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# Reading Interests in Relation to Vocational, Extracurricular, and Academic Interests of Boys in Grades Two Through Six

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# READING INTERESTS IN RELATION TO VOCATIONAL, EXTRACURRICULAR, AND ACADEMIC INTERESTS OF BOYS IN GRADES TWO THROUGH SIX

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# CHAPTER I

## INTRODUCTION

In the education field today, there is a need for research dealing with elementary students and their varied interests in terms of future employment. New technologies and industries are expanding and altering their assemblage and products so quickly that new types of employment are being created each day. Many jobs are becoming obsolete as a result of this vocational explosion.

What jobs will be available for today's children remains to be seen. The intellectual preparation for these children lies in the hands of the classroom teacher. She is the person who can best train the children for tomorrow's jobs. The best way to do this is to discover the interests and occupational desires of each student. She will then be able to help the child absorb as much knowledge in the areas as possible. The amount and type of preparation can mean the success or failure of our future's adults, thus placing a great responsibility on teachers.

Researchers have conducted various studies involving the vocational aspirations of the high school and college student. Some of

the studies have followed through to analyze the results of those students actually following their stated course of vocations. Much information has been brought to the fore by these studies at the secondary level.

Obviously persons in secondary education are more necessarily ready to step into the working world. But the elementary children must not be pushed by the wayside and forgotten. Very soon, these youngsters will be ready to enter and leave the world of secondary education. They must be as well prepared as today's adolescent if not more so. The best way to accomplish this is for each elementary teacher to know her students well enough to be able to guide and enrich them in their own particular interests.

## STATEMENT OF THE PROBLEM

The breadth of reading interests poses a problem to educators. Obviously each child has different interests, but the question remains as to whether his reading includes vocational, extracurricular, and academic interests. Educators would be aided immensely if a definite relationship were discovered between reading interests and academic inquisitiveness, vocational thought, and extracurricular enjoyment within the elementary grades.

## PURPOSE OF THE STUDY

The purpose of this study is to aid the elementary teacher in planning a meaningful curriculum. If she can be made aware of a correlation between the student's reading motivations and his personal preferences, she should be more able to plan with and for the student so that he may receive maximum benefit within the limitations of his ability and his school. In this way she can build and strengthen a bond of understanding between herself and each of her students.

Only boys will be interviewed in this study, as it is felt that most boys will grow up to be the primary wage earner within their own families. The teacher needs to help each of her boys develop and explore in his field of interest. This need not be limited to vocational interests only, but ought to include extracurricular and other academic activities.

Teachers are just now beginning to broaden and individualize the scope of their curriculum to fit the personal needs of the students. There is great importance, therefore, in collecting any available information and formalizing new knowledge within this area.

## STATEMENT OF THE RESEARCH HYPOTHESES

The writer intends to determine: (1) if a significant relationship exists between the reading interests of boys in grades two through

six, and vocational, extracurricular, and academic interests; (2) if there is agreement among the grade levels within each of these major areas; and (3) if concordance exists between the grades for nine subgroups within each of these major areas.

## PROCEDURES TO BE USED IN GATHERING AND ANALYZING THE DATA

In order to gather data for this study, the writer will use the interview technique. The subjects to be used will be all boys in the Thorp Grade School, Thorp, Washington, grades two through six. The interview is to be given individually to each boy and recorded on tape for accuracy of responses. The questions will cover such areas as what type of book each likes to read, their personal aspirations, and hobbies or interests they may have. Each respondent will remain anonymous in order that the boys will feel free to speak honestly and expressively.

Each boy's responses will be analyzed for evidence of follow-through or diverse answers. A composite of all boys' answers will be reviewed within the four main areas--reading, vocational, academic, and extracurricular--to determine the extent of correlation. Each of the four areas will be divided into nine identical subgroups for ease of quantitative tallying. All students' responses are to be tallied arbitrarily by the writer, each subgroup then being subtotaled within

the four areas. The boys' subtotals are to be tallied by grade level and totaled.

The raw data will then be subjected to a statistical analysis. M. G. Kendall's formula for the Coefficient of Concordance is to be used to determine the degree of relationship among the various aspects (5:245). The results will be accepted or rejected on the basis of the 5% or 1% levels of significance.

## DEFINITION OF TERMS

In this study, several terms will be used which need to be clarified or defined to prevent misunderstandings by the readers.

Reading interest refers to the absorption of various types of literature--books, periodicals, newspapers, comics--by the student and his inclination toward various broad areas of classification. There is no attempt made to determine the extent of engrossment with each piece of literature in this study.

Vocational interest displays the aspirations of an individual toward the assuming of a specific career. In this study there is no inference made as to the actual aptitude of the students for their occupational goals.

Academic interest is expressed by a person in the enjoyment and exploration of a given educational subject. For this study, the following are defined as academic subjects: reading, arithmetic,

science, social studies, English, spelling, art, music, and physical education.

Extracurricular interests are those areas in which a person participates outside of the regular school (or work) environment. These are his non-committed activities in which he can freely express and enjoy himself.

Adventure takes in the fictional world and that of unusual, dangerous, or spectacular experiences.

The arts include all factions of creative works taking on form, style, and beauty. These are painting, sculpting, architecture, music, literature, drama, and the dance.

History involves all events which have preceded the present moment, the present time. The development and expansion of the earth's inhabitants from one day to the next present various changes which can be looked upon as a span of time.

The area of mechanics involves all which can be operated with or by machines, often run automatically and lacking human qualities of expression and intelligence.

Nature includes all that is not man-made and are a part of the earth's natural environments.

Public relations involves a person with his fellow human beings in a cooperative and meaningful coexistence.

Science includes the systematic study of the physical and chemical make-up of the varied aspects of the universe.

Sports are all competitive physical activities engaged in by people. An exertion of the body in the promotion of various techniques is used to succeed over the opponent.

"Other" is open-ended and includes all responses which cannot be adequately placed in different categories.

Kendall's Coefficient of Concordance (5:245) is as follows:

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2(n^2-1)} - 3 \frac{(n+1)}{(n-1)}$$

In this formula, W is the answer or the coefficient of concordance, $\Sigma$ is "the sum of," R is each rank awarded to the quantitative data, n is the total number of areas or subgroups, m is the number of rank scores given in each column.

# CHAPTER II

## REVIEW OF THE LITERATURE

Educators are constantly searching and experimenting to discover ways to improve the learning process, to stimulate, motivate, and give long range as well as short range help to all students. First, the teacher must learn about each of her students and be cognizant of the methods open to her and the operational rationale of these tools. She should know what interest is, why it is important, various areas of interest, and be familiar with interest inventories.

### WHAT IS INTEREST?

Since this study is concerned with four different types of interest--reading, vocational, academic, and extracurricular--the leaders in the educational field need to be consulted for their definition of "interest."

Kuder explains interest thus: "We say a person has an interest in an activity when he finds it satisfying, when he enjoys doing it and talking about it, and when he tries to do his best at it" (14:5).

Fryer states that:

> In a measurement sense, subjective interests are likes, which are estimated experiences characterized by feelings of pleasantness, and aversions are dislikes, which are estimated experiences characterized by feelings of unpleasantness. . . . In a measurement sense objective interests are positive reactions and objective aversions are negative reactions to stimulating objects and activities in the environment. (9:15-16)

"Genuine interest is the accompaniment of the identification, through action, of the self with some object or idea for the maintenance of a self-initiated activity." (5:14) "Interests . . . are very varied; every impulse and habit that generates a purpose having sufficient force to move a person to strive for its realization, becomes an interest." (5:14)

DeGarmo feels that:

> . . . interest is a feeling that accompanies the idea of self-expression. It has its origin in the exhilaration, the sense of power, of mastery, that goes with every internally impelled effort to realize a condition for the survival of the self, whether such survival touch one aspect of the man or another. Interest is therefore dynamic in character. It has its primary root in inherited impulse. (4:18-19)

> Interests come from experience. They are learned. Whether it's studying a school subject, playing an instrument, working a jig-saw puzzle, gardening, or working as a soda-jerk, a person must be exposed to the activity--must have given it a fair trial--before he can really say he is either interested or not interested in it. (14:5-6)

## WHY IS INTEREST IMPORTANT

As stated before, interest is learned and based on experience (13:63).

> . . . interests are more than a cluster of favored activities. They represent, in the aggregate, modes of life in which the child's emotional well-being and his social relations are deeply involved. Through the process of developing interests that are in keeping with his particular qualities and abilities the child is helped to acquire a conception of himself that is in line with reality. Through this process he probably also can be the medium through which he is helped to find a place in his social environment that is comfortable to him and to others. For it is by way of common interests that people establish many of their social contacts and fulfill many of their social needs, whether by temperament they tend to be very gregarious or very selective in their relations with others. (13:86)

John Dewey states that "When a child feels that his work is a task, it is only under compulsion that he gives himself to it. At every let-up of external pressure his attention, released from constraint, flies to what interests him." (5:2)

> There are two types of pleasure. One is the accompaniment of activity. It is found wherever there is successful achievement, mastery, getting on. It is the personal phase of an outgoing energy. This sort of pleasure is always absorbed in the activity itself. It has no separate existence. This is the type of pleasure found in legitimate interest. Its source lies in meeting the needs of the organism. The other sort of pleasure arises from contact. It marks receptivity. Its stimuli are external. It exists by itself as a pleasure, not as the pleasure of activity. Being merely excited by some external stimulus, it is not a quality of any act in which an external object is constructively dealt with. (5:12)

"The interests that children have--and the relative strength of them--play an important role in their lives. They are important in learning, in leisure-time activities, and in career planning." (14:7) Maturity, emotions, environment culture, and sex affect the amount and type of interest shown by a child.

> Interests are primarily important because they are a strong motivating force. We pursue interesting activities more vigorously and with greater satisfaction than we pursue uninteresting tasks. Interests are important in learning. They are important in planning school work and vocational selection. They determine, to a large extent, a person's degree of success and satisfaction on a job. They help satisfy basic human drives. And they can help us find satisfying leisure-time pursuits. (14:24)

Thorndike is of the opinion that one "has power to enjoy and need only to teach himself, or be taught, to be interested in the topic or activity, which he ought to learn, so that he will have enough enjoyment from learning it to maintain the learning process." (23:15) "If a person tends to like that which he can do best, because the relatively greater ability produces greater interest, it may be expected that an increase in the absolute amount of ability will produce an increase in the absolute amount of interest." (23:45) "The amount of interest in any small unit of learning by any person is then a consequence of that due to the nature of the unit itself, plus that gained by enlisting the common human passions and strong individual hobbies, and plus or minus that gained or lost by it appeal to any idiosyncrasies of the person." (23:57)

> On the one hand the interest acts in a forward direction to dispose the person toward certain behavior, making him connect the situations to responses different from those which would ensue if the interest were lacking. . . . On the other hand it acts in a backward direction to make certain experiences satisfying and so to arouse a confirming reaction which causes the person to continue or repeat the behavior then and there if the situation remains, and if the situation vanishes, to be more likely to repeat the behavior when the situation recurs in the future. (23:58)

# FOUR KINDS OF INTEREST

## Reading Interest

Within reading interests themselves, there are definite basic preferences and dislikes for boys versus girls. Yet both boys' and girls' interests often tend to differ from teacher and librarian recommendations. (12:567) For information children often seek sources other than those connected with reading. (12:502-512) Boys' reading interests are shown to be:

> . . . adventure (outdoor adventure, war, scouting), outdoor games, school life, mystery (including detective stories), obvious humor, animals, patriotism, and male characters. Unfavorable factors for boys were: love, other sentiments, home and family life, didacticism, religion, the reflective, extended description, 'nature,' form or technique as a dominant factor, and female characters. (16:no page)

"The reading materials commonly used in literature classes were liked better by girls than by boys by a more than two to one ratio." (12:469)

Harris found that the most important factor to be considered about reading interests is ". . . the tremendous range of individual differences both in amount of voluntary reading and in the specific interests that are expressed." (12:469) The teacher needs to know both the general areas in interests to groups of students, and also to discover each student's interests and needs.

Vocational Interests

> Many factors will affect a young person's ultimate success and satisfaction in the work that he chooses--whether his reasons for that choice are relatively sound or unsound. His ability, perseverance, initiative, reliability, family circumstances, economic conditions, and just plain luck, will all count. But interest in the work is very important. In the long run, satisfaction with a job or a career will depend on whether or not that work is enjoyable to the individual. (14:30)

"At present there is a real need for investigation of the exact knowledge that people of various ages have of the occupations, their functional relations, their monetary, educational, and experience requirements, and so on." (9:41) "The separation of many occupational groups from all others, by their interests, seems to be possible, but there is still the question whether it can be done to a degree valuable for practical purposes." (9:140) Fryer further states that, "It is a problem of how much reliance can be placed upon statements and estimates of interests, made by the person himself, or upon the results of inventories and tests of interests, as indications of future interests." (9:145) "It may be that an influence of the fathers' occupations is present in the mental requirements of the children's occupational choices." (9:168)

Strong introduces the thought that interests can be modified by re-education. (20:10) Social approval and self-satisfaction are involved in chosen interests. (20:14-15) "When 'vocational interest' is defined not as a single choice but as 'the sum total of many interests

that bear in any way upon an occupational career,' then we find surprising permanence, certainly among adults and college students and to a somewhat lesser degree among high-school students." (20:21)

Hahn and MacLean have summarized their vocational interest theories as follows:

1. Interests are an aspect of personality shaped by both hereditary and environmental factors.
2. Long-range, stable, occupational interests emerge during early teens, but mature interest patterns are not fixed for most individuals until an age of approximately twenty-five years.
3. Interests are not necessarily closely related to aptitudes or abilities.
4. Interests probably can not be created de noco and in a short time merely by the classroom presentation of varied and vicarious experiences to youth. Such exposure may possibly, however, start the development of a new zone of interest, help fix existing interests, or uncover latent ones.
5. A strong motivation toward certain types of occupational or avocational behavior is expressed by a wide number of responses to an extremely wide range of stimuli.
6. Interests . . . involve both acceptance and rejection of possible lines of activity.
7. The estimated, judged or measured interests of secondary school and college students in an occupation seem to them to be and in fact often are quite unrelated to the training program they must take to prepare them for employment in the occupational family in which they have an identified dominant interest.
8. A legitimate interest in an occupational outlet often has little effect on grades earned in the curriculum leading to that outlet. . . .
9. Vocational and avocational interests appear to run in similar directions for a large proportion of individuals.
10. The interests of individuals tend to be less varied with increasing age. (10:no page)

Academic Interests

"In every school, there are many activities and electives that fit the individual interests of the students. When we know these interests, we can suggest activities and courses that use these interests. By doing so, we make school more meaningful to children and give direction to their work." (14:28)

Jersild points out that ". . .it is quite possible that when a child tells what he likes best in school, for example, he may simply be indicating that he has a preference for one thing as compared with certain other things, rather than a self-sustained interest in a freely chosen activity." (13:2) In his survey of children's interests Jersild points out:

> . . . that a closer relationship appears when we examine the specific things pupils especially like or especially wish to learn more about at school in the light of the aspirations which they express in their three wishes, whether in specific or general terms, and in the replies they give when asked what they want to be when they grow up. (13:16)

> In all schools and at all levels, items in the broad category that includes academic subject matter areas were mentioned most frequently when children told what they liked best in school. . . . The features of the school program named most often when children described what they liked best were also named frequently when they described what they liked least. (13:25)

He states that children's interests veer from education as they become older. Some interests may not be observed, yet the child may be capable of acquiring them.

On knowledge, DeGarmo stated, "To be truly educative, the instruction of the school must be able to contribute powerfully to the pupil's future welfare; and it must be so imparted that immediate ends shall contribute to make the distant ones seem real." (4:73)

Extracurricular Interests

Super suggests a study of avocational interests to help direct the student toward various vocational opportunities. Extracurricular or avocational interests are developed by individuals, for many varied reasons. Super states his individualized theory of avocations in the following way: "Avocations are chosen according to the present needs of an individual in a given situation, and on the basis of the possible ways in which that individual can meet those needs in that situation." (21:114)

## INTEREST INVENTORIES

Much of today's literature in the field of education expresses the feeling that " . . . the teacher should seriously try to find out what the present and worthy interests of her particular pupils are." (15:213) McKee goes on to suggest that the individual teacher should give an interest inventory learning of hobbies and reading areas of interest. (15:213) He further suggests that the teacher then take advantage of this interest and provide extra reading materials within the particular area. (15:442)

Albert J. Harris has delved quite extensively into the area of questioning to help the teacher understand and study the reading interests of her children. (11:285) His ultimate goal is to develop more serious readers in adults, with reading interests improved while these adults are still children. He has three suggestions for this:

> We can improve interest in reading by helping children to enjoy reading. We can improve reading interests by expanding the range of topics and variety of kinds of reading material they become interested in reading. And we can improve reading interests by helping children to move from less mature to more mature preferences and to recognize and prefer writing that has genuine literary worth. (11:284)

"Building a lasting interest in reading, and developing an appetite for what is worth reading, are two objectives that have tremendous long-range significance." (12:466-467) Mr. Harris suggests several ideas for teacher awareness of student interests ranging from audial and visual observations to the interest questionnaire. (11:292-293)

Charles D. Dzuiban and Jess P. Elliott gave the What I Like To Do Inventory (Thorpe, Meyers and Bonsall, 1954) to 223 disadvantaged students grades four through seven to determine any discrepancy with norms set for the advantaged student. The findings showed no significant difference between the norms of the advantaged and the disadvantaged students. (7:163)

In 1960, William W. Cooley and Paul R. Tohnes used the personality test technique on high school students to determine educational and vocational preferences. They went a step further and

predicted achievement for each student. The profiles were extremely accurate and the technique will be available to high school counselors. (2:back)

William C. Cottle feels that ". . . even the most carefully constructed inventory is effective only within the limitations of the person who uses it or the conditions under which it is used." (3:1) He states that most interest inventories are given to college students or adults. Questions have been raised as to whether they are of much use below the college level. ". . . only limited exploration or experimentation with new instruments designed for use below this level has occurred. This situation may be the same sort of acceptance of the status quo that produced little work on interest measurement of occupational groups below the professional level until Clark developed and published the Minnesota Vocational Interest Inventory (MVII)." (3:2-3)

## SUMMARY

Much information has been gathered on adult interests and very limited amounts concerning children. The educators cited interest from various viewpoints. Most were concerned with occupational interests and discussed these in great depth within their works.

Definitions of interest were given as well as the importance of interest. Four different types of interest were discussed, those being reading, vocational, academic, and extracurricular. Inventory use, importance, and results were also presented.

With this review of the literature the need becomes apparent for the study of an inventory given to the elementary student to determine his areas of reading interests with vocational, extracurricular, and academic interests.

# CHAPTER III

## FINDINGS OF THE INTEREST INVENTORY

Knowledge of students' interests is important to the teacher that she may erect a guidepost toward which to work in helping and educating the children in her care. Directing work toward genuine interests can stimulate children toward ends and new beginnings which might not otherwise be possible. In a world with expanding population, automation, and the openings of new frontiers, the passing as well as long-range interests of today's children need to be very carefully studied by teachers, parents, and industry. The vista of tomorrow's jobs may and probably will be quite different from those which are available and in demand today. Therefore, a teacher has need to know the general areas of vocational aspirations of her students. She can help guide and assist them while she keeps her eye on future occupational trends. One way for the teacher to discover her students' interest areas is by giving an interest inventory or interview. The inventory can be divided into major areas, each of which can be analyzed as a unit, and subsequently each question examined separately from which she can arrive at accurate conclusions for the group involved. The teacher can then

consolidate the information and develop plans to fit the interests of the students.

## MECHANICS OF THE INVENTORY ADMINISTERED FOR THE STUDY

An inventory form was adapted by the writer for administration to all boys, grades two through six, at Thorp School, Thorp, Washington, during December of 1969. The questions were taken in part from Albert J. Harris, "Things I Like to Do" (11:293), "Interest and Activity Poll" (12:480-481), and Thomas Boning and Richard Boning, "I'd Rather Read Than . . ." (1:197), others being inserted by the writer. The questions were randomly arranged on the interview sheet. A sample of the Interest Inventory may be found in Appendix A.

Each question was arbitrarily placed by the writer as being in one of the four major interest areas of this study--reading, vocational, academic, and extracurricular. Most of the questions involve reading interests, as reading is probably considered the most essential part of the educative process by leading authorities.

## GROUPING OF THE RESPONSES

All responses were arbitrarily placed on one of nine subgroups within one of the four areas involved. These nine subgroups are as follows: adventure, arts, history, mechanical, nature, public

relations, sciences, sports, and other. All numerical responses, "I don't know," and most yes or no answers were placed in the "other" category unless the positive response supported another question. Definitions of the nine categories are to be found in Chapter I of this study. The writer devised the nine subgroups for ease of quantitative analysis and for objective and significant observations of the data. The reader's attention is called to the fact that the tally sheets for the analyzed data are included in Appendix B, with grade totals to be found in Appendix C.

## READING INTERESTS

The first of the four areas to be studied is that of reading interests. The intent of this group of questions is to determine reaction and involvement with reading matter. The responses indicate the various kinds of available materials which are read by the students. The items indicated refer to media used either outside the classroom or during spare time or free reading sessions. With the students expressing what they read or would like to read, the responses give an indication of the interests of the boys in this area. The questions included under reading interests are 7, 8, 10, 11, 12, 13, 16, 17, 18, 19, 20, 22, 27, and 28. The questions are given below along with the findings of each.

About how many comic books do you read a week?

For this question, sixteen of the twenty-nine boys responded that they read five or less comic books a week. Only two boys said they read more than five, the most being ten. Eleven boys do not read comic books, most of whom are in 4th, 5th, and 6th grades.

The responses to this question indicate that more boys in the lower grades (2nd and 3rd) read comic books than do the older ones. There is an indication that as the boys mature there becomes less need or desire for visual stories. For the younger children the illustrations aid in the deciphering and meanings of unknown words and/or phrases.

What comic books do you like best?

Those boys giving positive responses to the preceding question were asked to indicate their preference of comic books. All indicated adventure types, with Archie and Superman being the most popular. The majority of the boys preferred those dealing with human beings, rather than "animals" such as Donald Duck. Seventeen preferred the "well-established" comics, rather than the more recent innovations. Almost all of those listed have television counterparts.

From the indications given, most boys imply a desire to read adventurous comic books involving people. Their responses suggest a transfer from television to comics.

What magazines do you read?

The most popular of the magazines available are Boy's Life and Life Magazine. These two magazines appealed to the 2nd, 5th, and 6th graders. The 6th graders also indicated adolescent directed magazines such as Love, Hotrod, and Teen. Nature and sports were generally mentioned as Boy's Life, Western Farmer, Sports Afield, and Sports Life. Most of the 3rd and 4th graders specified magazines to be found in most homes like National Geographic and Holiday. Some stressed feminine periodicals like McCall's, Family Circle, and Good Housekeeping. Nine of the boys do not read magazines, three of whom were those who do not read comic books.

Tastes in magazines are generally varied, with a general trend toward more mature magazines by the 5th and 6th graders. The pictures in Life and Boy's Life probably generally appeal to the 2nd graders as they tend to be quite interested in people. The 3rd and 4th graders express a tendency to pick up whatever is around and handy, be it how to set the latest hair style or a vacation abroad.

What do you like most in the magazines?

A variety of responses were indicated for this question. Cartoons were most popular to 3rd, 4th, and 5th graders. Other areas of interest were nature, mechanics, adventures, and visuals.

What don't you like in the magazines?

Two of the responses were opposite to those given to the previous question. Three did not know. Seven disliked the various forms of advertisement such as cigarette ads, sales, and coupons to send in. Along with advertisements, the most frustrating to some of the boys was the reading.

Combining the results of these two questions, there is an apparent dislike for those parts of magazines in which they cannot understand or partake. The only parts which appeal are those on their level of comprehension.

How many books have you read since school started?

Nineteen boys indicated they had read ten or fewer books. The 2nd and 4th graders were the most compatible in the numerical range of books, whereas the 2nd and 5th were extremely diverse. The 6th graders as a group tend to read more books than the other grades.

There does not seem to be a set pattern as to the number of books which are read in the different grade levels. The older grades do have a larger vocabulary and should be inclined to do more reading.

Do you read the newspaper?

There were twelve positive responses, ten negative, and seven answered "sometimes" to this question. A majority of the

positive answers were grouped in grades four, five, and six. Fourth graders were the only ones as a group who all read newspapers at least occasionally.

What part do you usually read first?

The most popular single answer by far to this question was the comics. Second graders were the only grade which did not give this response. Five of the remaining answers expressed an interest in finding out some of the day's news. Only two indicated sports, one weather, and one read the birth announcements.

From these two questions there tends to be a general awareness of newspapers and their various contents. Probably many of the boys are not old enough to absorb much of the news or the details of it.

I will read the names of some books. If you would like to read them, please tell me.

The books listed are arbitrarily rearranged into the nine subgroups for ease of discussion. The total positive responses for each grade are also indicated.

| 1. Adventure | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| The Vanishing Corpse | 3 | 4 | 2 | 2 | 3 |
| Secret of the Lost Gold Mine | 3 | 7 | 5 | 4 | 7 |
| Murder at the Movies | 1 | 3 | 3 | 2 | 6 |
| Famous Ghost Stories | 4 | 5 | 4 | 3 | 6 |
| A Bomber Pilot's Story | 4 | 5 | 4 | 3 | 6 |

| | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| Ford of the FBI | 5 | 6 | 4 | 3 | 6 |
| Romance on the Range | 3 | 0 | 4 | 1 | 2 |
| The Spider's Revenge | 4 | 6 | 3 | 1 | 4 |

| 2. Arts | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| 1,001 Things You Can Make | 2 | 4 | 4 | 1 | 3 |
| How to Draw and Paint | 5 | 4 | 1 | 0 | 0 |

| 3. History | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| Flying Against Japan | 3 | 3 | 3 | 2 | 3 |
| Famous Voyages | 4 | 5 | 4 | 4 | 6 |
| Great Battles of History | 4 | 4 | 4 | 3 | 6 |
| The Texas Rangers | 5 | 3 | 4 | 4 | 4 |
| Heroes of Guadalcanal | 3 | 2 | 5 | 2 | 2 |
| Famous Bank Robberies | 4 | 3 | 5 | 2 | 6 |

| 4. Mechanical | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| How to Take Good Pictures | 4 | 4 | 3 | 0 | 1 |
| How to Repair Furniture | 3 | 2 | 3 | 1 | 1 |
| How Engines Work | 5 | 6 | 4 | 3 | 4 |

| 5. Nature | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| War in the Desert | 4 | 4 | 4 | 1 | 6 |
| Big Game Hunting | 4 | 3 | 5 | 4 | 6 |
| Wild Animals and Their Habits | 3 | 5 | 5 | 3 | 6 |
| Mountain Climbing Adventure | 3 | 5 | 5 | 3 | 6 |

| 6. Public Relations | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| Exploring African Jungles | 5 | 5 | 4 | 4 | 4 |
| Inside an Airplane Factory | 4 | 4 | 4 | 2 | 3 |

| 7. Science | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| Wonders of the Electric Eye | 3 | 4 | 5 | 2 | 2 |
| Modern Miracles of Medicine | 3 | 2 | 4 | 1 | 1 |
| The Earth and the Stars | 5 | 4 | 4 | 2 | 2 |
| Heroes of Science | 4 | 2 | 4 | 4 | 3 |
| The Story of Steel | 5 | 3 | 4 | 2 | 2 |

| 8. Sports | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| Famous Football Games | 5 | 6 | 3 | 4 | 5 |
| Dick Jones, Fullback | 3 | 3 | 4 | 3 | 2 |
| Winning Plays in Basketball | 5 | 6 | 4 | 5 | 7 |
| Life of Joe DiMaggio | 4 | 5 | 4 | 1 | 2 |
| Hold That Line! | 4 | 0 | 3 | 0 | 2 |

| 9. Other | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| The Stolen Kiss | 2 | 4 | 2 | 1 | 1 |
| Dancing Sweethearts | 1 | 1 | 2 | 0 | 0 |
| The Dream Princess | 2 | 0 | 2 | 0 | 0 |

Most of the boys chose a wide selection of books that they would sometime like to read. They expressed their preferences merely from the titles. The least popular areas seemed to be the arts, mechanical, and the romances listed under "Other." Most boys seemed to be easily appealed to by titles of books and might expand or start an interest by delving into works which sound interesting to them.

If you like to read the kinds of books I name, please tell me.

Here the boys expressed an interest in general categories of books. Their preferences are indicated below by grade totals.

| | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| science | 4 | 5 | 3 | 5 | 2 |
| love | 0 | 0 | 2 | 0 | 1 |
| how to make things | 5 | 3 | 4 | 5 | 3 |
| cowboy | 3 | 7 | 4 | 1 | 4 |
| fighting | 4 | 6 | 4 | 2 | 6 |
| sports | 5 | 7 | 4 | 5 | 6 |
| crime | 2 | 2 | 0 | 0 | 4 |
| nature | 4 | 3 | 4 | 5 | 3 |
| spy | 5 | 4 | 5 | 2 | 5 |
| travel | 5 | 5 | 3 | 2 | 2 |
| war | 4 | 4 | 3 | 1 | 5 |
| flying | 4 | 4 | 4 | 3 | 5 |
| romance | 3 | 1 | 2 | 0 | 0 |
| adventure | 4 | 3 | 5 | 4 | 5 |
| history | 4 | 3 | 4 | 4 | 3 |
| murder | 4 | 1 | 3 | 2 | 5 |

Again the boys are quite diversified as to types of reading they like. This is a good indication of open-mindedness which they need to explore all different possibilities of interest. There is a strong dislike expressed of love, romance, and crime.

What would help you read more?

Most of the boys felt there is a need for some improvement in books or in their reading ability. They sensed a general lack of adeptness in the reading skills. This question puzzled many of the boys and they had a hard time verbalizing their feelings.

Do you like to read just for fun?

There were twenty-three positive responses to this and six negative answers. Most boys seem to like to read what appeals to

them and not necessarily to their teacher or parents. The 6th grade boys were the most negative of the grades.

Do you ever read for information?

This question had twenty-two positive answers and seven negative ones. Only two of the negative respondents were the same as the previous question.

## VOCATIONAL INTERESTS

This set of questions was designed to glimpse the tendencies of the student toward vocational aspirations. Parental occupations are noted to help determine possible reasons for children's choices. Questions 9, 20, 21, 29, and 30 were used to ascertain vocational intent.

What famous man would you like to be like?

Many varied answers were obtained for this question. Three did not know. Twenty-two students gave specific names of persons they would like to be like. The most popular choice was Samson, followed by Abraham Lincoln and Richard Nixon. Eleven named persons of television fame, including fictional characters like Superman and Tarzan. The others picked specific occupational choices of dentist, football player, preacher, president, and movie star.

There is an unanswered question that arises when a child picks a specific personality. Does he actually want to be like him or what this famous person represents or implies to the child? This would be an interesting question to pursue.

What do you want to be when you grow up?

Again there were many diversified answers, the most frequently named being truck driver, cowboy, mechanic, farmer, and air force pilot. Four boys' answers are compatible with their previous responses in the preceding question. Only six of the occupations chosen would require a college education. Many choices are outdoor jobs, such as football player, carpenter, lumberjack, farmer, and lineman.

Do you want to go to college?

This question received nineteen positive responses, nine negative, and one "I don't know." Five of the six occupational choices requiring a college education were followed through with "yes" answers for this question. Fourth grade was the only one in which all the boys wanted to go to college. Second grade had only one positive response.

There appears to be some lack of follow-through in vocational choices and desire for a college education. Either the children are ignorant of the types of jobs requiring college, or parents and teachers are putting too much stress on the necessity of going to college and not letting the child decide.

What is your father's occupation?

The answers for this question were many and varied. Four of the jobs would require a college education, such as preacher and member of the college. Four boys wanted to enter the same vocation as their fathers, three of whom are truck drivers and one a farmer. Some occupations are manual, including construction, lumber mill, and meat processing, while others are salesmen or office workers.

What is your mother's occupation?

The responses here were much more limited. Eighteen of the mothers are housewives. Only one of the working mothers holds a college-required job, which is that of teacher.

From the findings of these two questions, few of the boys want to perpetuate the family trade. Most want a college education; therefore, the children tend to be striving toward greater educative ends, better jobs, and higher salaries.

## ACADEMIC INTERESTS

This section is designed to discover the academic preferences of the boys involved in the survey. Teachers should be aware of these in order to improve those subjects which are less appealing to students in general. Questions included in this area are 1, 6, 23, 24, and 25.

What grade are you in?

This question is merely to establish the grade levels of the children involved in the study. There were five 2nd graders, seven 3rd graders, five 4th graders, five 5th graders, and seven 6th graders.

Who is the greatest man in the world?

Many of the boys had to think carefully of all those of whom they had heard or read. Seven boys did not know. Eight boys decided upon a president, while six decided upon God or Jesus. Samson was chosen by three of the boys, and the boy's father by only two. Three were famous personalities.

These responses indicate religious training as well as pride in our government and country. There is an indication of interest in the family life and school teachings.

What is the best way your teacher can help you?

Most of the boys seemed to feel that they needed the most help with the reading skills. There is a desire for assistance in vocabulary, phonetic drill, enunciation, and more time spent with reading. Five are not sure of the directions given. Only one boy desired help in arithmetic. Ten boys did not know how their teacher could help them.

What is your favorite subject?

The subject chosen by almost half of the boys was

arithmetic. The other subjects liked by the boys were physical education, social studies, and spelling. Very few liked others such as reading, English, science, and art.

Which subject do you like least?

Most of the boys who liked the other subjects in the previous question liked arithmetic the least. The pro-arithmetic boys chose social studies, science, and English as least favorite. No one chose reading.

From these two questions, there seems to be either a definite like or dislike attitude toward arithmetic, science, social studies, and English. These are mainly subjects which need to be understood completely before advancing to the next step in each. Evidently if they have been able to grasp the basic foundations and understand the "whys" of each part, then they are able to experience enjoyment and a challenge for each succeeding part.

## EXTRACURRICULAR INTERESTS

The purpose of this area is to determine the specific leisure time activities in which the children are involved. This is an attempt to find out how they entertain themselves when there is nothing planned for them to do. Questions 2, 3, 4, 5, 14, 15, and 26 inquire about extracurricular interests.

What do you like to do after school?

Obviously the most popular answer by far involves the various aspects of play. Twenty-five of them like to play with each other, riding horses, having snowball fights, and competitive sports. Some of the boys like to work around their homes and farms. Only one wanted to read.

What do you like to do when it rains?

When these boys are kept inside due to weather, the majority play with their games or watch television. Three of the boys help around the house. Two boys expressed a desire to read. Some wanted to go outside anyway.

What do you like to do in the evening?

The most popular for this question was to watch television. Seven liked to continue their outdoor sports, four to play games, and three to read books.

What do you like to do on weekends?

Weekends constitute another time for being outdoors. Interests are expanded to include hunting and fishing and enjoying nature. Four find excitement in going to town or visiting friends. Four wanted to watch television and no one mentioned reading.

The above four questions reflect the respondents' love of the outdoors. When inside, the boys are forced to such commercial

means of entertainment as are available to them. Only a very few want to read.

If you had $1,000 what would you do with it?

Eight of the boys would save their money. Many wanted luxuries such as new cars, motorcycles, boats, and horses. Only one boy would put it specifically toward a college education. Many of the boys had grandiose ideas of how much $1,000 would buy. This may point up a lack of monetary training on the part of the school and the parents.

What are your favorite TV programs?

The answers for this question covered almost the entire spectrum of available television programs. The younger boys preferred the cartoons. The middle grades generally preferred the more dramatic programs, whereas the upper grades liked those during the prime time in the evenings.

Do you collect anything? If so, what?

Most of the boys do have collections; only seven do not. Rocks are the favorite of the boys. Other items include those easily found near their homes or on vacations, such as seashells, butterflies, and arrowheads.

## SUMMARY

This chapter has included the Interest Interview given to boys at Thorp School, Thorp, Washington, grades two through six. There were twenty-nine respondents. The children were interviewed and taped individually and privately, each taking approximately twenty minutes. All were extremely cooperative except one student, many saying they had "fun" being interviewed. The one boy was quite hostile, appearing very sullen with extremely curt answers.

The questions have been divided into four main areas--reading, vocational, academic, and extracurricular. Each area was divided into nine subgroups for statistical analysis, which is to be discussed in the next chapter. The nine subgroups are adventure, arts, history, mechanical, nature, public relations, science, sports, and other.

Each of the questions within the four areas has been discussed. Within the reading area, most of the boys displayed an awareness and interest in the various types of media available. Enjoyment of adventurous and whimsical tales is quite apparent. They are quite open-minded to most types of literature available. There appeared little inclination to delve into romances, the arts, or mechanics. Vocational interests were shown to be quite diverse and in most cases very different from that of the fathers. Most interests were expressed in

outdoor occupations which would be in keeping with the adventuresome nature of their reading interests. Several expressed a desire for college training while aspiring for blue-collar jobs. Academic interests showed a definite absorption of home and school influences. The subjects liked or disliked mostly were those requiring a foundation of fundamentals, with each advanced stage built upon it. Extracurricular interests again brought out the students' love of the outdoors and adventure, this time of their own doing.

From the findings of the interview questions, there appears to be no strong relationship between any of the four areas. The statistical data to confirm this diversity will be presented in the following chapter.

# CHAPTER IV

## STATISTICAL ANALYSIS AND CONCLUSIONS

This chapter will introduce Kendall's Coefficient of Concordance (5:245) with the study of reading, vocational, academic, and extracurricular interests. The research hypotheses to be tested would show a significant relationship between the four main areas by grade. The possible agreement between grade levels within each area, and also a concordance between the grades of the nine subgroups within each area is to be explored. Tables with the specific data are included in the appendices.

## COMPARISON BY GRADES

All the information given by the respondents was converted to quantitative form through the use of the four areas and nine subgroups. The tabulations were totaled by grade level for each subgroup.

The first test of significance is designed to compare each of the four areas of reading, vocational, academic, and extracurricular. Each grade level was treated separately. The totals for each subgroup were ranked in ascending order of preference. This was

done for each area. The specific data are found in Appendix D.

Second Grade

The ranking for the 2nd graders resulted in a very diverse pattern. No consistent pattern of preferences occurred. Only one subgroup, that of science, appeared to display any continuity. Science obtained average rankings in all four areas. The coefficient of concordance resulted in W = .26. The research hypothesis is thus rejected for grade two.

Third Grade

Third grade rankings display no consistent patterns of concordance among the four areas. There appeared no preference in any of the subgroups. The findings of W = .30 is rejected, showing no concordance between the four areas in grade three.

Fourth Grade

Fourth grade showed even more diverse rankings than the two previously mentioned grades. There is no subgroup showing a consistence of preference. The result of W = .19 is rejected. There is no significant correlation between the four areas in grade four.

Fifth Grade

Fifth grade does not offer a set pattern of consistence.

There is one subgroup, however, which displays high stability. The boys accorded the subgroup "other" with quite high preference. There was enough divergence within the response tabulation to give a correlation of W = .33. This also is rejected as showing no significant concordance in the 5th grade.

Sixth Grade

Sixth grade as with the others displayed a wide pattern of rankings. Subgroup "other" was accorded similar high rankings, the only subgroup showing consistence. The correlation is W = .30. Any concordance in grade six is definitely rejected.

Conclusions

All five grades involved have rejected any concordance between reading, vocational, academic, and extracurricular interests at the 5% and 1% levels of significance. There is very limited carry-over indicated in any of the subgroups. This is so insignificant as to not be considered as showing any correlation among the groups. The first part of the research hypothesis of reading interests showing a significant relationship to vocational, academic, and extracurricular interests in boys grades two through six is thus rejected.

## AGREEMENT AMONG AND WITHIN THE GRADE LEVELS FOR EACH AREA

This second test of significance is designed to determine the amount of agreement between the grades in each of the four areas. Totals were ranked in ascending order of preference for each grade level. The specific data for this section are to be found in Appendix E. The areas are each analyzed separately.

### Reading Interests

A comparison of the ranks obtained display a very strong consistency of preference by the five grades. The boys were in complete accord in the rankings of subgroups "adventure" and "other." There is extremely high agreement of the "arts" and "history," and to a slightly lesser extent in "mechanical" and "nature." Only "public relations," "science," and sports" reflect a very limited diversity. The coefficient of concordance is W = .93 which very definitely accepts agreement among and within the grades in reading interests.

### Vocational Interests

In the vocational area, the boys displayed a more varied profile of ranking preferences. There is some continuity in the "arts" and "mechanical." There is a spread of four or five ranks in the other subgroups. The result of W = .65 is accepted, displaying agreement

in vocational interests.

## Academic Interests

In the academic area the boys showed slightly greater agreement within the subgroups than they did in vocational interests. Subgroup "other" was accorded the same rank in all the grades. The "arts" displayed a very slight deviation with "mechanics," "adventure," and "sports" showing a somewhat greater spread of ranks. The coefficient W = .73 is accepted showing agreement in academic interests.

## Extracurricular Interests

Extracurricular interests were observed to be in very high accord. There is universal agreement for subgroup "sports," with a slightly less extent in "history." There is a very high correlation in "adventure," "mechanical," and "science." The other subgroups had a somewhat greater span of ranks. The coefficient is W = .80 which accepts agreement in extracurricular interests.

## Conclusions

All of the boys displayed enough agreement for acceptance at the 1% level of significance of the research hypothesis of agreement among and within the grade levels in each of the areas. The areas in which the boys were most in accord was that of reading. All expressed

a very high interest in "adventure," "other," and "history." There was a general dislike for the "arts," "public relations," and "mechanical." Vocational interests fell mainly in the categories of "mechanical" and "other," with lesser interest in "arts," "nature," and "public relations." Academic interests were in "other," "mechanical," "arts," and "science." Extracurricular interests went to "sports," with less interest in "adventure."

## CONCORDANCE BETWEEN THE NINE SUBGROUPS FOR EACH AREA

The third and final test of significance will be to determine if the research hypothesis of concordance between the nine major subgroups within each area is valid. The subgroups were ranked by preference by each grade. Each area was evaluated separately. Specific data for this test are to be found in Appendix F.

### Reading Interests

There is a conservative spread of the rankings for the nine subgroups. The fifth graders were most in accord, rating the subgroups almost the same. The coefficient shows $W = .45$ which is accepted at 1% level of significance for concordance between the subgroups in the area of reading interests.

## Vocational Interests

Among vocational interests, the boys experienced widespread diversity in the preference of the subgroups. Third graders were fairly consistent, yet showed some extreme tendencies. The coefficient is W = .036, rejecting any concordance between the subgroups in the area of vocational interests.

## Academic Interests

The area of academic interests showed diverse ratings in preferences of the subgroups. Fourth graders showed a very slight tendency toward agreement among the subgroups. The coefficient is W = .035, rejecting any concordance among the subgroups in the academic area.

## Extracurricular Interests

The rankings among the extracurricular interests are quite diverse with no apparent correlation. Six graders showed a very slight agreement pattern. The result of the coefficient is W = .06 which is rejected.

## Conclusions

All of the tests of significance resulted in very random rankings. Only reading interests were accepted as having concordance

among the subgroups. The significance was quite low in this area, however. The other three areas displayed very slight percentages causing vocational, academic, and extracurricular areas to be rejected as having significant agreement among the subgroups.

## CONCLUSIONS

The research hypothesis which has been tested is three-fold: (1) show significant relationship between the four areas of reading, vocational, academic, and extracurricular interests by grade; (2) agreement between grade levels within each area; and (3) concordance between the grades for the nine subgroups within each area. The results of the three parts are unique unto themselves.

Each of the areas of reading, vocational, academic, and extracurricular interests was compared by grade. There was found to be no significant concordance in any of the areas, thus rejecting the first phase of the hypothesis.

Agreement among and within the grade levels was found to exist in each area. The findings were extremely significant at the 1% level of significance. There was a very great extent of concordance among the reading interest and to a lesser degree in extracurricular interests.

Comparison of the nine subgroups produced varied results. There was found to exist at the 1% level a very slight significance in

the subgroups of reading interests. The subgroups of the other three areas displayed no significant agreement.

There is acceptance, then, for concordance between the grade levels within each area. There is also agreement as to the subgroups within reading interests. The rest of the hypothesis is rejected as being of no significance.

# CHAPTER V

# RECOMMENDATIONS AND SUMMARY

## REVIEW OF THE PROBLEM

Educators are continually seeking ways of aiding children in preparation for their adult lives. There has been much research involving the interest and aspirations of the secondary and college student, often leaving the elementary child behind. The writer felt the need to explore the possibilities of a positive relationship between reading, vocational, academic, and extracurricular interests within the elementary grades. If a correlation could be established, this would aid the teacher in developing the necessary skills in a strong foundation for future use by the student. The three-part research hypothesis would determine (1) if a significant relationship exists between the reading interests of boys, grades two through six, and vocational, extracurricular, and academic interests; (2) if there is agreement between the grade levels within each major area; and (3) if concordance exists between the grades for the nine subgroups within each major area.

## RESEARCH METHODOLOGY

The writer adapted parts of interview inventories by Albert J. Harris (11:293) and (12:480-481), and Thomas Boning and Richard Boning (1:196). All boys grades two through six at Thorp School, Thorp, Washington, participated in the inventory. The responses for each question were analyzed to discover diversity or compatibility among the boys. The data was also subjected to Kendall's Coefficient of Concordance (5:245) to determine any significant agreement in testing the hypothesis.

## SUMMARY OF THE LITERATURE

Works of many well-known authorities in the education field were researched to discover their opinions of interest and its importance. Several definitions of interest were given in order to dredge out the various qualities of interest which are involved and why they are important. Some opinions were gained involving the four types of interests explored in this study. There are a few educators who have expressed views of the interest inventory, its importance in teaching, and the levels at which it becomes most significant.

## REVIEW OF THE FINDINGS

Each of the thirty questions involved in the interest inventory given by the writer was examined individually to determine any

convergence or divergence by the students in their responses. The questions were separated into the four sections in order to clarify the findings of each. The responses were quite diverse indicating randomness of any pattern. The boys were of several minds in reading and extracurricular interests. Perhaps the most significant findings were the overwhelming aspiration of blue-collar occupations, and a very definite like or dislike for the academic subjects except reading.

## REVIEW OF THE STATISTICAL ANALYSIS

The quantitative data were tested for significance by use of Kendall's Coefficient of Concordance (5:245). There was found to be no significant relationship between reading, vocational, academic, and extracurricular interests in grades two through six. The theory was accepted at the 1% level of significance that there is agreement among and within each of the grades in each area. Agreement within the subgroups was found to be significant only in the area of reading.

## RECOMMENDATIONS

The recommendation of the writer for teachers, administrators, psychologists, and others is to become familiar with the methods and instruments used here, review the literature cited, then construct an instrument to further test for common interest levels of students.

A similar instrument to the one used here should be administered to girls, testing for the critical data.

Teachers are urged to use the inventory method to determine the true and immediate interests of their students and fit the learning atmosphere to the students.

This study has accepted only part of the hypothesis. The investigations of children's interests must go on. The educators must probe, delve, and help tomorrow's adults. The writer thus submits her findings to all educators, in hopes that they will contribute to better education.

## CONCLUSION

Wherever there are children, so are there future adults. Teachers are charged with the duty of preparing these children for that future. The world environment is changing very quickly, forcing people into newly-created occupations and unique situations.

Children's interests can help teachers in this great undertaking, if they will use them. The teacher can encourage and help expand those interests, giving them firm foundations to lean upon as they grow older. Teachers are helping to mold tomorrow when they work with children's interests today. Development of personality, leisure, activities, use of intellectual abilities, and vocational training can all be affected by even one teacher's concern for the child's own personal interests.

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## APPENDICES

# APPENDIX A

## INTEREST INTERVIEW

Adapted in part from Albert J. Harris, "Things I Like to Do," "Interest and Activity Poll," and Thomas Boning and Richard Boning, "I'd Rather Read Than . . . ."

1. What grade are you in?
2. What do you like to do after school?
3. What do you like to do when it rains?
4. What do you like to do in the evening?
5. What do you like to do on weekends?
6. Who is the greatest man in the world?
7. About how many comic books do you read in a week?
8. What comic books do you like best?
9. What famous man would you like to be like?
10. What magazines do you read?
11. What do you like most in the magazines?
12. What don't you like in the magazines?
13. How many books have you read since school started?
14. If you had $1,000, what would you do with it?
15. What are your favorite TV programs?

16. Do you read the newspaper?

17. What part do you usually read first?

18. I will read the names of some books. If you would like to read them, please tell me.

Wonders of the Electric Eye

Famous Football Games

1,001 Things You Can Make

War in the Desert

The Vanishing Corpse

Secret of the Lost Gold Mine

Modern Miracles of Medicine

Dick Jones, Fullback

How to Draw and Paint

Flying Against Japan

Murder at the Movies

The Stolen Kiss

Famous Voyages

The Earth and the Stars

Winning Plays in Basketball

How to Take Good Pictures

Famous Ghost Stories

Dancing Sweethearts

Exploring African Jungles

How to Repair Furniture

A Bomber Pilot's Story

Ford of the FBI

Romance on the Range

Big Game Hunting

Wild Animals and Their Habits

Life of Joe DiMaggio

Inside an Airplane Factory

Great Battles of History

The Spider's Revenge

The Texas Rangers

Heroes of Science

Hold That Line!

How Engines Work

Heroes of Guadalcanal

Famous Bank Robberies

The Dream Princess

Mountain Climbing Adventure

The Story of Steel

19. If you like to read the kind of books I name, please tell me.

science

love

how to make things

cowboy

fighting

sport

crime

nature

spy

travel

war

flying

romance

adventure

history

murder

20. What do you want to be when you grow up?

21. Do you want to go to college?

22. What would help you to read more?

23. What is the best way your teacher can help you?

24. What is your favorite subject?

25. Which subject do you like least?

26. Do you collect anything? If so, what?

27. Do you like to read just for fun?

28. Do you ever read for information?

29. What is your father's occupation?

30. What is your mother's occupation?

# APPENDIX B

## Tally Sheet of the Four Areas by Grades

| Grade 2 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Student number | 1 | 2 | 3 | 10 | 11 | 1 | 2 | 3 | 10 | 11 |
| Subgroup | Reading | | | | | Vocational | | | | |
| adventure | 15 | 10 | 14 | 8 | 7 | 1 | 0 | 0 | 0 | 1 |
| arts | 3 | 3 | 2 | 4 | 4 | 0 | 1 | 0 | 1 | 1 |
| history | 8 | 8 | 8 | 6 | 1 | 0 | 0 | 0 | 0 | 0 |
| mechanical | 4 | 5 | 3 | 2 | 4 | 3 | 0 | 0 | 3 | 0 |
| nature | 5 | 6 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 1 |
| public relations | 3 | 4 | 3 | 4 | 3 | 0 | 0 | 0 | 1 | 3 |
| science | 5 | 6 | 5 | 6 | 2 | 0 | 3 | 0 | 0 | 0 |
| sports | 6 | 5 | 5 | 5 | 5 | 0 | 0 | 3 | 0 | 0 |
| other | 10 | 9 | 9 | 6 | 5 | 1 | 1 | 2 | 0 | 0 |
| Subgroup | Academic | | | | | Extracurricular | | | | |
| adventure | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 3 |
| arts | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| history | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| mechanical | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| nature | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| public relations | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 |
| science | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 |
| sports | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 4 | 3 |
| other | 3 | 1 | 3 | 4 | 3 | 0 | 0 | 2 | 0 | 2 |

| Grade 3 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Student number | 9 | 23 | 24 | 25 | 27 | 28 | 29 | 9 | 23 | 24 | 25 | 27 | 28 | 29 |
| Subgroup | Reading | | | | | | | Vocational | | | | | | |
| adventure | 11 | 10 | 10 | 9 | 9 | 12 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| arts | 4 | 3 | 2 | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |
| history | 5 | 3 | 6 | 1 | 3 | 6 | 3 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| mechanical | 3 | 5 | 2 | 2 | 1 | 3 | 4 | 1 | 2 | 2 | 1 | 1 | 1 | 0 |
| nature | 4 | 0 | 5 | 3 | 1 | 5 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 1 |
| public relations | 3 | 2 | 4 | 1 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| science | 4 | 3 | 4 | 1 | 2 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| sports | 3 | 3 | 5 | 5 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| other | 8 | 6 | 6 | 8 | 8 | 7 | 6 | 0 | 2 | 1 | 2 | 2 | 1 | 2 |
| Subgroup | Academic | | | | | | | Extracurricular | | | | | | |
| adventure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 1 | 2 |
| arts | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| history | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| mechanical | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| nature | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 3 | 0 |
| public relations | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 1 |
| science | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| sports | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 4 | 2 | 3 | 1 |
| other | 3 | 2 | 4 | 4 | 2 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |

| Grade 4 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Student number | 4 | 5 | 6 | 7 | 8 | 4 | 5 | 6 | 7 | 8 |
| Subgroup | Reading | | | | | Vocational | | | | |
| adventure | 14 | 14 | 13 | 11 | 11 | 0 | 0 | 0 | 0 | 0 |
| arts | 4 | 1 | 2 | 4 | 1 | 1 | 1 | 0 | 0 | 0 |
| history | 5 | 7 | 6 | 8 | 6 | 0 | 0 | 0 | 1 | 1 |
| mechanical | 3 | 4 | 3 | 4 | 0 | 1 | 2 | 0 | 0 | 1 |
| nature | 3 | 5 | 5 | 5 | 7 | 0 | 0 | 1 | 2 | 2 |
| public relations | 3 | 3 | 2 | 2 | 2 | 2 | 0 | 4 | 1 | 0 |
| science | 6 | 4 | 5 | 5 | 4 | 1 | 0 | 0 | 0 | 0 |
| sports | 5 | 6 | 2 | 4 | 6 | 0 | 1 | 0 | 0 | 0 |
| other | 12 | 12 | 7 | 7 | 9 | 0 | 1 | 0 | 1 | 1 |
| Subgroup | Academic | | | | | Extracurricular | | | | |
| adventure | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 1 |
| arts | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 2 | 2 |
| history | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| mechanical | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 2 |
| nature | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| public relations | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| science | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| sports | 0 | 1 | 0 | 0 | 0 | 4 | 2 | 2 | 1 | 1 |
| other | 2 | 3 | 2 | 3 | 4 | 0 | 1 | 1 | 1 | 1 |

| Grade 5 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Student number | 13 | 14 | 15 | 17 | 19 | 13 | 14 | 15 | 17 | 19 |
| Subgroup | Reading | | | | | Vocational | | | | |
| adventure | 7 | 8 | 8 | 10 | 7 | 0 | 0 | 0 | 0 | 1 |
| arts | 1 | 2 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 0 |
| history | 5 | 6 | 3 | 4 | 4 | 0 | 1 | 0 | 0 | 0 |
| mechanical | 1 | 3 | 2 | 3 | 1 | 1 | 1 | 2 | 0 | 2 |
| nature | 3 | 4 | 5 | 5 | 2 | 0 | 0 | 0 | 0 | 0 |
| public relations | 2 | 5 | 3 | 1 | 1 | 2 | 0 | 1 | 4 | 0 |
| science | 5 | 6 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| sports | 3 | 2 | 4 | 5 | 5 | 1 | 0 | 0 | 0 | 0 |
| others | 7 | 7 | 6 | 4 | 7 | 1 | 3 | 1 | 0 | 2 |
| Subgroup | Academic | | | | | Extracurricular | | | | |
| adventure | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 1 |
| arts | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 1 | 1 |
| history | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| mechanical | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| nature | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| public relations | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 |
| science | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| sports | 0 | 0 | 0 | 1 | 0 | 3 | 2 | 2 | 1 | 3 |
| other | 1 | 3 | 3 | 3 | 3 | 1 | 3 | 1 | 2 | 2 |

| Grade 6 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Student number | 12 | 16 | 18 | 20 | 21 | 22 | 26 | 12 | 16 | 18 | 20 | 21 | 22 | 26 |
| Subgroup | Reading | | | | | | | Vocational | | | | | | |
| adventure | 12 | 6 | 12 | 12 | 15 | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| arts | 0 | 3 | 2 | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| history | 5 | 3 | 5 | 4 | 5 | 5 | 8 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| mechanical | 2 | 2 | 1 | 3 | 4 | 5 | 3 | 3 | 0 | 1 | 2 | 2 | 1 | 1 |
| nature | 3 | 1 | 5 | 4 | 7 | 4 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| public relations | 1 | 2 | 2 | 1 | 2 | 2 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| science | 1 | 3 | 0 | 1 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| sports | 3 | 3 | 3 | 2 | 5 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| other | 7 | 7 | 9 | 6 | 8 | 7 | 5 | 2 | 1 | 3 | 2 | 1 | 2 | 2 |
| Subgroup | Academic | | | | | | | Extracurricular | | | | | | |
| adventure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 1 | 1 | 0 |
| arts | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| history | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| mechanical | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| nature | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |
| public relations | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 1 | 0 |
| science | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| sports | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 3 | 3 | 1 | 2 |
| other | 3 | 3 | 4 | 3 | 2 | 4 | 3 | 3 | 2 | 2 | 2 | 0 | 3 | 0 |

# APPENDIX C

## Grade Totals for the Four Areas

| | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|
| Reading | | | | | |
| adventure | 54 | 69 | 63 | 40 | 75 |
| arts | 16 | 15 | 12 | 7 | 11 |
| history | 31 | 27 | 32 | 22 | 35 |
| mechanical | 18 | 20 | 14 | 10 | 20 |
| nature | 19 | 21 | 25 | 19 | 27 |
| public relations | 17 | 18 | 12 | 12 | 13 |
| science | 24 | 20 | 24 | 16 | 12 |
| sports | 26 | 28 | 23 | 19 | 26 |
| other | 41 | 49 | 47 | 31 | 49 |
| Vocational | | | | | |
| adventure | 2 | 0 | 0 | 1 | 0 |
| arts | 3 | 4 | 2 | 2 | 2 |
| history | 0 | 4 | 2 | 1 | 2 |
| mechanical | 6 | 8 | 4 | 6 | 10 |
| nature | 1 | 4 | 5 | 0 | 3 |
| public relations | 4 | 3 | 7 | 7 | 4 |
| science | 3 | 2 | 1 | 0 | 0 |
| sports | 3 | 0 | 1 | 1 | 1 |
| other | 4 | 10 | 3 | 7 | 13 |
| Academic | | | | | |
| adventure | 0 | 0 | 0 | 1 | 0 |
| arts | 2 | 3 | 2 | 3 | 3 |
| history | 1 | 5 | 3 | 3 | 0 |
| mechanical | 3 | 2 | 3 | 3 | 2 |
| nature | 0 | 0 | 0 | 0 | 0 |
| public relations | 2 | 0 | 1 | 1 | 2 |
| science | 2 | 6 | 1 | 2 | 4 |
| sports | 1 | 0 | 1 | 1 | 2 |
| other | 14 | 19 | 14 | 13 | 22 |
| Extracurricular | | | | | |
| adventure | 9 | 10 | 7 | 7 | 8 |
| arts | 2 | 1 | 9 | 5 | 3 |
| history | 0 | 0 | 0 | 0 | 0 |
| mechanical | 1 | 3 | 5 | 1 | 2 |
| nature | 4 | 8 | 3 | 2 | 5 |
| public relations | 3 | 7 | 2 | 8 | 6 |
| science | 2 | 0 | 1 | 0 | 0 |
| sports | 14 | 16 | 10 | 11 | 14 |
| other | 4 | 6 | 4 | 9 | 12 |

## APPENDIX D

### Comparison by Grade of the Four Areas

Second Grade

| | adv. | arts | hist | mech | nat | p.r. | sci | spts | other |
|---|---|---|---|---|---|---|---|---|---|
| Reading | 9 | 1 | 7 | 3 | 4 | 2 | 5 | 6 | 8 |
| Vocational | 3 | 5 | 1 | 9 | 2 | 7.5 | 5 | 5 | 7.5 |
| Academic | 1.5 | 6 | 3.5 | 8 | 1.5 | 6 | 6 | 3.5 | 9 |
| Extracurricular | 8 | 3.5 | 1 | 2 | 6.5 | 5 | 3.5 | 9 | 6.5 |
| | 21.5 | 15.5 | 12.5 | 22.0 | 14.5 | 20.5 | 19.5 | 23.5 | 31.0 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2(n^2-1)} - 3 \frac{(n+1)}{(n-1)}$$

$$W = \frac{12 (462.25 + 240.25 + 156.25 + 484.00 + 196.00 + 420.25 + 380.25 + 552.25 + 961.00)}{9 (16) (80)} - 3\frac{(10)}{(8)}$$

$$W = \frac{12 (3852.50)}{12 (960)} - 3.75$$

$$W = 4.01 - 3.75$$

$$W = .26$$

Research hypothesis rejected; W is insignificant.

Third Grade

| | adv. | arts | hist | mech | nat | p.r. | sci | spts | other |
|---|---|---|---|---|---|---|---|---|---|
| Reading | 9 | 1 | 6 | 3.5 | 5 | 2 | 3.5 | 7 | 8 |
| Vocational | 1.5 | 6 | 6 | 8 | 6 | 4 | 3 | 1.5 | 9 |
| Academic | 2.5 | 6 | 7 | 5 | 2.5 | 7.5 | 8 | 2.5 | 9 |
| Extracurricular | 8 | 3 | 4 | 1.5 | 7 | 6 | 1.5 | 9 | 5 |
| | 21.0 | 16.0 | 23.0 | 18.0 | 20.5 | 17.5 | 16.0 | 20.0 | 31.0 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3\frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12 (441.00 + 256.00 + 529.00 + 324.00 + 420.25 + 306.25 + 256.00 + 400.00 + 961.00)}{9 (16) (80)} - 3\frac{(10)}{(8)}$$

$$W = \frac{12 (3893.50)}{12 (960)} - 3.75$$

$$W = 4.05 - 3.75$$

$$W = .30$$

Research hypothesis rejected; W is insignificant.

Fourth Grade

| | adv | arts | hist | mech | nat | p.r. | sci | spts | other |
|---|---|---|---|---|---|---|---|---|---|
| Reading | 9 | 1.5 | 7 | 3 | 6 | 1.5 | 5 | 4 | 8 |
| Vocational | 1 | 4.5 | 4.5 | 7 | 8 | 9 | 2.5 | 2.5 | 6 |
| Academic | 1.5 | 1.5 | 6 | 7.5 | 7.5 | 4 | 4 | 4 | 9 |
| Extracurricular | 7 | 8 | 1 | 6 | 4 | 3 | 2 | 9 | 5 |
| | 18.5 | 15.5 | 18.5 | 23.5 | 25.5 | 17.5 | 13.5 | 19.5 | 28.0 |

$$W \quad \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3 \frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12}{9\ (16)\ (80)} (342.25 + 240.25 + 342.25 + 552.25 + 650.25 + 306.25 + 182.25 + 380.25 + 784.00) - 3 \frac{(10)}{(8)}$$

$$W = \frac{12\ (3780.00)}{12\ (960)} - 3.75$$

$$W = 3.94 - 3.75$$

$$W = .19$$

Research hypothesis rejected; W is insignificant.

Fifth Grade

| | adv | arts | hist | mech | nat | p.r. | sci | spts | other |
|---|---|---|---|---|---|---|---|---|---|
| Reading | 9 | 1 | 7 | 2 | 5.5 | 3 | 4 | 5.5 | 8 |
| Vocational | 4 | 6 | 4 | 7 | 1.5 | 8.5 | 1.5 | 4 | 8.5 |
| Academic | 3 | 7 | 7 | 7 | 1 | 3 | 5 | 3 | 9 |
| Extracurricular | 6 | 5 | 1.5 | 3 | 4 | 7 | 1.5 | 9 | 8 |
| | 22.0 | 19.0 | 19.5 | 19.0 | 12.0 | 21.5 | 12.0 | 21.5 | 33.5 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3 \frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12 (484.00 + 361.00 + 380.25 + 361.00 + 144.00 + 462.25 + 144.00 + 462.25 + 1122.25)}{9 (16) (80)} - 3 \frac{(10)}{(8)}$$

$$W = \frac{12 (3921.00)}{12 (960)} - 3.75$$

$$W = 4.08 - 3.75$$

$$W = .33$$

Research hypothesis rejected; W is insignificant.

Sixth Grade

| | adv | arts | hist | mech | nat | p.r. | sci | spts | other |
|---|---|---|---|---|---|---|---|---|---|
| Reading | 9 | 1 | 7 | 4 | 6 | 3 | 2 | 5 | 8 |
| Vocational | 1.5 | 4.5 | 4.5 | 8 | 6 | 7 | 1.5 | 3 | 9 |
| Academic | 2 | 7 | 2 | 5 | 2 | 5 | 8 | 5 | 9 |
| Extracurricular | 7 | 4 | 1.5 | 3 | 5 | 6 | 1.5 | 9 | 8 |
| | 19.5 | 16.5 | 15.0 | 20.0 | 19.0 | 21.0 | 13.0 | 22.0 | 34.0 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3 \frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12 (380.25 + 272.25 + 225.00 + 400.00 + 361.00 + 441.00 + 169.00 + 484.00 + 1156.00)}{9 (16) (80)} - 3 \frac{(10)}{(8)}$$

$$W = \frac{12 (3888.50)}{12 (960)} - 3.75$$

$$W = 4.05 - 3.75$$

$$W = .30$$

Research hypothesis rejected; W is insignificant.

## APPENDIX E

### Agreement among and within the Grade Levels

| | Reading | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | adv | arts | hist | mech | nat | p.r. | sci | spts | other |
| Second grade | 9.0 | 1.0 | 7.0 | 3.0 | 4.0 | 2.0 | 5.0 | 6.0 | 8.0 |
| Third grade | 9.0 | 1.0 | 6.0 | 3.5 | 5.0 | 2.0 | 3.5 | 7.0 | 8.0 |
| Fourth grade | 9.0 | 1.5 | 7.0 | 3.0 | 6.0 | 1.5 | 5.0 | 4.0 | 8.0 |
| Fifth grade | 9.0 | 1.0 | 7.0 | 2.0 | 5.5 | 3.0 | 4.0 | 5.5 | 8.0 |
| Sixth grade | 9.0 | 1.0 | 7.0 | 4.0 | 6.0 | 3.0 | 2.0 | 5.0 | 8.0 |
| | 45.0 | 5.5 | 34.0 | 15.5 | 26.5 | 11.5 | 19.5 | 27.5 | 40.0 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3\frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12 (2025.00 + 30.25 + 1156.00 + 240.25 + 702.25 + 132.25 + 380.25 + 756.25 + 1600.00)}{9 \quad (25) \quad (80)} - 3\frac{(10)}{(8)}$$

$$W = \frac{12 (7022.50)}{12 (1500)} - 3.75$$

$$W = 4.681 - 3.75$$

$$W = .931$$

Research hypothesis accepted at the 1% level of significance.

| | Vocational | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | adv | arts | hist | mech | nat | p.r. | sci | spts | other |
| Second Grade | 3.0 | 5.0 | 1.0 | 9.0 | 2.0 | 7.5 | 5.0 | 5.0 | 7.5 |
| Third Grade | 1.5 | 6.0 | 6.0 | 8.0 | 6.0 | 4.0 | 3.0 | 1.5 | 9.0 |
| Fourth Grade | 1.0 | 4.5 | 4.5 | 7.0 | 8.0 | 9.0 | 2.5 | 2.5 | 6.0 |
| Fifth Grade | 4.0 | 6.0 | 4.0 | 7.0 | 1.5 | 8.5 | 1.5 | 4.0 | 8.5 |
| Sixth Grade | 1.5 | 4.5 | 4.5 | 8.0 | 6.0 | 7.0 | 1.5 | 3.0 | 9.0 |
| | 11.0 | 26.0 | 20.0 | 39.0 | 23.5 | 36.0 | 13.5 | 16.0 | 40.0 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2-1)} - 3\frac{(n+1)}{(n-1}$$

$$W = \frac{12\,(121.00 + 676.00 + 400.00 + 1521.00 + 552.25 + 1296.00 + 182.25 + 256.00 + 1600.00)}{9 \quad (25) \quad (80)} - 3\frac{(10)}{(8)}$$

$$W = \frac{12\,(6604.50)}{12\,(1500)} - 3.75$$

$$W = 4.403 - 3.75$$

$$W = .653$$

Research hypothesis accepted at the 1% level of significance.

| | Academic | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | adv | arts | hist | mech | nat | p.r. | sci | spts | other |
| Second Grade | 1.5 | 6.0 | 3.5 | 8.0 | 1.5 | 6.0 | 6.0 | 3.5 | 9.0 |
| Third Grade | 2.5 | 6.0 | 7.0 | 5.0 | 2.5 | 2.5 | 8.0 | 2.5 | 9.0 |
| Fourth Grade | 1.5 | 6.0 | 7.5 | 7.5 | 1.5 | 4.0 | 4.0 | 4.0 | 9.0 |
| Fifth Grade | 3.0 | 7.0 | 7.0 | 7.0 | 1.0 | 3.0 | 5.0 | 3.0 | 9.0 |
| Sixth Grade | 2.0 | 7.0 | 2.0 | 5.0 | 2.0 | 5.0 | 8.0 | 5.0 | 9.0 |
| | 10.5 | 32.0 | 27.0 | 32.5 | 8,5 | 20.5 | 31.0 | 18.0 | 45.0 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3 \frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12 (110.25 + 1024.00 + 729.00 + 1056.25 + 72.25 + 420.25 + 961.00 + 324.00 + 2025.00)}{9 \quad (25) \quad (80)} - 3 \frac{(10)}{(8)}$$

$$W = \frac{12 (6722.00)}{12 (1500)} - 3.75$$

$$W = 4.481 - 3.75$$

$$W = .731$$

Research hypothesis accepted at the 1% level of significance.

| | Extracurricular | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | adv | arts | hist | mech | nat | p.r. | sci | spts | other |
| Second Grade | 8.0 | 3.5 | 1.0 | 2.0 | 6.5 | 5.0 | 3.5 | 9.0 | 6.5 |
| Third Grade | 8.0 | 3.0 | 1.5 | 4.0 | 7.0 | 6.0 | 1.5 | 9.0 | 5.0 |
| Fourth Grade | 7.0 | 8.0 | 1.0 | 6.0 | 4.0 | 3.0 | 2.0 | 9.0 | 5.0 |
| Fifth Grade | 6.0 | 5.0 | 1.5 | 3.0 | 4.0 | 7.0 | 1.5 | 9.0 | 8.0 |
| Sixth Grade | 7.0 | 4.0 | 1.5 | 3.0 | 5.0 | 6.0 | 1.5 | 9.0 | 8.0 |
| | 36.0 | 23.5 | 6.5 | 18.0 | 26.5 | 27.0 | 10.0 | 45.0 | 32.5 |

$$W = \frac{12\ \Sigma\,(\Sigma\ R)^2}{nm^2\,(n^2 - 1)} - 3\frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12\ (1296.00 + 552.25 + 42.25 + 324.00 + 702.25 + 729.00 + 100.00 + 2025.00 + 1056.25)}{9\ \ (25)\ \ (80)} - 3\ \frac{(10)}{(8)}$$

$$W = \frac{12\ (6827.00)}{12\ (1500)} - 3.75$$

$$W = 4.551 - 3.75$$

$$W = .801$$

Research hypothesis accepted at the 1% level of significance.

# APPENDIX F

## Comparison of the Subgroups in Each Area

| | Reading | | | | |
|---|---|---|---|---|---|
| | Second | Third | Fourth | Fifth | Sixth |
| adventure | 2 | 4 | 3 | 1 | 5 |
| arts | 5 | 4 | 3 | 1 | 2 |
| history | 3 | 2 | 4 | 1 | 5 |
| mechanical | 3 | 4.5 | 2 | 1 | 4.5 |
| nature | 1.5 | 3 | 4 | 1.5 | 5 |
| public relations | 4 | 5 | 1.5 | 1.5 | 3 |
| science | 4.5 | 3 | 4.5 | 2 | 1 |
| sports | 3.5 | 5 | 2 | 1 | 3.5 |
| other | 2 | 4.5 | 3 | 1 | 4.5 |
| | 28.5 | 35.0 | 27.0 | 11.0 | 33.5 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3 \frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12 (812.25 + 1225.00 + 729.00 + 121.00 + 1122.25)}{5 \quad (81) \quad (24)} - 3 \frac{(6)}{(4)}$$

$$W = \frac{12 (4009.50)}{12 (810)} - 4.50$$

$$W = 4.95 - 4.50$$

$$W = .45$$

Research hypothesis accepted at the 1% level of significance.

APPENDIX F (Continued)

Vocational

| | Second | Third | Fourth | Fifth | Sixth |
|---|---|---|---|---|---|
| adventure | 5 | 2 | 2 | 4 | 2 |
| arts | 4 | 5 | 2 | 2 | 2 |
| history | 1 | 5 | 3.5 | 2 | 3.5 |
| mechanical | 2.5 | 4 | 1 | 2.5 | 5 |
| nature | 2 | 4 | 5 | 1 | 3 |
| public relations | 2.5 | 1 | 4.5 | 4.5 | 2.5 |
| science | 5 | 4 | 3 | 1.5 | 1.5 |
| sports | 5 | 1 | 3 | 3 | 3 |
| other | 2 | 4 | 1 | 3 | 5 |
| | 29.0 | 30.0 | 25.0 | 23.5 | 27.5 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3\frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12 (841.00 + 900.00 + 625.00 + 552.25 + 756.25)}{5 \quad (81) \quad (24)} - 3\frac{(6)}{(4)}$$

$$W = \frac{12 (3674.50)}{12 (810)} - 4.50$$

$$W = 4.53 - 4.50$$

$$W = .03$$

Research hypothesis is rejected. W is not significant.

APPENDIX F (Continued)

Academic

| | Second | Third | Fourth | Fifth | Sixth |
|---|---|---|---|---|---|
| adventure | 2.5 | 2.5 | 2.5 | 5 | 2.5 |
| arts | 1.5 | 4 | 1.5 | 4 | 4 |
| history | 2 | 5 | 3.5 | 3.5 | 1 |
| mechanical | 4 | 1.5 | 4 | 4 | 1.5 |
| nature | 3 | 3 | 3 | 3 | 3 |
| public relations | 4.5 | 1 | 2.5 | 2.5 | 4.5 |
| science | 2.5 | 5 | 1 | 2.5 | 4 |
| sports | 3 | 1 | 3 | 3 | 5 |
| other | 2.5 | 4 | 2.5 | 1 | 5 |
| | 25.5 | 27.0 | 23.5 | 28.5 | 30.5 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3\frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12 (650.25 + 729.00 + 552.25 + 812.25 + 930.25)}{5 \quad (81) \quad (24)} - 3\frac{(6)}{(4)}$$

$$W = \frac{12 (3674.00)}{12 (810)} - 4.500$$

$$W = 4.535 - 4.500$$

$$W = .035$$

Research hypothesis is rejected. W is not significant.

APPENDIX F (Continued)

Extracurricular

| | Second | Third | Fourth | Fifth | Sixth |
|---|---|---|---|---|---|
| adventure | 4 | 5 | 1.5 | 1.5 | 3 |
| arts | 2 | 1 | 5 | 4 | 3 |
| history | 3 | 3 | 3 | 3 | 3 |
| mechanical | 1.5 | 4 | 5 | 1.5 | 3 |
| nature | 3 | 5 | 2 | 1 | 4 |
| public relations | 2 | 4 | 1 | 5 | 3 |
| science | 5 | 2 | 4 | 2 | 2 |
| sports | 3.5 | 5 | 1 | 2 | 3.5 |
| other | 1.5 | 3 | 1.5 | 4 | 5 |
| | 25.5 | 32.0 | 24.0 | 24.0 | 29.5 |

$$W = \frac{12 \Sigma (\Sigma R)^2}{nm^2 (n^2 - 1)} - 3\frac{(n + 1)}{(n - 1)}$$

$$W = \frac{12 (650.25 + 1024.00 + 576.00 + 576.00 + 870.25)}{5 \quad (81) \quad (24)} - 3\frac{(6)}{(4)}$$

$$W = \frac{12 (3696.50)}{12 \ (810)} - 4.50$$

$$W = 4.56 - 4.50$$

$$W = .06$$

Research hypothesis is rejected. W is not significant.