order of taking tests is rotated these effects will be minimized. One class took the wishes measure first, the statement measure next and the standardized measure last. This order was then rotated for each class in each city.

Hypotheses

1. It is hypothesized that there will be little or no consistency among the four instruments in the measurement of the eight childrens' interests areas. This lack of consistency will be demonstrated by few, if any significant correlations, among the various instruments across the interest areas.

2. It is hypothesized that the degree of consistency between the four instruments in the measurement of childrens' interests will vary with respect to sex.

3. It is hypothesized that the degree of consistency between the four instruments in the measurement of childrens' interests will vary with respect to the grade of the subject. There will be a greater number of significant intercorrelations between the instruments for seventh graders than for fifth graders.

4. It is hypothesized that the degree of consistency between the four instruments in the measurement of childrens' interests will vary with respect to the socioeconomic status (S.E.S.) of the child. There will be a greater number of significant intercorrelations among instruments across all interest areas for the high S.E.S. (Category C) children than for the low S.E.S. (Category A) children.

CHAPTER III

RESULTS AND DISCUSSION

Testing The Major Hypotheses

It was stated in Chapter II that each of the four interest measures would yield scores relative to the specific interest areas selected by the students. Two score values were employed. A score of one was assigned if the student revealed an interest in that specific area, zero was used if no such interest was determined. One of these two values was recorded for each student in each of the eight interest areas on the four different interest instruments. It was this information that provided the data necessary to test the major hypotheses.

The statistical analysis selected was a correlational technique. Because dichotomous data was involved (scores were 1 or 0) a special type of correlational analysis was used. The phi coefficient, a special case of the product moment correlation (Edwards 1967), was selected as the appropriate statistical technique. The test used to determine if the degree of relationship (phi coefficient) between two instruments was significantly different than zero was the Chi square test for phi coefficient as outlined by Edwards (1967).

The phi coefficient may be regarded as a correlation between two dichotomous variables (Hays 1963). The correlation is expressed as a number ranging from -1 to +1 with zero indicating the total lack of relationship between the two variables. In this study a relationship was said to exist if the chi square test of significance revealed a significance level greater than .01. The reason for employing the test

of significance for the phi coefficient as the single criterion for testing the hypothesis, was that it afforded the rejection or non-rejection of the hypothesis on a statistical basis. The other alternative was to arbitrarily select a correlation at which level a degree of relationship would be considered meaningful.

The interpretation of the results or findings of a correlation study create certain problems. In certain studies a low or moderate correlation is acceptable whereas in other studies a higher correlation is required. Popham (1967) illustrates this by suggesting that in educational situations where one is trying to relate a predictor test (I.Q.) to academic achievement, ocrrelations of .40 to .50 are acceptable. However, when one is attempting to determine whether two test forms are equivalent, correlations around .90 are desired. In this study correlations which exceed the .01 level of significance were considered meaningful. This is not to say that such an interpretation is without its problems. Borg (1963), for example, in his description of interpreting correlations suggests that in studies involving one hundred subjects, correlations ranging from .20 to .35 indicate only a slight degree of relationship despite the fact that these correlations may be significantly different from zero. Thus as one increases the sample size, the coefficient needed to be significant decreases. In an effort to further explain the degree of relationship, the correlation, between two instruments, the concept of common variance is employed. By squaring the correlation coefficient and multiplying by 100, the per cent of variance common to both measures correlate .50, twenty five per cent of the variance is common to both measures. Stated another way

25 per cent of the variation in interest measure X is due to the linear relationship existing between interest measure X and interest measure Y. The remaining amount (75%) of the variation is due to unexplained factors and is often called experimental error. (Alder and Roessler 1968)

Testing Hypothesis I

Hypothesis I stated that there would be little or no consistency among the four instruments in the measurement of the eight childrens' interest areas. This lack of consistency would be domonstrated by few, if any, significant correlations between the various instruments across the various interest areas.

TABLE 1

INTERCORRELATIONS BETWEEN THE INTEREST INSTRUMENTS IN THE MEASUREMENT OF THE EIGHT INTEREST AREAS

	INSTRUMENTS	I_1-I_2	I_1-I_3	I_1-I_4	I_2-I_3	I_2-I_4	I_3-I_4
INTEREST AREAS	ART	.17*	.01	.04	.36*	.06	.00
	MUSIC	.20*	.18*	.18*	.46*	.07	.07
	SOCIAL STUDIES	.03	.03	.04	.38*	.00	-.04
	ACTIVE PLAY	.13	.04	.13	.14	-.02	.12
	QUIET PLAY	.06	.03	.05	.42*	.10	.07
	MAN ARTS	.21*	.01	.11	.37*	.17*	.22*
	HOME ARTS	.14	.07	.27*	.30*	.20*	.09
	SCIENCE	-.02	.01	.02	.00	.14	-.05

I_1 Standardized Measure
I_2 Wishes Measure
I_3 Statement Measure
I_4 Teacher Rating
N = 254

*Significant Phi coefficient
Phi = .16 p = .01

The results reported in table 1 indicate that hypothesis I is not generally true. Although the correlations tended to be low, fifteen of them were significant.

The highest degree of relationship existed between the statement I_3 and wishes I_2 techniques. With the exception of the interest areas of active play and science, these two techniques had a significant degree of consistency in the measurement of childrens' interests. The significant correlations between these two measures ranged from .30 to .46.

Based on the finding that a significant relationship existed between the statement and wishes techniques, one would be inclined to conclude that these two measures did uniformly measure interests. When one looked at the proportion of the variance shared by these two measures, however, it was found that only nine to twenty one per cent of the variance is common to both techniques. Despite the fact that they are significantly related in their measurement of interest, these two techniques leave 79 to 91 per cent of their common variance unaccounted for. Further, if we were to employ Pophams' criterion, that two forms of the same test should share 80 per cent of the variance ($r = .90$), the two measures, although significant related in their measurement of interest, would again be found wanting. All of this quite generally interpreted meant that the two techniques which correlate the highest in the measurement of childrens' interests, did not uniformly measure those interests.

It is difficult to relate the findings of this study to the findings of the earlier cited and somewhat related Jersild and Tasch Study (1949). These two authors report their findings relative to the consistency instruments in terms of percentages. For example, they found that when children are asked to give their wishes, 6 per cent of them listed

school subjects. When the same students were asked to state those activities they liked best at school, 59 per cent listed school subjects. This would indicate a low level of agreement between the two measures, but the degree of the relationship is not known. Suffice it to say that the Jersild-Tasch study found little or no agreement between the wishes and statement techniques. This present study on the other hand, found a significant degree of relationship between the two measures. Further analysis of the significant correlations between the two techniques found in this present study, revealed that although the relationship was significant, it was not meaningful in terms of measurement efficiency.

In general the self-report measures (I_1, I_2, I_3) when correlated with the teacher rating measure I_4, yielded low intercorrelations. If one can assume that teacher ratings are the most valid of the instruments then the low intercorrelations found between this and the other measures could be accounted for by the weaknesses most generally associated with the self-report techniques. Cronbach (1960) suggests that response styles and faking are two common weaknesses of the self-report techniques.

The response style is especially applicable to the standardized interest technique. In the interest inventory used in this study the student was asked to score the box under no, ?, or yes relative to a specific statement. A student may become fixed in scoring one or another of the boxes and maintain this behavior throughout the test. When he is tested by another technique his responses may very well be different than that indicated on the standardized instrument because of his response set to that inventory.

Faking or scoring those items which the student may think are socially desirable may also account for the differences found between

the teacher ratings and the other instruments. The teacher may rate the child as being interested in a school subject through observing his participation relative to that subject. The student on the other hand may score the items, on the various instruments, which he perceives will put him in a more desirable light with the teacher. As a result the teacher ratings and the other techniques will show little consistency in their measurement of childrens' interests.

It will be noted that those instruments which showed the greatest degree of consistency overall were the statement technique and the wishes measure. If faking or listing socially desirable items should occur, it would be the easiest to do so on these two techniques. Because the two measures are similar in their structure it would be easier to be consistent in the faking across these two measures than it would be in faking the other more subtle measures.

Testing Hypothesis II

Hypothesis two stated that the degree of consistency between the four instruments in the measurement of childrens' interests will vary with respect to sex.

TABLE II

INTERCORRELATIONS BETWEEN THE INTEREST INSTRUMENTS IN THE MEASUREMENT OF THE EIGHT INTEREST AREAS FOR BOYS AND GIRLS

INSTRUMENTS		I_1-I_2	I_1-I_3	I_1-I_4	I_2-I_3	I_2-I_4	I_3-I_4
ART	B	.05	.05	.02	.47*	.13	-.02
	G	.20	-.09	.05	.24*	-.01	.01

Table II (cont'd)

I N T E R E S T A R E A			I_1	I_2	I_3	I_4	$I_1 I_2$	$I_1 I_3$
	MUSIC	B	.30*	.16	.11	.46*	.03	-.12
		G	.06	.17	.11	.45*	-.01	.18
	SOCIAL STUDIES	B	.07	.09	.06	.42*	.03	.16
		G	.03	.05	.01	.34*	-.06	.25*
	ACTIVE PLAY	B	.19	.14	.01	.07	.05	.04
		G	.08	.04	.20	.21	-.07	.16
	QUIET PLAY	B	.18	.11	.00	.42*	.03	.07
		G	-.08	-.05	-.07	.42*	.06	.05
	MAN ARTS	B	.16	-.04	.02	.31*	.03	.23
		G	.15	-.06	.11	.16	.03	.01
	HOME ARTS	B	-.14	-.07	-.04	-.05	.02	.05
		G	-.05	-.12	.15	.23*	-.07	-.17
	SCIENCE	B	-.04	.01	.06	.22	.15	.05
		G	-.01	.02	-.03	-.06	.12	-.08

I_1	Standardized Instrument	*Significant Phi Coefficient	
I_1^2	Wishes Instrument	N of Boys = 124 - Phi = .24	p = .01
I_2^3	Statement Technique	N of Girls = 130 - Phi = .23	p = .01
I_4	Teacher Ratings		

It was readily determined that hypothesis two must be rejected. The total number of significant correlations for girls was the same as it was for boys: six for boys and six for girls.

In several of the interest areas certain of the techniques revealed significant intercorrelations between instruments for boys and not girls and vice versa. In music, for example, the standardized technique significantly correlated with the wishes technique for boys but not for girls. In home arts the wishes instrument significantly correlated with the statement instrument for girls and not boys. In manual arts the same two instruments were significantly related for boys but not girls. All of this would seem to indicate that in a very few instances the intercorrelations among measures was related to the type of interest involved and the sex of the child. In most comparisons, however, this did not seem to be the case. In fact the correlations found in table two were

not significant and the ones that were did not follow a pattern related either to the sex of the child or a particular interest.

It will be remembered that in the earlier discussion of sex related interest studies of children, authors using certain of the techniques elicited a sex difference while others using a different technique found no such difference. Maas and Michaels (1964) and Tyler (1951, 1955) using standardized instruments found definite sex related interest patterns. Miyamato et al (1964) employing the "tested interest" technique, of which category the wishes instrument is representative, found no such sex differences. Various explanations were advanced to explain this discrepancy in the findings, one of which alluded to the differences in the techniques employed. The data presented in this study suggested that the differences in techniques may account for the differences in the results.

A rather interesting finding emerged relative to the statement of interests as reported by girls I_3 and teacher ratings I_4. In the areas of social studies girls statements and teacher ratings relative to this interest were negatively related. It would seem that either teachers infer an interest in those areas when none actually exists or that girls are interested in these areas when the teachers feel they are not. In either case, it would appear that teachers were incorrect in their assessment of girls interests in these areas.

It should be noted that in the cases where significant intercorrelations between instruments were found for boys and not girls or vice versa, the correlations were small. The absolute size of these correlations ranged from .23 to .31. This in turn represents from five to nine per cent of the variance common to both measures. Again Popham

suggests that two forms of the same measure would share at least 18 per cent of the variance---elements common to both. In view of this very little interpretation could be given to the findings.

Testing Hypothesis III

Hypothesis three stated that the degree of consistency between the four instruments in the measurement of childrens' interests will vary with respect to the grade level. There will be a greater number of significant intercorrelations between the instruments for seventh graders than for fifth graders.

TABLE III

INTERCORRELATIONS BETWEEN THE INTEREST INSTRUMENTS IN THE MEASUREMENT OF THE EIGHT INTEREST AREAS FOR FIFTH AND SEVENTH GRADERS

	INSTRUMENTS		I_1-I_2	I_1-I_3	I_1-I_4	I_2-I_3	I_2-I_4	I_3-I_4
	ART	5	.12	.05	.09	.14	.05	-.03
I		7	.27*	.09	-.03	.41*	.08	.06
N	MUSIC	5	.14	.18	.13	.35*	.08	.06
T		7	.30*	.26*	.24*	.55*	.11	.19
E	SOCIAL	5	.04	.09	.07	.01	.10	.09
R	STUDIES	7	.05	.02	.00	.47*	-.06	-.06
E	ACTIVE	5	.21	.12	.19	-.03	-.01	.05
S	PLAY	7	.07	-.01	.05	.24*	-.01	.23
T	QUIET	5	.12	-.05	.10	.01	.11	.19
	PLAY	7	-.02	.10	-.01	.25*	.10	.10
	MAN	5	.22*	-.12	.12	-.09	-.07	-.13
A	ARTS	7	.19	.04	.09	.57*	.41*	.31*
R	HOME	5	.17	.01	.33*	.13	.32*	.05
E	ARTS	7	.12	.12	.21	.51*	.10	.07
A	SCIENCE	5	-.09	.03	-.06	-.25*	.10	.16*
S		7	.05	-.01	.10	.37*	.18	.20

I_1 Standardized Measure
I^1 Wishes Measure
I^2 Statement Measure
I^3 Teacher Ratings
I_4

*Significant Phi coefficient
N of 5th grade = 136 Phi = .22 p = .01
N of 7th grade = 118 Phi = .24 p = .01

The number of significant intercorrelations between instruments for seventh graders was 14. This represents twenty-nine per cent of the total number of comparisons between instruments for all interest areas. The number of significant intercorrelations between instruments for fifth graders was 5. This represents 10 per cent of the total number of comparisons between instruments for all interest areas. The difference between the two proportions was significant at the .01 level on a two tailed test of significance. Thus it would appear that hypothesis three was not to be rejected: that is, there is a greater degree of consistency between the instruments in the measurement of seventh grade interests.

Table three reveals that intercorrelations between I_2, the wishes technique, and I_3 the statement technique, are significant across all interest areas for seventh grade students. These correlations range from .24 to .57 the highest reported in this study. For fifth graders the only significant intercorrelations between these two measures were in the interest area of music and science, the latter being negatively related.

It was mentioned in Chapter I that inconsistencies between findings of various studies using different techniques were evident. Bledsoe and Brown (1965) for example, using a standardized form found that mathematics was the most popular subject for children through the fourth grade, however, social science became the subject first chosen by children until at least the eighth grade. Jersild and Tasch (1949) and Amatora (1961), both studies employing a statement technique, found that from the fourth grade on through high school mathematics was the school subject most popular with students. One reason for this apparent lack of consistency in the findings could be attributed to the types of instruments used.

Inconsistencies, as mentioned above, occurred between studies employing the standardized technique and the statement technique. The findings of the present study showed that the intercorrelations between these two techniques were very low and only one case was significant; seventh grade music. Thus it would appear that little or no reliability occurred between the two measures, this in turn could account for the lack of consistent findings in the above mentioned research.

It will also be noted in table three that the standardized measure I_1 was the only measure which significantly correlated with the other three techniques in the measurement of a specific interest. Thus in the measurement of music interests of seventh graders the greatest reliability can be gained by using the standardized instrument.

Once again, caution should be exercised in interpreting the findings relative to this specific hypothesis. The correlations between measures for this specific hypothesis ranged from .22 to .57. Although significant, very little relationship between was shown to exist. Again if we square the correlations we can determine the amount of variance accounted for. A correlation of .57, the highest found, represented only 33 per cent variance common to both measures. This left two thirds of the total variance not common to the two measures. This was hardly evidence to suggest that the two measures do indeed measure the same thing.

Testing Hypothesis IV

Hypothesis four stated that the degree of consistency between the four instruments in the measurement of childrens' interests will vary with respect to the socioeconomic status (S.E.S.) of the child. There

will be a greater number of significant intercorrelations among instruments across all interest areas for the high S.E.S. children than for the low S.E.S. children.

TABLE IV

INTERCORRELATIONS BETWEEN THE INTEREST INSTRUMENTS IN THE MEASUREMENT OF THE EIGHT INTEREST AREAS FOR HIGH MEDIUM AND LOW SOCIOECONOMIC STATUS

	INSTRUMENTS		I_1-I_2	I_1-I_3	I_1-I_4	I_2-I_3	I_2-I_4	I_3-I_4
	ART	H	.21	.03	.05	.42*	.01	-.12
		M	.00	.02	.08	.36*	.09	.02
I		L	.27	-.02	-.01	.30*	.06	.10
N	MUSIC	H	.27	.25	.08	.58*	-.01	.03
T		M	.06	.16	.36*	.52*	.05	-.04
E		L	.28*	.15	.10	.29*	.17	.20
R	SOCIAL	H	.10	-.06	-.04	.22	.00	.11
E	STUDIES	M	.04	.03	.00	.51*	.07	.04
S		L	-.01	.11	.17	.40*	-.04	-.06
T	ACTIVE	H	.05	.09	.16	.17	-.17	.17
	PLAY	M	.19	-.01	.04	.15	.08	.08
		L	.17	.06	.19	.11	.01	.13
A	QUIET	H	.00	.08	.06	.43*	.05	.07
R	PLAY	M	.04	.10	.15	.49*	.30*	.12
E		L	.13	-.10	-.03	.33*	-.08	.02
A	MAN	H	.24	-.05	.23	.37*	.00	.13
S	ARTS	M	.06	-.12	.10	.36*	.22	.29*
		L	.32*	.18	.02	.40*	.26	.24
	HOME	H	.33*	.24	.24	.34*	.08	.06
	ARTS	M	-.06	-.11	.27	.34*	.19	.02
		L	.18	.09	.30	.28*	.33*	.15
	SCIENCE	H	.05	.08	.03	.20	.08	-.05
		M	.06	.14	.11	.50*	.34*	.25
		L	-.12	-.02	-.03	-.23	-.06	-.17

I_1 Standardized Measure
I_2 Wishes Measure
I_3 Statement Measure
I_4 Teacher Ratings

H = High SES (Category C)
M = Medium SES (Category B)
L = Low SES (Category A)

*Significant Phi coefficient
High S.E.S. Phi = .29 p = .01
Med. S.E.S. Phi = .28 p = .01
Low S.E.S. Phi = .28 p = .01

The number of significant intercorrelations between instruments were as follows: high SES had 6; medium SES had 11; and low SES had 10. The difference between proportions of the high SES and low SES intercorrelations were not significant at the .05 level on a two tailed test of significance. This would indicate that the hypothesis was not supported. Instead it would appear that the trend was just the opposite of that which was predicted. The lower SES had a higher proportion of significant intercorrelations between the measures; .21 to .13. Because this difference in proportions was not significant, it could be explained as occurring by chance.

It will be noted that the comparisons between the wishes I_2, and the statement I_3, techniques yield the greatest number of significant relationships. Again this could be accounted for by the similarities in the two techniques. Both the wishes and statement techniques, as used in this study are very similar in their structure and content, thus they tend to elicit similar responses on each of the tests. The other techniques differ with respect to their structure and approach to the measurement of interests, thereby, possibly eliciting different results. The work of Reissman (1962) suggested that we could look to certain of the subject matter areas for differences between children in the various SES's and their choices of interests. It is he who suggested that low SES children tend to be more pragmatic and anti-intellectual than their middle class brethren. As a result they would be more interested in those areas which are immediately practical and do not require a great deal of symbolic thought. Manual arts and home arts are both practical and tend to be non-symbolic in terms of course content. If Reissman's contention is correct

then the interest areas of manual arts and home arts should reflect the highest degree of consistency for low SES children. It is these interest areas that are the most immediately practical and require the least amount of symbolic thought.

Table four reveals that in home arts for low SES students, three of six possible comparisons between instruments were significant. In the interest areas of manual arts and music two of the possible six comparisons were significant. Thus it would appear that Reissman's suggestion receives some support from the present study. The evidence, however, is considerably less than convincing. The reasons that the findings of this study do not support the Reissman findings could attribute to two factors.

The first factor relates to inconsistency among the different measures in measuring the interests of children. The significant correlations relative to this hypothesis ranged from .28 to .58. This represents 7 to 33 per cent of the amount of variance common to all measures. This meant that at least two thirds of the elements common to two of the measures were unexplained. This in turn could account for the inconsistency in findings when the various measures were compared with one another. A second factor which might serve to explain the findings centers around a discussion of the nature of the sample involved.

The cities from which these students were selected are primarily "factory oriented". The bulk of the students come from homes where the head of the household is in some way tied to the auto industry. Very few children of "high" professionals were included in the study.

Such professionals as college professors, attorneys, physicians, etc., were not found in any abundance in high SES category. Rather, children who were children of technicians or operators of businesses by in large comprise this category. However, having a technical skill or operating and owning a business does not necessitate a strong educational background. Therefore, the children of these people may not share a strong belief in academic matters as would the children of people having professions wherein education is the vehicle of attaining that profession, e.g., lawyers, professors. Consequently, the contention that children of higher SES would tend to select school subjects more academically oriented than would children of lower SES was not demonstrated by this study. Because the distinctions between the SES's in this study was not very great, some of the students who were in the high SES in this study may indeed reflect middle or low SES values. As a result the findings relative to middle and SES interests were somewhat confounded by the overlap in the classification of socioeconomic status.

Limitations Of The Study

Representativeness Of Subjects And Generalizability Of Findings. The procedures used in selecting the subjects for this study were seemingly adequate. It is not the selection procedure as much as it is the population from which the subjects were selected that gives rise to certain questions.

Both cities from which the subjects were selected are "factory towns". As a result, the majority of the subjects come from homes wherein the head of the household is employed in the factory. Thus, few of the

subjects included in this study come from families wherein the head of the household is engaged in the "professions", e.g., college professors, lawyers, etc. Because few of the subjects, representative of this occupational group, were included in the study their school related interests were not adequately measured. The findings of this study then could not be generalized to populations of children wherein upper middle class children are included. Further, the sample in this study consisted of fifth and seventh graders. To generalize the findings of this study to children other than in these two grades is inadvisable.

Instruments. Earlier it was noted that none of the authors of the interest instruments offered any data relative to their validity. Comments were made, however, as to the reasons for using their various types of instruments. Amatora (1957), for example, simply commented that asking a student to state his interests is the best measure of these interests. In the absence of empirical validation relative to any of the interest techniques, criteria for efficacy of these measures is notably lacking. Because previous research failed to reveal which, if any, of the interest measures were the most effective, obvious limitations were placed on the present study. This study had no criteria for investigating the relative worth of the various instruments and as a result it could only analyze the extent to which these techniques related to one another.

Another serious limitation of this study has to do with the crudeness of the scales employed. The students were scored as either having or not having an interest in a given area; they received a score of one or zero in each of the interest areas. This type of crude scaling has a depressing effect upon the interreliability coefficients among the measures. If one were to increase the number of units on the scale, ie.,

take into account the gradients of interest, this error due to scaling would be minimized.

Type of Study. This specific study was representative of what Borg (1963) describes as an exploratory relationship study. This type of study is especially useful when little or no research has been conducted in the specific area presently under investigation. One then must rely on theory and/or the findings from research only somewhat related to the topic in order to specify variables which may have some degree of interrelatedness. Research of this type rarely involves analysis beyond correlational techniques. As a result, these studies are subjected to the limitations generally associated with the use of correlations.

Because variables have a demonstrated relationship (correlation) one can not necessarily assume that a cause and effect relationship exists. A correlation simply suggests that the two variables are related to one another in some manner. Although this general limitation of interpreting correlations is applicable to this study another limitation gains prominence through its relevancy to this specific study.

It was mentioned earlier that although a correlation may yield significance it is only significantly different from zero. Correlations in this study ranging from .16 to .29 were found to be significant at the .01 level on a chi square test. Borg (1963) indicates that correlations of .20 to .35, although significant, are of such a degree as to indicate only a slight relationship. Selltiz et al (1960) further points out that despite the fact that a result is statistically significant, it need not necessarily be psychologically or socially significant. This point is aptly demonstrated by the results of this study.

The correlations between techniques required for significance in this study represent having only three to eight per cent of the variance common to both techniques. This leaves from 92 to 97 per cent of the variance due to factors other than that which is common to both measures. This would hardly represent a meaningful relationship between interests measures both of which were supposed to measure the same psychological trait.

There is another problem which is especially relevant to a correlational study of this type. In testing the significance of a great number of correlations, one can expect some of the correlations to be significant due to chance alone. In the first hypothesis, 48 correlations were tested to see if they differed significantly from zero. Fifteen of the forty eight correlations tested were found to be significant. It is not known how many of these significant correlations occurred by chance. There is, however, a method of estimating the minimal number of significant items one might expect to be due to chance. One multiplies the number of items tested for significance by the prescribed alpha level. In this case it would be 48 times .01 or at least .48 of the items were significant due to chance alone. Consequently, hypothesis I had to be rejected because of the occurrence of significant correlations which may or may not have occurred by chance. This problem did not affect the findings related to the other hypotheses.

In hypothesis II, for example, the test of the hypothesis was to determine if there was a proportionately greater number of significant correlations for girls than for boys. If the correlations were significant due to chance then one would expect that they would occur in equal

proportion for both boys and girls. The same situation would exist with hypotheses III and IV. Thus only hypothesis I would be affected by the occurrence of correlations due to chance.

CHAPTER IV

SUMMARY, RECOMMENDATIONS AND IMPLICATIONS

SUMMARY

Problem

This study attempted to investigate the results of four different types of interest instruments given to the same individual. It was intended to determine if all of the different instruments would yield the same results for the same individual. Four hypotheses were advanced in this study. Hypothesis I stated that there would be no consistency among the four instruments in the measurement of the eight childrens' interest areas. Hypothesis II stated that there would be a greater consistency among the instruments for girls than for boys. Hypothesis III stated that there would be a greater consistency between the instruments for seventh graders than for fifth graders. Hypothesis IV stated that there would be a greater consistency among instruments for the high S.E.S. children than for low S.E.S. children.

Treatment

The subjects employed in this study were drawn from two Midwestern cities. In one of the cities a representative sample of fifth and seventh graders was selected to participate in the study. In the other city, much smaller in size, the total fifth and seventh grade population was selected to participate.

Four different types of interest instruments were used in this study. The types were the standardized technique, the wishes technique, the

statement technique and teacher ratings. Each subject participating in the study was given all of the four instruments. The order in which the subjects took the various instruments was rotated in an attempt to control for sequencing effects. All of the school interests elicited from the students were translated into eight different interest areas. These areas were: art, music, social studies, quiet play, active play, manual arts, home arts and science. For purposes of analyses the subjects participating in this study were categorized into their appropriate sex, grade and socioeconomic status.

Results and Discussion

All of the students were scored on each of the instruments as to whether they did or did not evince an interest in each of the eight interest areas. It was decided that if a student indicated an interest he would be given the score of one in that interest area. If the student did not evince an interest, he would be given a zero in that interest area. This scoring was completed for each of the children on all four measures. The phi coefficient, a special case of the product moment correlation, was the statistical analysis selected for this type of data.

Hypothesis I was rejected. This would suggest that there is some degree of consistency among the techniques in measuring childrens interests. Fifteen of the forty eight intercorrelations were significant. The greatest consistency among techniques was noted for the comparison between the wishes and statement (I_2 and I_3) measures.

Hypothesis II was also rejected. The number of significant Phi coefficients between measures was the same for girls as it was for boys.

The same pattern with respect to the findings in hypothesis I, was also noted in hypothesis II. The greatest number of significant phi coefficients among measures occurred between the wishes I_2, and the statement I_3, techniques.

Hypothesis III was supported. This meant that a proportionately higher number of significant phi coefficients between measures were found for seventh graders than for fifth graders. It was also found in hypothesis III that the greatest number of significant phi coefficients occurred between the wishes and statement techniques.

Hypothesis IV was rejected. No significant differences were noted in the proportion of significant phi coefficients for high and low S.E.S. Again it was found that the greatest number of significant correlations occurred between the comparisons of wishes and statement techniques.

Two notable findings emerged from the study. The first was that the greatest number of significant intercorrelations occurred between I_2, and I_3, the wishes and statement techniques. The consistency found between the two measures could in part be attributed to the similarity in their structures. This in turn would suggest to the student that similar responses were required. The second notable finding that emerged from this study was that a proportionately greater number of significant correlations occurred between instruments in the measurement of 7th grade interests than in the measurement of fifth grade interests.

Recommendations

It was suggested that one of the reasons for failing to find greater consistency between measures for the high SES students, had

to do with the population from which the sample was selected. The sample selected for this study did not include a proportionate number of students who come from families wherein the head of the household achieved his occupation virtue of a formal education. Professionals such as attorneys, college professors, rise to their professions by having acquired a certain amount of formal education. Consequently, their values, it would seem, would certainly include a preference for the more academic interests. These values, it would follow, would be reflected by their children. The category in which these children would have been classified was represented in this study by a preponderance of sales people, technicians and business operators. A strong academic background is not necessarily required for thse occupations. As a result, the value these people would hold toward pure academic interests is not as strong as those people whose professions require an emphasis on the more academic. Thus one could expect, that children representing these two different backgrounds would express different school related interests. Most certainly future research in this area would want to select samples in which more children from professional families are included. This would allow for a narrower classification of all occupations with people from like occupations falling into the same category. In this study the few subjects from professional families were grouped in the same category as were children from families including business owners and operators thus masking the observation of any differences, if any, which may have existed between them.

It is also recommended that the accuracy of the children's responses might be increased if another kind of interest instrument was

added. This instrument should be of the type so that each child is forced to become more responsible in making his choice of school subjects. This can be accomplished by instructing each student that he is to mark down the school subjects he would like to study the following semester. Further, instructions should include that once he has marked these school subjects down, he cannot later on in the semester change his mind because he would have to take those courses. Through this method the student would attend to the selection of school subjects more rigidly. Of course one could not hold the students to such a contract thereby creating a question of the ethics involved. Aside from the matter of the ethics involved this technique would assure more responsible responses on the part of the student than is afforded by the existing instruments.

In this study it was found that a greater proportion of significant correlations occurred in comparisons involving 7th graders than for 5th graders. This was interpreted as indicating that the interests themselves become more stable as children grow older. In an effort to determine if indeed correlations between instruments do increase with age, at least two more grades should be included in the sample. Possibly one might want to select a third grade sample and a ninth grade sample in addition to the ones already included. This would increase the age range of the sample from 3rd to 9th grade.

Implications

If one could make the assumption that a student will do well (get good grades) in those areas in which he is interested, one could measure

the students interests using the different instruments and then relate these findings to grades the student has received in the various courses. This would provide a method for judging the efficacy of the various interest measures. Before one can make a definite statement about the efficacy of the various techniques one must first determine an external criterion upon which to judge the efficacy of the various techniques. In measurement terminology this process is alluded to as determining the predictive validity of a measure. It should be noted, however, that in determining which instruments have relevance for educational practice, predictive validictive is not the only measurement concern. Concurrent validity may be equally as important in determining the use of various interest measures in educational practice.

Determining concurrent validity was the essential task of this study. It involves taking several interest measures on the same subject and making comparisons among the results elicited by these various measures. If the concurrent validity (correlations) among the measures is reasonably high enough then one or another of the instruments may be used to measure childrens' interests. If, however, low intercorrelations among the measures result then it is not known which if any of the techniques are effective in the measurement of childrens' interest. All that can be said is that the different interest measures do not appear to measure the same thing. Thus it can be seen that the understanding knowledge of the concurrent validity coefficient of a measure can be equally as important in making educational decisions as having knowledge of the predictive validity coefficient.

In the absence of predictive coefficients for any of the measurement instruments used in this study and because of the generally low phicoefficients (concurrent validity) among the measures, it is difficult to determine which if any of the instruments was an effective tool in measuring children's interests. There were, however, some findings that did suggest some implications for education.

In this study it was found that the instruments revealed a greater number of significant intercorrelations for the older (7th grade) students than for the younger students (5th grade). This might indicate to teachers that younger children have a tendency to be more "flighty" in their interests than do older children. What a younger child may be interested in today may not hold the same interest for him tomorrow. This in turn could indicate that until a student has had an opportunity to know of or experience certain subjects he cannot be relied upon to state his choice, with any certainty, about his school related interests.

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APPENDIX

Appendix 1

Occupation of the head of the household of the students who are the subjects of the study.

Category A — Nurses Aide, Practical Nurse, Hairdresser, Housekeeper, Enlisted Military Personnel, assembly line worker (auto), Laundry worker, Farm hands, construction workers, dishwashers, custodian and taxi driver.

Category B — Carpenter, truck driver, electrician, construction foreman, printers, postmen, policemen, firemen, baker, clerical and sales personnel.

Category C — Administrative and Executive personnel of large concerns, i.e., Oldsmobile, managers and operators of medium sized businesses. Owners of smaller businesses, lawyers, teachers, physicians, ministers, military officers, accountants, morticians.

APPENDIX 2

What I Like To Do

An Inventory of Children's Interests

Prepared by

Louis P. Thorpe

Charles E. Meyers

Marcella Ryser Bonsall

WHAT I LIKE TO DO

An Inventory of Children's Interests

Prepared by

Louis P. Thorpe

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Marcella Ryser Bonsall

Before you write . . . . .

Wait for your teacher to tell you whether to mark in this booklet or on a separate sheet of paper. If you are to use a separate sheet for your answers, your teacher will tell you where to write your name. If you are to mark in this booklet, fill in the blanks below.

NAME_____ **AGE**____ **BOY**____ **GIRL**____

GRADE____ **SCHOOL**_____ **TODAY'S DATE**_____

SRA

GLOSSARY

Arrange the furniture: Move the furniture into place.

Artificial: Not real, but looks real.

Attractive: Good looking.

Ballet: A dance on the stage; often the lady dancers wear fluffy skirts and dance on their toes.

Basic: Important.

Cartoon: A picture like the pictures in the funny papers.

Climate: The weather.

Concert: A program of music.

Control the insects that spread disease: Kill the flies and other insects that have germs that make us sick.

Crochet: Knit with one needle that has a hook on it.

Decorate (also **Decoration**): Make things beautiful.

Design: A drawing or other art work; also to plan them.

Display: Show.

Embroider: Do fancy work with needle and thread.

Entertained themselves: Had fun.

"Erector Set": Metal that you can build things with.

Exhibit: Show; it means the same as "display."

Famous: Well known.

Flip jackknives: A game played with pocketknives.

Jewelry: Rings and bracelets.

Labor strike: When workers refuse to work.

Lantern: A cover for a light, often made out of paper.

Linoleum block: Something you can carve art work on; when spread with ink or paint, your picture can be printed on paper.

Locate: Find.

Military bands: The Army or Navy bands that play lots of marches.

Model: Make things by shaping them, as with clay.

Model train: (also **airplane** and **boat**): A small toy train that looks like a real one.

"Monopoly": A game like "Parchesi" that several people play on a table.

Musical instrument: Horns and pianos are instruments that you play music on.

Musician: One who plays music.

Necessary: Needed.

Opera: A play with music; the actors sing instead of talking their parts.

Orchestra: A large band.

Paper pulp and glue (papier maché): "Gooey stuff" made out of paper and paste that can be shaped like clay.

Perform: Do.

Pipe cleaners: Strips of wire covered with cloth; they are used to clean pipes but can be used to make things with.

Pitch horseshoes: A game played by throwing horseshoes, also called "quoits."

Plastic: Something you make things out of by shaping, cutting, or sawing.

Posters: Big pieces of paper that are painted with pictures and words; often they are put on the bulletin board to tell about a school play.

Prefers: Likes better.

Produce better food: Grow better food.

Pyramids: Very old stone buildings that were made by hand and are still standing in Egypt and Mexico.

Relay racing: Team racing.

Scenery: The painted backgrounds on a stage.

Sketches with charcoal: Drawings made with a very black pencil.

Stencil: A cutout, often made of cardboard, that is used in art work.

Symphony: A long piece of music.

Target: The point that you aim for in shooting arrows or throwing darts.

Treaties: Agreements between countries.

Unusual: Not usual; something that does not happen often.

Volcano: A mountain that sometimes spits fire and smoke.

Wallet: A small purse to carry money in, often made out of leather.

DIRECTIONS:

This booklet will help you understand your interests better. It tells about many different things to do. You will probably find some activities that you like very much, and others that you don't like at all.

Read each item in this booklet and decide whether you would like to do what it says.

If you would like to do what the item says, mark the space under YES.

If you would not like what the item says, mark the space under NO.

If you don't care one way or the other—that is, if you neither like nor dislike what the item says, mark the space under the question mark.(?)

If you do not understand a word, ask your teacher to explain it before you mark the item.

Here is an example of how John, a fifth grade boy, marked some of the items:

	NO	?	YES
1. Eat ice cream	☐	☐	☒
2. Play crack-the-whip	☒	☐	☐
3. Walk in the woods	☐	☒	☐
4. Sleep in a tent	☐	☐	☒

Look at number 1. John likes to eat ice cream so he marked the box under YES.

Now look at number 2. Where is John's mark? It is under NO. This means that John would not like to play crack-the-whip.

Now look at number 3. How does John feel about walking in the woods? Since John marked the space under the question mark, we know that he doesn't care very much whether he walks in the woods or not. He neither likes nor dislikes walking in the woods.

Now look at number 4. We see that John would like to sleep in a tent—he marked the space under YES.

You are going to mark the things in this booklet just as John did. Be sure you understand what the item means before you make a mark. Remember, if you would like to do something, mark the space under YES. If you would not like to do it, mark the space under NO. If you do not care one way or the other, mark the space under the question mark.

Be sure to put your mark for each item in the correct row of spaces. You have to be especially careful if you are using a separate answer sheet.

Your teacher will help you if you have any questions. When you are told to go ahead, turn the page and begin to mark your answers.

Would you like to . . .

PART A

	NO	?	YES
1. Make pictures with crayons	☐	☐	☐
2. Carve things out of wood	☐	☐	☐
3. Draw unusual designs	☐	☐	☐
4. Look at famous paintings	☐	☐	☐
5. Make designs with pieces of colored felt	☐	☐	☐
6. Make a picture by brushing paint through a screen	☐	☐	☐
7. Go to see an art exhibit	☐	☐	☐
8. Carve things out of soap	☐	☐	☐
9. Make maps	☐	☐	☐
10. Make Christmas and birthday cards	☐	☐	☐
11. Decorate the bulletin board	☐	☐	☐
12. Make artificial fruit out of wax	☐	☐	☐
13. Take pictures with a camera	☐	☐	☐
14. Make a scrapbook of pictures you like	☐	☐	☐
15. Draw cartoons	☐	☐	☐

	NO	?	YES
16. Print with carved linoleum or wood blocks	☐	☐	☐
17. Read about the lives of great artists	☐	☐	☐
18. Model things with paper pulp and glue (papier maché)	☐	☐	☐
19. Do finger painting	☐	☐	☐
20. Read about famous paintings	☐	☐	☐
21. Make party decorations—such as lanterns and placecards	☐	☐	☐
22. Trace stencils to make pictures	☐	☐	☐
23. Design posters	☐	☐	☐
24. Paint designs on clothing—such as ties, or scarves, or aprons	☐	☐	☐
25. Model things out of clay	☐	☐	☐
26. Paint pictures with water colors	☐	☐	☐
27. Paint designs on dishes and glasses	☐	☐	☐
28. Mix paints to make different colors	☐	☐	☐
29. Design new clothes	☐	☐	☐
30. Make sketches with charcoal	☐	☐	☐

Would you like to . . .

PART B

	NO	?	YES
31. Take singing lessons	☐	☐	☐
32. Go to a concert	☐	☐	☐
33. Play in an orchestra	☐	☐	☐
34. Collect phonograph records	☐	☐	☐
35. Learn new songs	☐	☐	☐
36. Join a music club	☐	☐	☐
37. Listen to opera music	☐	☐	☐
38. Listen to talks on music	☐	☐	☐
39. Play in a band	☐	☐	☐
40. Make up a song or a tune	☐	☐	☐
41. Read about great musicians	☐	☐	☐
42. Sing in a church choir	☐	☐	☐
43. Listen to the music of other countries	☐	☐	☐
44. Listen to organ music	☐	☐	☐
45. Sing while you're working or playing	☐	☐	☐

	NO	?	YES
46. Dance in a ballet	☐	☐	☐
47. Play an instrument in a musical program	☐	☐	☐
48. Listen to symphony music on the radio or TV	☐	☐	☐
49. Listen to popular music on the radio	☐	☐	☐
50. Listen to someone else play a musical instrument	☐	☐	☐
51. See a ballet	☐	☐	☐
52. Have a singing part in a music program	☐	☐	☐
53. See movies about singers and musicians	☐	☐	☐
54. Recite a poem with a group	☐	☐	☐
55. Go to an opera	☐	☐	☐
56. Collect autographs of musicians and singers	☐	☐	☐
57. Play a homemade instrument–such as a comb wrapped in tissue	☐	☐	☐
58. Learn how to play a musical instrument	☐	☐	☐
59. Take dancing lessons	☐	☐	☐
60. Listen to a military band	☐	☐	☐

Go right on to the next page.

Would you like to . . .

PART C

		NO	?	YES
61.	Hear about life in the jungles of Africa and South America	☐	☐	☐
62.	Visit a prison to see how it is run	☐	☐	☐
63.	Learn how the pyramids were built without machinery	☐	☐	☐
64.	Hear a talk on what your city is doing to make it a better place in which to live	☐	☐	☐
65.	Find out how we choose judges for our courts	☐	☐	☐
66.	See the different kinds of money used all over the world	☐	☐	☐
67.	Learn why people have different talents—some are good in art, others are good in arithmetic, and still others in reading	☐	☐	☐
68.	Hear about how our lakes and mountains and plains help to make the United States a rich country	☐	☐	☐
69.	Read the newspaper to see what is happening in other countries	☐	☐	☐
70.	Hear about homes people lived in thousands of years ago	☐	☐	☐
71.	Hear a talk on how your city and state take care of the people who cannot work to earn their own living	☐	☐	☐

		NO	?	YES
72.	Hear about the first boats that were made	☐	☐	☐
73.	Learn how holidays like Labor Day, Independence Day, and Memorial Day got started	☐	☐	☐
74.	Learn about the difference between a king and a president	☐	☐	☐
75.	Hear about all the things we buy from other countries	☐	☐	☐
76.	Listen to news programs on the radio	☐	☐	☐
77.	Hear a talk on what happens to a letter from the time you put it in the mailbox until it is delivered	☐	☐	☐
78.	Learn about the different treaties we have made with other countries	☐	☐	☐
79.	Find out why we have a limit to the number of people who may come from other countries to live in the United States	☐	☐	☐
80.	Learn about the causes of a labor strike	☐	☐	☐
81.	Hear about how people entertained themselves before they had radio, television, and movies	☐	☐	☐
82.	Learn what makes the cost of food change from time to time	☐	☐	☐

Would you like to . . .

	NO	?	YES
83. Learn how Alaska and Hawaii became part of the United States	☐	☐	☐
84. Find out what the important people of our country are doing	☐	☐	☐
85. Learn about different languages	☐	☐	☐
86. Learn what can be done to help sick people who do not have any family to take care of them	☐	☐	☐
87. See a display of the weapons used many years ago—before guns and tanks and planes were invented	☐	☐	☐
88. Find out how a person gets a job working for the government	☐	☐	☐
89. Learn why our country prefers to have many companies making the same kind of thing, such as cars, rather than just one company making all of them	☐	☐	☐
90. Find out why some people are almost always happy and others are almost always sad and gloomy	☐	☐	☐
91. Hear about the kind of government the American Indians had before the white people came	☐	☐	☐
92. Learn about how people of all races and religions can get along better	☐	☐	☐

	NO	?	YES
93. Find out what is against the law in some states but not against the law in other states	☐	☐	☐
94. Find out the differences between our city government and our national government	☐	☐	☐
95. Find out how American schools are different from the schools in Europe	☐	☐	☐
96. Find out more about how people in China and India live	☐	☐	☐
97. Learn about our American heroes	☐	☐	☐
98. Find out how our state is different from other states in this country	☐	☐	☐
99. Learn more about what happens to money when you put it in the bank	☐	☐	☐
100. Learn what the United Nations is doing	☐	☐	☐
101. Hear about the way people traveled long distances before we had cars, steamboats, trains, and airplanes	☐	☐	☐
102. Study maps to see which state has the most wheat, cattle, or fruit	☐	☐	☐
103. Find out how people "bought" and "sold" things before there was money	☐	☐	☐

Go right on to the next page.

PART D

Would you like to . . .

	NO	?	YES
104. Play baseball	☐	☐	☐
105. Go hunting	☐	☐	☐
106. Play cowboys, or space men, or cops and robbers	☐	☐	☐
107. Play tennis	☐	☐	☐
108. Go swimming	☐	☐	☐
109. Play tug-of-war	☐	☐	☐
110. Pitch horseshoes	☐	☐	☐
111. Play kick-ball or dodge-ball	☐	☐	☐
112. Play follow-the-leader	☐	☐	☐
113. Fly a kite	☐	☐	☐
114. Flip jackknives	☐	☐	☐
115. Go fishing	☐	☐	☐
116. Play hockey	☐	☐	☐
117. Play hopscotch or "sky blue"	☐	☐	☐
118. Play volleyball	☐	☐	☐

	NO	?	YES
119. Walk on stilts	☐	☐	☐
120. Do folk dancing	☐	☐	☐
121. Play football	☐	☐	☐
122. Roller skate	☐	☐	☐
123. Play basketball	☐	☐	☐
124. Go on hikes	☐	☐	☐
125. Box or wrestle	☐	☐	☐
126. Do marching	☐	☐	☐
127. Go camping	☐	☐	☐
128. Ride horseback	☐	☐	☐
129. Do stunts on bars or on a mat	☐	☐	☐
130. Explore caves	☐	☐	☐
131. Play ping-pong	☐	☐	☐
132. Climb trees	☐	☐	☐
133. Shoot targets with a bow and arrow or a BB gun	☐	☐	☐

Would you like to . . .

	NO	?	YES
134. Go bike riding	☐	☐	☐
135. Build things out of snow	☐	☐	☐
136. Play tag	☐	☐	☐
137. Play hide-and-seek	☐	☐	☐
138. Do relay racing	☐	☐	☐
139. Go sledding in the snow	☐	☐	☐
140. Throw rocks or darts at a target	☐	☐	☐
141. Play catch	☐	☐	☐
142. Play jumping-rope games	☐	☐	☐
143. Ice skate	☐	☐	☐

Your teacher will tell you whether to stop here or go on.

Would you like to . . .

PART E

		NO	?	YES
144.	Collect pictures—such as baseball players, or airplanes	☐	☐	☐
145.	Perform magic tricks	☐	☐	☐
146.	Play table games like "Monopoly"	☐	☐	☐
147.	Read poems	☐	☐	☐
148.	Be in a play or a show	☐	☐	☐
149.	Play checkers	☐	☐	☐
150.	Play jacks or shoot marbles	☐	☐	☐
151.	Write letters to your friends and relatives	☐	☐	☐
152.	Belong to a club	☐	☐	☐
153.	Listen to sports on the radio—or watch sports on TV	☐	☐	☐
154.	Make up stories	☐	☐	☐
155.	Play card games	☐	☐	☐
156.	Play "dress-up"	☐	☐	☐
157.	Play house or play school	☐	☐	☐
158.	Collect stamps or coins	☐	☐	☐

		NO	?	YES
159.	Play guessing games	☐	☐	☐
160.	Play with a yo-yo	☐	☐	☐
161.	Take care of a pet animal	☐	☐	☐
162.	Read stories	☐	☐	☐
163.	Do card tricks	☐	☐	☐
164.	Play cards by yourself	☐	☐	☐
165.	Play with a model train	☐	☐	☐
166.	Work jigsaw puzzles	☐	☐	☐
167.	Build things with an "Erector Set"	☐	☐	☐
168.	Visit your parents' friends	☐	☐	☐
169.	Play with paper dolls	☐	☐	☐
170.	Listen to someone read stories	☐	☐	☐
171.	Listen to stories on the radio—or watch stories on TV	☐	☐	☐
172.	Go to movies	☐	☐	☐
173.	Write poems	☐	☐	☐

Would you like to . . .

PART F

		NO	?	YES
174.	Work crossword puzzles	☐	☐	☐
175.	Make a scrapbook	☐	☐	☐
176.	Go to the library	☐	☐	☐
177.	Weave baskets out of straw	☐	☐	☐
178.	Make things out of pipe cleaners	☐	☐	☐
179.	Build model trains	☐	☐	☐
180.	Fix broken furniture	☐	☐	☐
181.	Build a soap-box car	☐	☐	☐
182.	Run a printing press	☐	☐	☐
183.	Make fancy house numbers	☐	☐	☐
184.	Fix a motor so that it runs better	☐	☐	☐
185.	Make model airplanes or model boats	☐	☐	☐
186.	Build big toys—such as wagons and scooters	☐	☐	☐
187.	Make book shelves	☐	☐	☐
188.	Make things out of plastic	☐	☐	☐

		NO	?	YES
189.	Build a bird house	☐	☐	☐
190.	Make puppets out of wood and cloth	☐	☐	☐
191.	Grind and polish stones for jewelry	☐	☐	☐
192.	Make lamp shades	☐	☐	☐
193.	Make a piece of jewelry out of metal	☐	☐	☐
194.	Make artificial flowers out of paper and wire	☐	☐	☐
195.	Build scenery for a play	☐	☐	☐
196.	Take apart and fix old clocks	☐	☐	☐
197.	Make leather things—such as wallets or belts	☐	☐	☐
198.	Hammer designs on copper trays or plates	☐	☐	☐
199.	Cut out jigsaw puzzles	☐	☐	☐
200.	Build a radio set	☐	☐	☐
201.	Fix broken toys	☐	☐	☐
202.	Cut out and make things out of tin cans	☐	☐	☐

Go right on to the next page.

Would you like to . . .

PART G

		NO	?	YES
203.	Pick out new wallpaper or paint for your room	☐	☐	☐
204.	Help plan meals for the family	☐	☐	☐
205.	Plant and take care of a garden	☐	☐	☐
206.	Wash windows	☐	☐	☐
207.	Polish shoes	☐	☐	☐
208.	Go shopping for groceries	☐	☐	☐
209.	Help put up screens or storm windows	☐	☐	☐
210.	Arrange the furniture in your room in an attractive way	☐	☐	☐
211.	Set the dinner table in an attractive way	☐	☐	☐
212.	Polish silver	☐	☐	☐
213.	Paint walls, or a floor, or furniture	☐	☐	☐
214.	Cut out and sew new clothes	☐	☐	☐
215.	Make candy or ice cream	☐	☐	☐
216.	Clean out a fish bowl or a bird cage	☐	☐	☐
217.	Wash or iron clothes	☐	☐	☐

		NO	?	YES
218.	Wash the car	☐	☐	☐
219.	Help with the house cleaning	☐	☐	☐
220.	Help wash walls or clean wallpaper	☐	☐	☐
221.	Mend clothes or sew on buttons	☐	☐	☐
222.	Knit, crochet, or embroider	☐	☐	☐
223.	Clean the basement, or the attic, or the garage	☐	☐	☐
224.	Buy things for the house	☐	☐	☐
225.	Make hooked rugs	☐	☐	☐
226.	Arrange flowers in a vase	☐	☐	☐
227.	Weave on a loom	☐	☐	☐
228.	Clean cupboards and closets	☐	☐	☐
229.	Bake cakes, pies, or cookies	☐	☐	☐
230.	Take care of children	☐	☐	☐
231.	Cut or rake the lawn	☐	☐	☐
232.	Clean up your desk or chest-of-drawers	☐	☐	☐

Would you like to . . .

PART H

	NO	?	YES
233. Learn how fish take care of their young	☐	☐	☐
234. See pictures of unusual kinds of fish	☐	☐	☐
235. Hear a talk on how whales are caught and what is done with them	☐	☐	☐
236. Watch the kinds of birds that are found in our part of the country	☐	☐	☐
237. Learn about the different kinds of birds that live in the hot climates of Brazil, Africa, and the Pacific Islands	☐	☐	☐
238. Watch young birds learn to fly	☐	☐	☐
239. Learn how homing pigeons are trained to find their way back after they have been taken hundreds of miles away from home	☐	☐	☐
240. Learn how plants get their "food"	☐	☐	☐
241. Learn about the plants and animals that live in the ocean	☐	☐	☐
242. Find out what makes the different colors in flowers	☐	☐	☐
243. Hear about the kind of soil necessary to grow healthy crops	☐	☐	☐
244. Learn about unusual plants—like the kind that fold up their leaves to catch insects, or the kind that have flowers only at night	☐	☐	☐

	NO	?	YES
245. Hear about how crops can be improved so they will produce better food	☐	☐	☐
246. Watch animals teach their young how to find their food, and protect themselves in fights	☐	☐	☐
247. Find out how wild animals get along together even though some are stronger and more fierce	☐	☐	☐
248. Learn about the way different animals find and store their food, locate shelter, and prepare for winter	☐	☐	☐
249. Learn what has to be done to control insects that spread disease	☐	☐	☐
250. Watch ants to see how they work together and live together	☐	☐	☐
251. Learn how the United States Weather Bureau can tell what the weather will be like tomorrow	☐	☐	☐
252. Hear about the kinds of fire that can't be put out with water	☐	☐	☐
253. Find out about how stars shine in the daytime, even though we can't see them	☐	☐	☐
254. Learn about how the different planets were discovered	☐	☐	☐
255. Hear about how sailors use the stars to guide them across the ocean	☐	☐	☐

Go right on to the next page.

Would you like to . . .

	NO	?	YES
256. Find out why things look so different when you see them through water	☐	☐	☐
257. Learn why you get green if you mix yellow and blue colors	☐	☐	☐
258. Read about how 3-D movies are made	☐	☐	☐
259. Study about the North Pole where "nights" last for several months, and "days" also last for several months	☐	☐	☐
260. Find out how rockets are built	☐	☐	☐
261. Find out why the moon and the earth never bump into each other	☐	☐	☐
262. Learn why the moon looks like a half-moon sometimes, and a full-moon at other times	☐	☐	☐
263. Hear a talk on how we can make metal soft enough to shape it into different things, and then strong enough for trains and buildings	☐	☐	☐
264. Find out about the basic differences between plastic and metal	☐	☐	☐
265. Find out about new ways to use plastic in place of metal or wood	☐	☐	☐
266. Find out how islands are formed	☐	☐	☐
267. Read about how men first discovered that the earth is round	☐	☐	☐

	NO	?	YES
268. Find out about the inside of a volcano	☐	☐	☐
269. Find out why salt is so necessary for good health	☐	☐	☐
270. Learn why there are many storms in some parts of the world and few storms in other parts of the world	☐	☐	☐
271. Hear a talk on what causes an earthquake	☐	☐	☐
272. Read about why hearing-aids can't help all deaf people	☐	☐	☐
273. Find out why a bell, a fog-horn, a bomb, a gun, a whistle, and a piano all make different sounds	☐	☐	☐
274. Find out how a compass is made so that it always points in the same direction	☐	☐	☐
275. Learn why you get a shock if you touch bare electric wires	☐	☐	☐
276. Learn about what makes the electricity go off and on when you push a button on the wall	☐	☐	☐
277. Hear a talk on how a television picture is sent from the studio to a TV screen	☐	☐	☐

Would you like to . . .

	NO	?	YES
278. Learn why there is thunder whenever there is lightning	☐	☐	☐
279. Learn what makes your voice carry over hundreds of miles of wires when you use a telephone	☐	☐	☐
280. Hear about how electricity is produced	☐	☐	☐
281. Find out why there is an echo if you say "Hello" in a cave but no echo if you say "Hello" out in a field	☐	☐	☐
282. Learn how the sound is put on a movie film	☐	☐	☐
283. Find out what causes the different colors in a rainbow	☐	☐	☐
284. Learn how technicolor movies are made	☐	☐	☐
285. Find out why field glasses or opera glasses make things look so big	☐	☐	☐
286. Learn about what makes a jet airplane go	☐	☐	☐
287. Learn about the inside of your body	☐	☐	☐
288. Find out about the kinds of animals that used to live on the earth thousands of years ago	☐	☐	☐
289. Find out how fish breathe	☐	☐	☐

	NO	?	YES
290. Find out how we get rubber from trees	☐	☐	☐
291. Learn what makes the weather hot or cold	☐	☐	☐
292. Learn how an automobile motor works	☐	☐	☐
293. Find out why iron toys get rusty if they are left out in the rain very often	☐	☐	☐
294. Find out how your body uses the food that you eat	☐	☐	☐

Fold your hands and wait quietly until the others have finished.

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Appendix 3

NAME_____ DATE _____

SCHOOL_____

What school subjects are you most interested in. List them in order of importance to you.

Appendix 4

NAME _____ NAME _____

SCHOOL _____

If you had as many wishes as you wanted, which subjects do you wish you could study in school.

Appendix 5

Enclosed you will find eight copies of your Class Roster. You will note that in the bottom of each copy is a specific interest area written in red. For example page one interest area is ART. This indicates that each student on the class roster on page 1 is to be rated in ART. The rating will be numbered 1 through 4 and entered into the column on the left hand side of the list of student names. The following is a description of the Rating Scale:

1 = The child falls within the 76 to 100 percentile in this interest area for this class.

2 = The child falls within the 51 to 75 percentile in this interest area for this class.

3 = The child falls within the 26 to 50 percentile in this interest area for this class.

4 = The child falls within the 0 to 25 percentile in this interest area for this class.

Appendix 6

A definition of The Interest Areas:

1. ART- This score indicates frequency of preference for active work with various arts and crafts, plus appreciation of the fine arts. Art supervisors will find pupil responses particularly helpful in planning projects with teachers.

2. MUSIC- Both music supervisors and classroom teachers will wish to give this area particular attention. The score indicates pupil appreciation for various types of music, as well as interest in active musical experiences.

3. SOCIAL STUDIES- The emphasis on social studies throughout the elementary school curriculum makes this area valuable for identifying social awareness and curiosity. The score indicates the degree of pupil interest in the various fields comprising social studies.

4. ACTIVE PLAY- Independent activities plus competitive and noncompetitive group sports are included in this area. Scores can provide many clues for improving pupil participation in recess-period activities and physical education programs.

5. QUIET PLAY- This area measures preferences for both independent and group "things to do" of a less active nature. Scores can be helpful in suggesting leisure-time pursuits that tie in with other interests.

6. MANUAL ARTS- The items in this area are directed to boys and girls alike. Scores indicate interest in creative activities, as well as the more routine "shop work," and will be helpful to both classroom

teachers and manual arts teachers.

7. HOME ARTS- The items in this area include a variety of "around-the-house" activities that apply to both boys and girls. Scores will be of particular interest to parents and teachers in elementary schools where materials dealing with home economics are included in the curriculum.

8. SCIENCE- This area measures the child's curiosity about an interest in the natural world. The items can be helpful in planning units in health, safety, and conservation, as well as natural science.