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A study of the expressed attitudes of elementary school educators, elementary school children, and parents of elementary school children concerning the curriculum, teaching methods, school plant, and school personnel

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A STUDY OF THE EXPRESSED ATTITUDES OF ELEMENTARY
SCHOOL EDUCATORS, ELEMENTARY SCHOOL CHILDREN, AND
PARENTS OF ELEMENTARY SCHOOL CHILDREN CONCERNING
THE CURRICULUM, TEACHING METHODS, SCHOOL PLANT,
AND SCHOOL PERSONNEL

Submitted by

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In Partial Fulfillment of the Requirements for
the Degree of Doctor of Education

1956

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CHAPTER I
INTRODUCTION

Purpose of the study.-- Education, like other professions, has a language all its own. Sometimes it completely excludes laymen from its discussions. Parents want to be able to talk intelligently about the things that concern their own children with those who share in the training of their children. Yet, an apparent educational tradition has often wrought among teachers, pupils, school administrators and the laity, quite different, if not completely opposite, points of view. Doob^{1/} succinctly points out that "men seek to understand themselves and the forces affecting them. Such understanding, they feel, is essential if they are to obtain better control over their own destiny." The problem of this study is suggested by this apparent lack of understanding among parents, children, and those who run the schools, and the need for better public relations between the school and the community.

The basic purposes of this dissertation are therefore:

1. To survey and to report the expressed attitudes of elementary school children in grades four, five, and six, their

1/ Leonard W. Doob, Public Opinion and Propaganda, Henry Holt and Company, New York, 1949, p. 1.

parents, and elementary educators, toward and concerning the elementary school curriculum, the teaching methods, the school plant, and the school personnel.

2. To explore the relationships among the expressed attitudes of parents, children, and educators with respect to the elementary curriculum, the teaching methods, the school plant, and the school personnel.
3. To study the relationship, if any, of the influence of socio-economic status on these expressed attitudes toward the elementary school.
4. To develop an instrument and a technique that will aid educators to systematically survey the attitudes held by parents, teacher, and child concerning the elementary school program.

Justification for the study.-- Whitney^{1/} indicates that: "Educational sociological research, because of the possibility of its contributions to the solutions of problems inherent in group life, is the most important field for investigation." There are charges that the schools are failing in their jobs. The current attacks on the schools have reached a new high. Much evidence points to the lack of understanding on the part of the public concerning education and its responsibilities. This is reflected in great measure by the unwillingness of the public to provide the best possible educational program. Inadequate physical facilities and teacher shortages are school problems that

^{1/} Frederick L. Whitney, Elements of Research, Prentice-Hall, New York, 1950, p. 295.

are widely known today. Still, with some problems made evident, there remains a great lack of public interest and support. Hand ^{1/} contends that educational planning must be recognized as a joint responsibility of both educators and laymen if new practices are to be successful. There has been success where educators and laymen have worked cooperatively in educational planning, and until this becomes a reality in all areas, it is highly probable that a low standard will prevail. "A school system will be only as good as the community will allow it to be."

In 1949, the National Citizens Commission for the Public Schools was founded by a group of prominent laymen. The idea behind the commission was that once the people were made aware of the crucial problems facing the schools, they would feel an urgent need to organize locally to do something about it.

The New York State Citizens' Committee of One Hundred for Children and Youth submitted a report to the governor in 1951, to produce action: action for the benefit of the four million young people of the state. "Any activity for the good of the community traditionally begins with the community itself. Local citizens themselves must initiate

1/ Harold C. Hand, What People Think About Their Schools, World Book Company, New York, 1948, p. 85.

action." ^{1/}

The country has not kept pace in its support with the demands being put on the schools. Since 1946, nine million children have been added to the rolls, and it is estimated that the number will increase at the rate of a million a year for the next five years. There is a deficit of classrooms and of qualified teachers. To overcome such a situation, there has to appear a broader concept of what is needed today. In some instances, the public has been invited to share. In many instances, they have not been completely willing. Apathy in this regard can be overcome through greater understanding.

The sources are innumerable, from educational textbooks to published committee reports from reputable organizations, urging the public to find out what is going on in the schools. The large circulation magazines, national in scope, have increased the number of educational articles from some 100 in number in 1940 to well over 350 such articles in 1954. The increasing emphasis has been on the lay citizens' responsibility for improving our public schools.

In this historic enterprise, that of attempting to exploit the power and the thinking that truly lies among the laity, there has come upon the scene impedimenta toward

^{1/} Report of the New York State Citizens' Committee of One Hundred for Children and Youth, The Four Million, Albany, New York, 1951, p. xxx.

true understanding. Armed with much mis-information and many generalizations, a minority group has dispersed throughout the country, unkind and false information concerning the schools. There are more of these in number than we would like to believe, perhaps, yet a major difficulty lies herein for a general reading public who does not read in critical fashion. Acceptance of generalizations as they are blithely stated are harmful to the thinking of those who are actually seeking truth.

A tax supported facility is always subject to criticism. The public schools of the United States directly involve more people than any other agency in this nation. Irresponsible reporting, off-the-cuff statements, irrational and emotional thinking have contributed to an unwarranted attack, an attack concentrated on and against the schools.^{1/}

In America we assume a doctrine involving respect for the individual. Russell^{2/} contends that since in school and out of school instruction is basically of a group nature, the home remains as perhaps the only place wherein the child is being treated as an individual, and that is why the home and school should work closely together. That

^{1/} "The Truth About Our Public Schools," Changing Times, The Kiplinger Magazine, Washington, 6, D.C., June 1954, p. 9.

^{2/} William F. Russell, How To Judge A School, Harper and Brothers, New York, 1954, p. 7 and p. 135.

is why also, that the school should consider with utmost seriousness the individual suggestions of parents and pupils, as well as those of educators.

Much of the material attacking the schools is based upon little information. Too few of the critics present any real constructive solution, and in too many instances the 'color' language distorts and distracts from the real issues. Many criticisms are honest and well intentioned, but lack basis and information. Too, there are more people than we would perhaps like to realize who honestly do not believe in the principles of public education. Scott and Hill ^{1/} in a recent compilation of attacks against the school, contend that the effectiveness of all 'opposition writing' is proportionate to the knowledge of the reader. This investigation has attempted to disperse, as well as gather, knowledge of an educational nature.

Common points of view spring from the sharing of common experiences. Success cannot be insured if the thinking, the attitudes and opinions of people, remains clouded to issues. Through vicarious experiences, there evolves enlightenment and understanding. An enlightened public must be included as participants in educational

1/ C. Winfield Scott and Clyde M. Hill, Public Education Under Criticism, Prentice Hall, Inc., New York, 1954, pp.414.

planning. Then, and only then, will just criticism be valid. Then will merited criticism be fruitful and welcome.

Hand and Sanford note: ^{1/}

"The strength of the public schools is in direct proportion to the extent to which they respond constructively to merited criticism. For this reason, merited criticism is not only desirable, it is a necessity if our schools are to be made adequate to the needs of our times."

Education is a community enterprise. Cooperative activity and agreement of what constitutes a good educational program should result in greater understanding and fuller support from the citizenry. Hand ^{2/} contends that:

"The future well-being of the public schools is contingent upon the establishment of mutual understanding and confidence between the scholars and the educationists."

Each locale has problems peculiar to no other area but its own. The prevailing attitudes of one community toward school problems can be entirely different from another community. The research relating to attitude studies concerning school problems and media for assessing public opinion with regard to school issues and lay participation seem to justify the need for a different approach and the

1/ Harold C. Hand and Charles W. Sanford, "A Scholar's Documents." Bulletin of the National Association of Secondary-School Principals, Vol. 37, No. 194, April, 1953, p. 460.

2/ Harold C. Hand, "Comments on a Scholar's Reply," Bulletin of the National Association of Secondary-School Principals, Vol. 37, No. 198, December, 1953, p. 180.

need for a different tool which might aid in securing greater cooperation and greater participation among those concerned. This is the motivating factor and a major quest of this study.

The current wave of criticism of the public schools, the apparent lack of concern of many for their schools, the differences in opinion concerning the elementary school curriculum, the methods of teaching employed, and the personnel and school plant, all point to the need for the development of a technique to survey the attitudes of a community. These same current conditions justify the need to search for some factors which may contribute to the attitudes held.

It has been said that people can be divided into three groups: those who make things happen; those who have things happen to them; and those who don't know what's happening. If this be true, the job of education then is to increase and guide the first group, and to shrink the size of the third group, so that what happens to those in the second group will take them in the right direction. Specifically, the justification for this study lies in the fact that:

1. There is need for further investigation of the attitudes of pupils.
2. There is need for further investigation of the attitudes of parents.

3. There is need for further investigation of the attitudes of educators.
4. There is a need for more adequate measuring devices in the area of attitude investigation.
5. Studies indicate that if schools aspire to the development of desirable attitudes, it will profit from closer contact with parents, children, and educators.

Scope and plan of the study.-- This study concerns itself with the public school elementary educational program of a large industrial city in south-eastern Massachusetts. The city has an overall population of 105,195 and presents diversity among racial, religious, and economic groups.

The initial steps involved a thirty-three and one third per cent sample from three schools representative of a high, a middle, and a low socio-economic level. Pupils were administered a free-writing response type inquiry form by the author. The parents of these children and the teachers of these children were personally interviewed by the author. Following the interview, notations and remarks were recorded privately for each personal interview. ^{1/}

One hundred and four personal calls were made to homes of parents in the high, medium, and low residential areas of the city. Interview time ranged from approximately seven

1/ See appendix A, pages 237-241

minutes to two hours and thirty-five minutes. From the information gained in this preliminary survey, the instrument for the city-wide survey was evolved.

The final survey encompassed the city, and was set up on a sampling basis of ten per cent of the total population of children of the fourth, fifth, and sixth grades from twenty-nine schools. There are four other schools of elementary status in the city which include two strictly primary, grades one, two, and three, and two 'special ungraded' schools. The two primary units are outside the study area and the ungraded schools were deemed not contributory to this study, thus they were omitted. The final survey involved 365 children, 365 parents, and 272 elementary educators. The educators were not selected on a sampling basis. The scope of this study is more fully described in chapter three.

The study is limited to the survey and analysis of the expressed attitudes of elementary school educators, elementary school children of the fourth, fifth, and sixth grades, and the parents of these children concerning the areas of investigation which included the curriculum, the teaching methods, the school plant, and the school personnel. The techniques and procedures are fully described in chapter three.

Summary of aims.-- This study attempts to present a logical, sound, and comprehensible augmentation to existing procedures designed to evaluate attitudes concerning things educational. This survey is designed to gather and report the expressed attitudes of pupils, parents, and teachers in a selected population. It is hoped that this study, its techniques, and statistical treatment will be of value to school administrators in assessing attitudes concerning the curriculum, teaching methods, school plant, and school personnel, and that more purposeful help and cooperation will ensue from lay participation in communities wherein this procedure may be employed.

CHAPTER II
REVIEW OF RELATED RESEARCH

This chapter concerns a review of the major efforts of the past concerning research in the field of attitude study and methodology.

Attitude defined.-- Allport ^{1/} states that "an attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related."

Remmers ^{2/} indicates that an attitude may be defined as a more or less emotionalized tendency organized through experience to react positively or negatively toward a psychological object. He contends that they involve, "an affectively toned idea or group of ideas predisposing the organism to action with reference to specific objects."

Thurstone and Chave ^{3/} indicate that an attitude

1/ Gordon W. Allport, "Attitudes," A Handbook of Social Psychology, Clark University Press, Worcester, Massachusetts, 1935, p. 810.

2/ Herman Henry Remmers, Introduction to Opinion and Attitude Measurement, Harper and Brothers Publishers, New York, 1954, p. 437.

3/ Louis L. Thurstone and E. S. Chave, The Measurement of Attitude, University of Chicago Press, Chicago, Illinois, 1929, pp. 6, 7.

"denotes the sum total of a man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specific topic." They continue, "a given attitude may reflect all that he feels and thinks about a given topic." An attitude is a complex affair which cannot be wholly described by any single numerical index.

Murphy and Likert ^{1/} contend that "attitudes are dispositions toward overt action."

In the overall, research reveals that the majority of thinking subscribes to the definition of attitude as a 'readiness or tendency to act or react in a certain manner.' An attitude is an abstraction, notwithstanding the reality to the owner, and may be inferred from nonverbal or verbal behavior.

Closely related to attitude study is opinion study. The term 'opinion' is often times loosely cast as having the same meaning as attitude, the implication being that both are concerned with a predisposition to action. Frequently, opinion is defined as the verbal expression of an attitude. "An opinion symbolizes an attitude." ^{2/}

^{1/} Gardner Murphy and Rensis Likert, Public Opinion and the Individual, Harper and Brothers Publishers, New York, 1938, p. 28.

^{2/} Louis L. Thurstone and E. J. Chave, op. cit., p. 7

Public opinion may be defined as the average judgment or consensus of the individuals of a 'public' regarding a given issue, institution or person.

With concern for definition, this study of expressed attitudes involves itself with some aspects of both, in eclectic fashion, for it is from the 'abstraction' to the 'predisposition toward and/or overt action' in which this study is interested. This concern lies in terms of predictive ability toward needed social action.

McNemar^{1/} presents a useful interpretation between the two based on the techniques employed in a research activity. The distinction is enlightening wherein the present study is concerned. "The typical attitude study involves a scale or battery of questions for ascertaining attitudes whereas the typical opinion study, particularly the public opinion type of study, leans heavily on a single question for a given issue." With this distinction in mind, the related research reviewed consisted in the majority of work in the attitude field. Some consideration was given to work done in the opinion field as it is allied.

Areas of use.-- There has been great diversity in fields of application of attitude research techniques.

^{1/}Quinn McNemar, "General Review and Summary of Opinion-Attitude Methodology," Psychological Bulletin, (July, 1946) 43: p. 290.

Psychologists, educators, journalists, and sociologists have contributed greatly to the present status of research in attitude investigation. Although there have been many articles and papers concerning attitudes and their investigation, perhaps the strongest impetus to research in this field was given by Louis L. Thurstone some 27 years ago. Thurstone's contribution, in the main, lies in attitude scales designed to measure attitudes toward God, the Bible, the church, capital punishment, the Constitution, communism, birth control, patriotism, war, evolution, censorship, the Negro, the Chinese, and the Germans.

Herman Henry Remmers and his students at Purdue University some twenty years ago came upon the investigative scene with a series of generalized scales designed to measure attitudes toward any school subject, any teacher, any disciplinary procedure, any vocation, and social institution, any social action, any practice.

Attitudes toward rural and urban life, law, behavior problems, education, juvenile delinquency, of children toward parents and of parents toward children have been scored by scales. Opinions about marriage, sex, retail stores, advertising, government issues, and government elections have been collected and analyzed. Surveys of opinion have been made by magazines, notably Fortune and Time. The American Institute of Public Opinion (Gallup

Poll) and the National Opinion Research Center at Denver, Colorado carry on polls from time to time concerning current topics or issues. ^{1/} Usually the results of such surveys appear in the magazines or the newspapers. Generally over-all percentages for a few breakdowns (items, categories or subclasses) are reported as a matter of record. The Public Opinion Quarterly occasionally receives such results.

Various governmental agencies have carried on work concerning opinions and attitudes. Program surveys in the Bureau of Agricultural Economics, under the direction of Rensis Likert, Office of War Information Surveys Division, National Opinion Research Center and the Research Branch of the Army's Morale Service Division have performed activity in this regard with an eye toward better governmental operation. The areas of use and fields of application are unbounded for this very young science.

Techniques.-- The early attempts at attitude investigation generally involved a questionnaire which was adopted on an a priori premise. Number ratings were arbitrarily assigned to the items or statements and they were summed, scored and interpreted in a manner of all things being

1/ Albert B. Blankenship, How To Conduct Consumer and Opinion Research, Harper and Brothers Publishers, New York, 1946, pp. 289-309.

equal. Thought was given to dimension. Reliability and validity were considered in general terms but no great consequence was attached thereto.

Recognition of the lack of value of such procedure prompted Allport and Hartman ^{1/} to attempt a scaling with regard to degrees of favorableness and unfavorableness resulting from the questions or statements.

Thurstone and Chave ^{2/} attempted improvement by their scale of favorableness or unfavorableness regarding respondents' attitudes. Statements were pre-judged by a jury and the median for any given item or statement became its assigned scale value. Criteria were developed for the elimination of ambiguous or irrelevant items or statements from the viewpoint of the judges. The process began with the assembling of a much larger number of statements than was needed. Thus, with a large number of statements, two comparable forms could be constructed. Typical values of reliability between forms for a variety of attitudes ran, on the average, in the low eighties (0.80). Since known attitudes were employed there was a degree of validity, but there was little adequate determination of this.

^{1/} F. H. Allport and D. A. Hartmann, "The Measurement of Atypical Opinion in A Certain Group," American Political Science, (1929) 19:pp. 735-760.

^{2/} Louis L. Thurstone and E. J. Chave, op. cit., pp. 59-66.

"We regard the present experiment as preliminary in character. Our main contribution is probably in the idea of using the equally-often-noticed difference as a unit of measurement for objective descriptions of attitude and opinion. ^{1/} They also added that "an attitude is a complex affair which cannot be wholly described by any single numerical index."

A variation in the Thurstone technique was applied by Kirkpatrick and Stone. ^{2/} Propositions were formulated, and the judges classified them into categories. Before employing the items or statements, there was insured 75 per cent agreement as to the argument category by the judges and 75 per cent agreement as to strength of wording. The continuum ranged from + 35 to - 35 with the maximum religious score being + 35 and the maximum irreligious score being - 35. The index of attitude is a quantitative variable. They indicate that the inequality of units, the questionable assumption of attitude continua, and the ambiguity due to different motives or reasons underlying the various responses to items presents a weakness in the Thurstone method.

1/ Ibid., note preface PP. v and vi, and p. 6.

2/ Clifford Kirkpatrick and Sarah Stone, "Attitude Measurement and the Comparison of Generation", Journal of Applied Psychology, (1935), 19: pp. 564, 577, 582.

Robert K. Merton ^{1/} contends that since Thurstone's method does not employ units that may be added or interchanged on a linear continuum, item analysis is the one way in which the results may be treated without involving great error. Writing in 1940 he says, "it has been largely agreed for the last decade that the various attitude scales introduced by L. L. Thurstone represent the most exact means of assaying group attitudes toward various social attitudes. It is argued here that some of the procedures used in the scoring and interpretation of Thurstonian scales involve methodological contradictions and sociological inadequacies." Thurstone's emphasis on linearity may obscure the sociological utility, contends Merton.

Riker ^{2/} attempted a study in 1944 wherein he employed six scales constructed by Thurstone. He matched intensity of feeling responses on a self-rating scale and degrees of favorableness and unfavorableness on a graphic self-rating scale with the Thurstone scales. His initial conclusions pointed toward comparability of values among the three methods, but a further and more accurate computation of the

1/ Robert K. Merton, "Fact and Fictitiousness in Ethnic Opinionnaires, "American Sociological Review, 1940, 5: 13-28
Note pp. 13, 18. and 19.

2/ Britten L. Riker, "A Comparison of Methods Used in Attitude Research," Journal of Abnormal and Social Psychology, 1945, 40: 102-103.

standard error refuted this. ^{1/} The inference obtained was that a group mean scale score at a determined neutral point does not necessarily preclude a neutral rating in attitude for the individuals of that group. "Self-rating scales are relatively easy to construct and can be applied to a great many situations where it is an impossibility to construct an attitude scale by the Thurstone procedure." ^{2/}

George Dudycha ^{3/} in an investigation of the Peterson Attitude Toward War scale revealed that statements were endorsed at both ends of the continuum. This naturally presented discrepancy which was attributable by the investigator to the lack of satisfactory reliability of scales constructed by the equal-appearing intervals method. He indicates that attitude toward war is not adequately measured by a single continuum, and suggests that it might be more accurate to speak of a person's attitudes toward war and try to measure them in terms of a number of continua. A pertinent inclusion in this work says: ^{4/}

1/ Britten L. Riker, "A Comparison of Methods Used in Attitude Research," A Correction, Journal of Abnormal and Social Psychology, 1945, 40: 102-103.

2/ Britten L. Riker, op. cit., p. 42.

3/ George J. Dudycha, "A Critical Examination of the Measurement of Attitude," Journal of Social Psychology, 1943, 18: 383-392.

4/ Ibid., p. 383.

"Any device that has been used as extensively as the Thurstone attitude scales is in time either accepted as a valid measuring instrument or questioned. Thurstone's scales have been accepted by some and questioned by others."

Scale values will change. Farnsworth ^{1/} found significant changes for items scaled by the Thurstone technique. Items scaled in 1930 and rescaled ten years later yielded an impressively high critical ratio. It might be concluded that results based upon the same meaning for scores over a period of time would lead the investigator over tenuous ground. "There has been a tacit assumption on the part of many opinion testers that scale values as obtained by the method of equal-appearing intervals do not change in magnitude even after a considerable lapse of time."

"A consideration of the data, from an experiment with the Thurstone-Peterson Attitude Toward War Scale, makes it clear that there is danger in the assumption that item weights will not reflect the ideologies of the moment."

The picture from 1930 to 1940 produced change. Less dynamic areas may tend to produce a relative stability.

Remmers and Weltman ^{2/} investigated the attitude inter-relationships of children, parents, and their teachers.

1/ Paul R. Farnsworth, "Shifts in the Values of Opinion Items," Journal of Psychology, (1943) 16: pp. 125-127.

2/ Herman H. Remmers and Naomi Weltman, "Attitude Inter-relationships of Youth, Their Parents and Their Teachers," Journal of Social Psychology, (1947) Vol. 22:61-66 (p.64)

They found that there is "a high degree of communality of attitudes between parents and children." The reported correlation found between the attitudes of children and parents was $+ 0.86$ (± 0.05) and between teachers and pupils was $+ 0.65$ (± 0.11).

The Thurstone scaling method was adapted by Remmers and Silance ^{1/} for the purpose of constructing 'generalized attitude scales' which could measure attitudes toward anything and vitiate the great amount of time and resources required for sorting and scale construction. There have been many applications of the so-termed 'generalized scales'. A multitude of studies by Remmers and his students at Purdue University, *Further Studies in Attitudes and POPYP*, have appeared. Critics contend a certain ridiculousness attached to the "scale applicable to any one of the phenomena in a class." McNemar ^{2/} notes that the vast quantity of reliabilities reported tend to have a median value of about seventy (0.70) with values as frequently below fifty (0.50) as above eighty (0.80), and as low as seven (0.07) and that this could indicate that a great amount of nothing but sheer activity has taken place.

^{1/} Herman Henry Remmers and E. E. Silance, "Generalized Attitude Scales," Journal of Social Psychology (1934), 5: 298-312.

^{2/} Quinn McNemar, Op. cit., p. 306.

"The uncritical energy has produced scales containing dead timber."

Rensis Likert ^{1/} presented a method for developing scales for attitude toward internationalism, imperialism, and the Negro. Statements or items based on an a priori judgment were listed and the respondent was to check one of five responses (strongly approve, approve, undecided, disapprove, and strongly disapprove). Initially sigma scoring weights were employed, a cumbersome conversion process, which was replaced by scoring weights of 1, 2, 3, 4, and 5. Odd-even (split half) reliabilities ranged from 0.79 to 0.92 while test-retest reliabilities ranged from 0.79 to 0.91. The three scales contained 24, 12 and 15 statements. The typical Thurstone scale contained 20 to 22 statements. One might conclude that the "ideal" scale can never be realized in the light of the ever present response errors.

Ferguson ^{2/} found that items or statements were not well distributed over a continuum when scaled by equal appearing interval methods. They tend to cluster at one or the other ends of a continuum. Likert administered

1/ Rensis Likert, "A Technique for the Measurement of Attitudes," Archives of Psychology (June, 1932), 22, 140: 1-55 .

2/ Leonard W. Ferguson, "A Study of the Likert Technique of Attitude Scale Construction," Journal of Social Psychology (1941), 13: pp. 51 and 52.

the Droba War Scale and requested subjects to indicate agreement and disagreement with statements according to his method and according to the Thurstone method as well. When scored by the Likert method, reliabilities approximated 0.88; and the scoring by the Thurstone technique revealed reliability of 0.76. The suggestion herein is that constructing and scoring scales in accordance with Likert's method gives with much less labor, just as valid results as the more complicated Thurstone procedure.

McNemar ^{1/} implies that there is presently insufficient proof as to the necessity of stringent requisite with regard to having statements which yield well distributed scale scores.

Riker ^{2/} has employed self-rating scales with a rate-rerate application and correlated these with equal appearing interval scales. The correlations of 0.55 to 0.84 might indicate that the intensity factor is of some importance.

Zubin and Gristle ^{3/} employed a technique of item selection which yielded differences between groups with known attitudes. They found a split-half reliability of

1/ Quinn McNemar, op. cit., p. 308.

2/ Britten L. Riker, Op. cit., p. 42.

3/ J. Zubin and M. Gristle, "An Empirical Scale For Measuring Militarism-Pacifism," Psychological Record (1937), 1: 27-32.

0.95 for their 65 item test, yet in employing criterion groups as basis for the validity of items, it might have been well for them to investigate and establish the real attitude or reason why the individuals belonged to a given group. This in itself could affect the validity of specific items.

Pace ^{1/} in 1939 employed verbally stated situations involving verbal reply as to which reaction a respondent would prefer. There was no scaling involved but a jury ranked the responses according to socio-political-economic liberalism. Arbitrary weights were assigned. Pace contended that ordinary scales had little validity.

Rosander ^{2/} in a comparative study of two scales constructed by the method of equal appearing intervals, found that the behavior scale and the opinion scale apparently measured much the same thing. The behavior scale contained verbally stated situations with the respondent requested to indicate any of several reactions to situations implied. Both scales were designed to measure attitude toward social equality of the Negro and the white. There could be strong "emotionalized attitudes"

^{1/} C. R. Pace, "A Situation Test to Measure Social-Political-Economic Attitudes," Journal of Social Psychology (1939), 10: 331-344.

^{2/} Arlyn C. Rosander, "An Attitude Scale Based Upon Behavior Situations," Journal of Social Psychology (1937), 8: 3-15, pp. 14, 15.

involved herein which might contribute to the reported results.

Guttman ^{1/} in 1944 presented a different approach which practically assured a single dimension with regard to the retained items. With matrix algebra as basis, Guttman's technique for item selection for scales measuring any psychological trait will eliminate undesirable items from the continuum. This is a potentially strong scaling method, yet Guttman includes that "perfect scales are not to be expected in practice. An attribute belongs to the universe by virtue of its content." To the researcher in this or allied areas, Guttman's work is of contributory importance.

From the complex origins and complicated nature of many opinions and most attitudes, Conrad ^{2/} indicates that strictly uni-dimensional scales may be virtually impossible to construct. "The uni-dimensional scale is a desirable scientific goal, but it is not the only legitimate and desirable goal." Scientific maxima at the sacrifice of social usefulness wherein attitude assessment is concerned is destruction of purpose. Conrad implies that an attitude

1/ Louis Guttman, "A Basis For Scaling Qualitative Data," American Sociological Review (April, 1944), 9: 139-150, pp. 140, 141.

2/ Herbert S. Conrad, "Measurement: A Reply to 'Opinion-Attitude Methodology'," Psychological Bulletin (1946), 43: 570-589, pp. 571, 579, 586.

scale is better judged by what it does rather than how it was derived. The good question is whether the attitude scales have a basic reliability contiguous with the groups of items employed, and whether they provide useful information. Attitude items with low intercorrelations are combinable into a total score if they have the common characteristic of pertinence to the personal trait or attitude under consideration. The requirement of pertinence should hold for uni-dimensionality of the scale, psychological or other type.

Churchman and Ackoff ^{1/} contend that "to measure an individual's degree of attitude, we must construct an environment in which he believes that associated with each end, there is one and only one behavior pattern that is a means for the end, and further, that each means is equally efficient for its end."

Crespi ^{2/} implies that overall reliability of the group as a whole overshadows the reliability of the individual responses. "The investigator need only be assured of adequate group reliability. The individual responses

1/ C. West Churchman and Russell L. Ackoff, "Definitional Models for Belief, Opinion and Attitude," International Journal of Opinion and Attitude Research (1948), Vol. 2: 151-167. (p. 165)

2/ Leo P. Crespi, "Opinion-Attitude Methodology and the Polls--A Rejoinder," Psychological Bulletin (1946), 43: 562-569, p. 563.

may be ignored without impugning the scientific quality of the work."

Single question opinion gauging has as its aim categorizing individuals or groups into two or more classes presumed to be qualitatively or quantitatively different. In its simplest form, the direct question is designed for a "yes" or "no" response. Without consideration of word meaning, the respondent's frame of reference may give impetus to a reply different than that assumed by the investigator. An evident uncontrollable factor is the understandability of the question. Naturally, the mechanics employed in questioning vary with the interviewer. Interviewer bias is an uncontrollable factor as well.

Psychologists have been critical of the single question technique claiming a definite lack of validity and reliability. McNemar ^{1/} in particular states "that greater use should be made of the open-end, non-directive, intensive interview technique" and that "single question opinion gauging be discarded in favor of opinion measurement by attitude scales." Scaling assumes quantitative differences he indicates.

Cantril ^{2/} and others are not unaware of incomplete

1/ Quinn McNemar, Op. cit., pp. 326-327

2/ Hadley Cantril, Gauging Public Opinion, Princeton, N. J., Princeton University Press, 1944, 318 pp. (see Chapters 1 and 2.)

validity. What they will proclaim however, is that the laws of probability applied to the problem of scientific sampling, will demonstrate that a small number of cases chosen at random from a large group are almost certain to have the main characteristics of the whole group and that no major poll ever went wrong with the single question method because too few persons were reached. ^{1/}

"As men have known throughout the ages, and as modern semantics has pointed out in detail, the meaning of even the simplest word may be slippery." ^{2/}

The problems involved in scaling and in the single question technique are not the same. The single question (opinion poll) method involves wording as a major issue whereas this is not of prime import in scaling. In scaling method it is generally agreed that the multiple response avenue is preferable to dichotomy. It may be added that the wording of any statements need scrutiny and that certain criteria should be established with regard to the wording of attitude statements. Wang contends that "the distinguishing feature of an attitude statement lies mainly in that it expresses an attitude." ^{3/}

^{1/} George Gallup and S. E. Rae, The Pulse of Democracy, New York, Simon and Schuster, 1940, p. 57.

^{2/} Hadley Cantril, op. cit., p. 3.

^{3/} C. K. Wang, "Suggested Criteria for Writing Attitude Statements," Journal of Social Psychology (1932) 3:367-373, p. 373.

This review of research has attempted to bring to light the prominent works done in areas related to the study. The foregoing have all been notable attempts to improve the science of attitude investigation. Concerning things more recent, a brief of the works of Rope, Dolio, Hand, Murfin, Valenti and Capra are in order. Not without recognition, but considered in the light of interest factor alone, are the attempts of the following omitted:- works of the National Citizens Commission for the Public Schools (they are in touch with over 1700 communities and are aiding their attempts toward better understanding among the professional educators and the lay public); Southern Berkshire Curriculum Committee Report; The Palo Alto "What Do The People Want From Their Schools" report; the report of the "Highlights of the 1950 Opinion Studies of the Denver Public Schools"; "This Happened in Pasadena"; the report of the New York State Citizens' Committee of One Hundred for Children and Youth of 1951 entitled "The Four Million"; the mid-century white house conference on children and youth report of 1951; "Parents and Teachers as Partners" of the SRA in 1952; "What Baltimoreans Think of Their Schools" of September 1952; and the attempts of Milton, Needham, and Newton, Massachusetts through their Parent Teacher Associations to investigate attitudes and opinions. There are many more. These are merely presented that the reader

interested in that which has gone before, might find sufficient challenge to pursue areas for improvement in this essential quest.

In 1940, Rope ^{1/} attempted opinion polling technique on certain educational issues in Pittsburgh, Pennsylvania. In determining issues to be studied, he consulted pertinent local magazines, newspapers, financial statements and published reports of the Board of Education, as well as having interviews with community leaders not affiliated with the school system. For each of the opinion items, five possible responses were provided ranging from highly favorable to very unfavorable. There was no attempt to scale, rather, the instrument was designed that it might appraise opinions on a group of separate items. The technique of cross-section polling was attempted to secure the sample. Every twentieth address was drawn from the census tract to be surveyed. A group of students from the University of Pittsburgh acted as interviewers for this study.

Statistical technique in the analysis for reliability rested upon computation of standard error for each item ^{2/}

1/ Frederick T. Rope, Opinion Conflict and School Support, Bureau of Publications, Teachers College, Columbia University, New York, 1941, pp. 72-85.

2/ Ibid., p. 98.

and the Chi Square Test of Independence was applied to check representativeness of the sample and to determine significant differences of reported opinion. Rope secured confidence at the 0.05 level. ^{1/}

A definite conclusion of the study indicates that "it is vital that educators know what the public desires and that they accept the guidance, contiguous with a democracy, which comes from this knowledge. "Education's fundamental purpose is to implement democratic policies. There is need for educational leaders to assess the expressed desires of all community groups concerning educational policies and functions." ^{2/}

Dolio ^{3/} performed a study in 1948 concerning the similarities and differences of educational attitudes of pupils, teachers and parents of a secondary school population. The attitudes inventory employed consisted of three different forms, one for each subclass. The inventory used by Dolio was an emergence from the studies under the direction of Hand at the College of Education, University of Illinois.

1/ Ibid., p. 160.

2/ Ibid., p. 46.

3/ Ardwin J. Dolio, Similarities and Differences in the Educational Attitudes of Parents, Teachers and Pupils of a Selected Secondary School, Unpublished Doctorate Dissertation, University of Illinois, Urbana, Illinois, 1948. pp. 1-271.

Stressing that anonymity was assured, Dolio administered the inventory to the pupils in small groups; the teachers were instructed to place their completed inventories in a sealed box; and the parent inventories were mailed. In general, Dolio found that the majority of parents expressed satisfaction with the school. ^{1/}

Dolio makes qualification ^{2/} that "since there are many 'publics' and since they hold opinions on many issues, it is perhaps valid to state that the term public opinion must be related to a specific public or publics and to a definite issue or series of issues about which opinions are sought before it can be successfully studied."

There was no sampling technique involved. Statistical treatment consisted of the use of the chi square test of significance.

Hand ^{3/} attempts to present a method whereby guesswork is eliminated in the school's public relations and personnel program through the media of pre-designed questionnaires which will assess the parent, pupil and teacher satisfaction or dissatisfaction within a community. He indicates that there are three 'psychic deluders' ever present as definite limitations to unsystematic method of appraisal, namely,

1/ Ibid., pp. 159-160.

2/ Ibid., p. 5.

3/ Harold C. Hand, op. cit., pp. 26 and 27.

the influence of unrepresentative observations, the reluctance of people to be frankly critical, and the influence of the observer's opinions and interests.

In explaining the "why" of each of the main inventory items, he indicates that the statements, questions or items were inserted as specifics on the belief that they were associated with parent-pupil satisfaction with the school or with high teacher morale, or with parent or pupil dissatisfaction or with low teacher morale. He hastens to add, however, ^{1/} "we offer these suggestions with considerable humility, for we know that the persons who are thoroughly familiar with the local situation are the ones most competent to decide."

Hand advocates that all pupils of grades six through twelve participate. He contends that this is better than sampling for this purpose. He includes, however, that if the groups are too large, a sample could be made by selecting every second or fifth name from the alphabetical files (for whatever number is desired in the sample) and this will give representativeness. There should be no sampling of teachers. ^{2/} Arbitrary selection of parent sample will suffice.

With regard to administration he indicates that an

1/ Ibid., pp. 32 and 33.

2/ Ibid., pp. 71-73.

outsider should administer the forms to the pupils and the teachers, and that the school department should mail the questionnaires to the parents, with a P.T.A. follow-up.

Hand's ^{1/} basic method of analysis consists in obtaining distributions showing the number of individuals giving each specific response to a particular question. Percentage comparison of the subclasses completes the analysis.

It is strictly a questionnaire tool involving 44 statements or questions in the parent form; 27 in the Junior High form; some 39 in the secondary form; and 69 statements or questions in the teacher form. The respondents are requested to check against an adjective or phrase description how they feel about a statement that preceded this attempt at range of intensity. There is much reading of a critical nature involved in the parent form.

There are no statistical implications given. There have been no population parameters described.

Murfin ^{2/} conducted an investigation of the expressed attitudes of children from two socio-economic levels and sought findings with regard to these attitudes and their relationship to reading achievement and intelligence. Some

1/ Ibid., pp. 97-99

2/ Mark Murfin, A Study of the Expressed Attitudes of Children From Two Socio-Economic Levels and the Relationship to Intelligence and Reading Achievement, 1952, Unpublished Doctorate Dissertation, School of Education, Indiana University, pp. 1-218.

three hundred statements were composed concerning attitudes toward (1) school and school teachers, (2) intellectual interest, (3) ambitions and goals, (4) restriction of freedom, and (5) outside motivating forces. The categories were evolved from a panel of three competent educators. An eleven point continuum (scale), a modification of the Thurstone technique, ranging from helpful to hinder secured judges' ratings of the statements. A median value described the numerical value of the statement. To check the reliability of participant selection, application of Warner's Index of Social Status was made and there was indication of variance in socio-economic level.

Murfin administered the scales to the children in their classroom, with neither principal nor teacher present. The "easy climate" was enhanced by the casual dress of the investigator.

In the analysis of the data, percentile distributions were employed. Statistical treatment involved application of the Chi Square Test of Significance.

Murfin ^{1/} concludes that "comparison of schools or pupils from different socio-economic levels cannot be justified and it is recommended that the interpretation of standardized tests be made with consideration of the socio-

1/ Ibid., pp. 174, 175.

economic status of the testee."

Valenti ^{1/} concerned himself with the development and evaluation of an instrument to measure the attitudes with which teachers and administrators view various problem areas pertaining to the social role of the teacher. He employed a self-administered inventory, a form of attitude questionnaire. With the acquisition of data from this tool, two sets of judges categorized the items, a procedure somewhat in the manner of the Thurstone technique. A preliminary form was administered to 73 subjects and a revised form to 515 subjects. The coefficients of reliability, via the Kuder-Richardson formula, resulted in 0.79 for the "A" category; 0.74 for the "B" category; 0.65 for the "C" category, and 0.87 for the "D" category on the revised form. Analysis of variance showed few significant relationships, however. A validity check, based on one-fifth of the 515 subjects (sampling techniques employed) revealed + 0.59 product moment correlations. This indicated a significant degree of relationship between inventory scores and a criterion - in this instance, the evaluation of leadership attitudes by colleagues and supervisors. The statistical treatment employed by Valenti is worthy of investigation.

^{1/} J. J. Valenti, "Measuring Educational Leadership Attitudes," Journal of Applied Psychology (February, 1952), 36: (36-43).

Valenti contends ^{1/} that age and experience partially affect attitudes. "The younger and less experienced the person, the more integrative are his attitudes; the older and more experienced, the more formal and impersonal they are." As a recommendation, he advocates that once significant areas are determined, immediate attempt at change or modification of individual and group attitudes is indicated. In this there is needed effort. "Research in modifying educational attitudes, in helping people redefine their roles, is necessary." ^{2/}

Capra ^{3/} reports a study in 1955 concerning the attitudes of parents toward current educational practices in the elementary school. The ninety-statement opinionnaire was constructed on a basis similar to the Thurstone and Murfin scaling procedure, with statements equally divided into categories of (1) discipline, (2) individual differences and (3) fundamentals of teaching.

The opinionnaire was given to some 2342 parents of children in grades one through eight in eleven elementary schools of Waukegan, Illinois. Of the respondents selected

1/ Ibid., p. 41.

2/ Loc. cit.,

3/ James Capra, A Study of the Attitudes of Parents Toward Current Educational Practices in the Elementary School, and Some Influencing Factors, Unpublished Doctorate Dissertation, School of Education, Boston University, Boston, Mass., 1955.

for participation, 718 parents completed and returned the questionnaire, a percentage of 0.306. Responses were tested for independence by Chi Square methods and analyzed for favorableness or unfavorableness.

Capra reports a scale reliability of 0.91 by test-retest methods and estimates validity of his instrument at 0.93 when scores of known agitators were compared with scores of known school supporters. Percentages are reported and non-parametric Chi Square tests comprise the statistical treatment of the data.

Capra concludes that ^{1/} "although parents and educators appear to sanction modern day school practices and to criticize adversely former school practices, agreement or disagreement with a stated educational practice was never complete on the part of any of those polled. This points to the need for schools to provide a continuous public relations program whereby all parents will become cognizant of present-day school problems and of the methods with which the schools are attempting to solve these problems."

Administration:-- In the overall, data on attitudes are secured by interviewing (personal call or telephone), by group testing, or by mail. The personal interview (not telephone) has no substitute. The group testing allows for

1/ Ibid., p. 245.

an environmental build-up that can be satisfying or unsatisfying. The mail questionnaire can have weakness in lack of response. However, all should be based upon specific sampling technique for representativeness, and the feasibility aspect is of major consideration in the ultimate selection of technique for study.

Considering the problem of non-response, the personal interviewer is forced to make call-backs until extended illness, departure from residence or death has been established. Then an alternate may be drawn as replacement. Group testing involves the same for true sampling technique. With regard to the mail questionnaire, this is employed in a number of surveys because of the economies involved. As was indicated, the objection to this method of collecting information lies in the fact that it generally involves a large non-response rate, and an unknown bias is involved in any assumption that those responding are representative of the combined total of respondents and non-respondents.

To cope with this actuality, a given procedure is to mail schedules in excess of the number expected to be returned and to follow up by enumerating a sample of those that do not respond to the mail canvass. Then, to achieve the desired precision, the number to be interviewed would vary with the response rate actually found. This will

insure a degree of representativeness within the population parameters. For purposes of estimate with regard to assumed response from a given population, Hansen and Hurwitz ^{1/} present helpful formulae.

With regard to the topic of administering any instrument for the purpose of surveying attitudes, a consideration of some principles of sampling reveal that "any excuse for the dangerous practice of treating non-random samples as random is now entirely tenuous." ^{2/}

"In the early years of the present century, it was not an uncommon idea that 'what you get by grabbing a handful' and the mathematical precise notion of a 'simple random sample' meant the same thing. The years have produced wariness and caution. From a 'grab sample' there is a tendency to underestimate the variability in the population. Because of the inevitable bias, much has been done in recent years, particularly in sampling human populations, to the development of sampling plans which simultaneously,

- i. are economically feasible
- ii. give reasonably precise results, and
- iii. show within themselves an honest measure of fluctuation of their results."

There are many ways to draw samples so that each individual or sampling unit in the population has an equal

1/ Morris H. Hansen and William N. Hurwitz, "The Problem of Non-Response In Sample Surveys," Journal of the American Statistical Association, 41:517-529, (note pages 521-522).

2/ William G. Cochran, Frederick Mosteller and John W. Tukey, "Principles of Sampling," Journal of the American Statistical Association (1954), 49:13-35, p. 14.

chance of appearing in the sample. One manner might be by numbering all the individuals in the population, and then using a table of random numbers, to select the sample on the basis of one random number to one individual. Because the relative chances of different individuals entering the sample are known and compensated for (the random numbers tables are mathematically precise in this), it becomes a probability sample. ^{1/}

In most situations it is quite easy to reduce the systematic errors in sampling to practical unimportance. The probability sampling plan, where the chance that any individual shall enter the sample is known and allowed for, and where adequate randomness is ensured by some scheme of (mechanical) randomization, will produce errors that are minimal and frequently consist of such items as:

1. failure of individuals to appear on the lists from which selection has been made
2. persons "perennially" not at home
3. refusals to answer, or breakdowns in the measuring device.

These are the hard core of causes of systematic error in sampling. Fortunately, in most situations their effect is small. A probability sample will remove almost all the systematic error due to sampling. ^{2/}

^{1/} Ibid., p. 15.

^{2/} Ibid., pp. 31, 32.

With concern for the size of sample required for attitude research, there are no stringent rules. The nature of the problem and the statistical design should be the determinants. It would be well to consider the subgroups for it is within and among these that breakdowns will be necessary. Rejections or acceptance of a null hypothesis on small numbers within the subgroups could lead to fallacy. It may be concluded that representativeness is a keynote and that any factor which might destroy this renders generalizations of a spurious nature.

As summation of the methods of attitude testing or inquiry technique, the following are offered from Kirkpatrick and Stone: ^{1/}

- I. Questionnaires
- II. Scales - in contrast to questionnaires call for subject responses ultimately expressible in terms of amount or degree
 - A. Rating Scales - are the simplest form of attitude scale. They may be adjective or numerical; ie., in the former the subject would indicate his attitude by checking favorable, neutral or unfavorable; the latter would request indication by choosing a point somewhere on a scale of 1 to 5.
 - B. Unstandardized Propositional Scale - wherein degrees of attitude variation are indicated by phrases or sentences rather than mere adjectives.
 - C. Standardized Propositional Scales - present scale values decided upon by a consensus of judges and/or by application of sigma weights. This type is that which Thurstone refined.

1/ Clifford Kirkpatrick and Sarah Stone, op. cit., pp. 564-566.

- D. The Belief Pattern Scale Method - combines the advantages of a single numerical score with the possibility of a configurational analysis.

Droba ^{1/} makes description as follows:

- A. The Method of Absolute Ranking - the simple "yes"- "no" type of questionnaire. Degrees of attitude are expressed separately for each indicator without reference to any other. This type instrument does not have a constant unit throughout, thus is not considered a scale.
- B. The Case Method - the individual describes verbally his own attitudes. This lacks objectivity and does not lend itself to quantitative analysis.
- C. The Method of Relative Ranking - each indicator is positioned relative to others. The subjects are requested to arrange in order of relative merit statements of attitude about any given thing. A scale does not result as equal differences in rank do not necessarily represent equal differences in attitude.
- D. The Graphic Rating Scale - the subject makes a check on a line to represent the degree of his attitude. Words or phrases guide toward varying intensity.
- E. The Method of Paired Comparisons - items are presented in pairs and the subject designates his preference. The final order of preference is obtained from the total number of times each item is preferred. These ratings may be transformed into scale values.
- F. The Method of Equal-appearing Intervals - exemplified by Thurstone's work. The scale provides a constant unit throughout.

1/ D. D. Droba, "Methods for Measuring Attitudes," Psychological Bulletin (1932) 29:309-323, pp. 309-316.

Summary.-- The inference from the related research indicates that the study of attitudes will continue and become more critical, more scientific and more effective as further knowledge and understanding is utilized.

A sociological problem is significant in proportion as there is a definite question answered which has a range of implications such that the answer properly presented necessarily affects sociological thought systems present and future. ^{1/}

The validity and reliability of instruments have shown a rather general lack of consistency. McNemar ^{2/} notes that there are several obvious factors which affect validity and/or reliability. The implication is that it is difficult to see how a reliable and valid response can be secured unless the respondent understands the question or the given issue. Other things being equal, the less the personal relevance of an issue, the lower the reliability and validity.

Murphy ^{3/} questions what groups of attitudes there are which actually fall into a scale arrangement. "Unless we

1/ Clifford Kirkpatrick and Sarah Stone, Op. cit., p. 580.

2/ Quinn McNemar, op. cit., p. 297.

3/ Gardner Murphy and Lois B. Murphy, Experimental Social Psychology, Harper and Brothers Publishers, New York, 1931.

arbitrarily make them fit into a linear scale, there is little likelihood that they will." This is an apparent limitation of many alleged scales. The whole merit of a scale is that it presents in quantitative form a consensus of opinion in which arguable points separate themselves from non-arguable points.

The inadequacy of sampling plus the fact that the groups used are from highly restricted universes leads one to question the value of a large proportion of the research on attitudes. ^{1/} The universe is seldom defined and the subjects are not often drawn in such a way as to constitute either a random or a stratified sample, contends McNemar. He continues, "more studies are needed based on specific sampling techniques from a far broader universe in order to have generalizations worthy of the name."

There has been much criticism within and among the attempters. Crespi ^{2/} takes to task the McNemar syllabus and for the timid supplies the rule: "Them that does nuthin', never gets into trouble." Or, for the bold and persistent researcher in attitude inquiry, "them that does the most, gets into the most trouble."

Conrad ^{3/} introspects and projects, "in a young science

1/ Quinn McNemar, op. cit., p. 332.

2/ Leo P. Crespi, op. cit., p. 568.

3/ Herbert S. Conrad, op. cit., p. 581.

we first attempt the 'hypothesis-finding' stage; then, form modified or new hypotheses; and, finally, and typically much later, develop an experimental media for determining the truth, limitations or falsity of specific refined hypotheses. "In the initial stage, the contribution lies in being aware of the possibly good hypotheses."

Kirkpatrick and Stone ^{1/} make note that "it is possible that there is no perfect method and no perfect instrument. It may be that certain methods and certain instruments are merely better than others for certain purposes."

In all fields, not alone in this, there is needed more time, more material, financial and otherwise, more and better qualified personnel, and more judicious, analytical, and fair appraisal along with tempered and just criticism.

"There is no sociological phenomena more widespread and more basic to all cultures than the process by which one takes over the attitudes, habits and customs of his fellows through interaction in primary groups. Universally, men reflect the majority opinion of the groups with which they are identified. Going hand in hand with the universal tendency to conformity is the universal tendency for change to take place from generation to generation." ^{2/}

The task is to help make change, a change for the better.

1/ Clifford Kirkpatrick and Sarah Stone, op. cit., p. 575.

2/ Ibid., p. 581.

CHAPTER III

SETTING AND PROCEDURES

1. Selection of Communities for Study

In the initial stages of this study, the selection of a population with which to work was a definite problem. The investigator was seeking an area within the limits of operational feasibility, and too, a population which would tend to include a variety of ethnic, religious and socio-economic groups within its parameters. To work with controlled groups or captured audiences is one thing, but, to elicit cooperation from a highly dispersed population concerning attitudes toward that which might result in controversy, is another.

The attempt to determine willingness to cooperate and participate initially involved contacting the educational leaders of 24 communities in eastern Massachusetts. A letter was sent to the 24 selected explaining the basic procedure and purpose of the study and requested them, following consideration, to return in the self-addressed franked envelope the enclosed sheet indicating willingness to participate.

A follow-up of those who indicated interest in such a study resulted in personal interviews for the purpose of

complete explanation of the purpose and procedure. Ultimately, the community of Norwood, Massachusetts, was selected for the 'pilot' study and the city of Fall River, Massachusetts, was to be the 'population' for the main study.

The Pilot Area.-- The 'pilot' study served as an excellent media for perfecting the techniques of the investigator, and aided materially in filtering out the imperfections of the format of the inquiry form and of the methodology involved. Recognition is due the pilot community, and a word concerning the 'make-up' of Norwood as a proving ground for this type of study might aid future investigators in seeking a similar type community.

The town of Norwood, Massachusetts, is located 14 miles south of the city of Boston and is considered a suburb. Norwood can be classified as a residential-industrial community, with its industries well diversified and of national and international contribution. In addition to its adequate school facilities, public, parochial, and private, Norwood provides and maintains an A-1, 200-bed ultra-modern hospital, two libraries of over 40,000 volumes, a million-dollar commercial airport in addition to a military air strip, two hotels, two newspapers, three theatres, six parks, two bathing beaches and one arena. There are nine children's playgrounds and a year-round

supervised recreational program. Of the thirteen churches, there are eight of Protestant denomination, three Roman Catholic, one Jewish, and one Syrian Orthodox. The variety of racial, religious, and socio-economic groups is evident. Norwood operates municipally under the town manager form of government. There are more than 7,000 dwelling units in the community.

The foregoing is revealed to illustrate the 'type of town' involved in the pilot study. It is rather all-encompassing for a community of 21,052 people of all types, but this Boston suburb was an excellent try-out area for study.

The major study area.-- The city of Fall River, Massachusetts, celebrated its one hundred and fiftieth anniversary in 1953. This community, one of the four largest cities in the state of Massachusetts, lies south easterly 20 miles from Providence, Rhode Island, and directly south 45 miles from Boston, Massachusetts. Its population of 105,195 people contains a large number of Portuguese, French-Canadians, Irish, Polish, and Italian, with a growing population of Jewish, Greek, Ukranian, Lebanese and Chinese. Truly a melting pot, the people are from various countries, every walk of life, and represent many nationalities and religious beliefs.

The city takes its name from the Quequechan River,

meaning "falling water."^{1/} The river gave power to the mills along its banks in the early nineteenth century and started the rise of the city to its place as the largest cloth manufacturing city in the world. Cotton textiles are only a part of the diversified industries found in the city today.

When Fall River was incorporated as a town in 1803, it contained two district schools.^{2/} In 1863, school districts were abolished and the "maintenance of school property devolved upon the Public Property Committee of the city government."^{3/} By 1941, there were 39 permanent school buildings in use, with 90 recitation rooms in the two high schools, 78 in the two junior high schools, and 275 recitation rooms in the elementary buildings.^{4/} The present situation finds one new elementary school building under construction to replace the one destroyed by fire in 1953, and one new elementary school building completed two years ago, to alleviate the overcrowding in the Highland district.

To gain insight with regard to the present situation, it might be well to note that in the year 1931 the finances

1/ Arthur Sherman Phillips, The Phillips History of Fall River, Fascicle I, Dover Press, Fall River, Massachusetts, 1944, pp. 67 and 153.

2/ Arthur Sherman Phillips, The Phillips History of Fall River, Fascicle II, Dover Press, Fall River, Massachusetts, 1945, p. 51.

3/ Ibid., p. 59.

4/ Ibid., p. 72.

and credit of the city were appreciably impaired due to serious and prolonged depression in the cotton industry. The total debt of the city in January of 1931 assumed some thirteen million dollars.

Phillips ^{1/} reports "from February 1931 to December 31, 1941, the reins of the city government were in the hands of the State Board of Finance. The elective officials had little power of initiative. Through hard, mean work, the budget was trimmed, and the city that had defaulted on a bond issue in 1930 was on its feet when home rule was established on January 1, 1942." It is noteworthy that the city did not have a payless pay day and that no bank failed during the wringing-out process. Before the debacle Fall River industry was confined largely to the spinning and weaving of cotton fabrics. Today it manufactures a great variety of commodities as evidenced by data issued by the Fall River Chamber of Commerce.

In addition to its present diversified industries, the city of Fall River provides and maintains The People's University, (its public library of over 200,000 volumes, its hospitals, churches, newspapers, and schools; and its location as a harbor for much water transportation and its

1/ Arthur Sherman Phillips, The Phillips History of Fall River, Fascicle III, Dover Press, Fall River, Massachusetts, 1946, p. 62.

airport, all reflect the international aspect of the city.

Governmental operation assumes that of a city with a mayor as the governing head. Fiscally independent by 1942, the city has continued to grow and flourish. Today it stands as one of the largest industrial-residential cities in the state of Massachusetts. It is the site of the main study of this dissertation.

2. Survey Procedure

Following the selection of the area for study, it was necessary to determine the population to be sampled. The scope of the study involved children of the fourth, fifth, and sixth grades, their parents, and elementary school teachers. The categories encompassed the curriculum, the teaching methods, the school plant, and the school personnel. Prior to administering the inquiry form to a population, in this technique, it was necessary to originate one from the population. There follows a description of the several steps involved..

Identifying the population.-- A conference with the superintendent of schools revealed that there were 33 public schools of elementary status within the confines of the city. Twenty-nine of these schools housed children on the fourth, fifth and sixth-grade level. The four other schools of elementary status included two primary grade schools,

grades one, two, and three, and two 'special' ungraded schools. The two primary units were outside the study area. The ungraded schools were deemed not contributory to the study and they were omitted.

The office of records information was made completely available to the investigator. The distribution of the school population for grades four, five, and six is revealed in Table 1.

Table 1. Population of Boys and Girls
in Grades four, five, and six.

Grade	Boys	Girls	Total
(1)	(2)	(3)	(4)
4	574	495	1069
5	492	548	1040
6	474	489	963
Totals	1540	1532	3072

On the basis of 3072 children in grades four, five, and six a ten-per-cent sample was selected which involved some 300 children and their parents in the city-wide survey. Teachers were not to be sampled. It was decided that the preliminary investigation would include at least one-third that number of parents, about 100, and approximately ten per cent of the total number of children. Educators interviews were confined to the three schools, a seven-

per-cent sampling, but deemed adequate in the light of representative and informed respondents. Since the overall picture indicated that there were three high, seventeen middle, and nine low classification schools, the three schools used in the preliminary investigation were arbitrarily selected, in conference with the superintendent of schools, as being representative of the typical socio-economic structures.

Table 2. Population of Boys and Girls According to Socio-economic Status by School and Grade in the Preliminary Investigation.

School	Grade	Boys	Girls	Total
(1)	(2)	(3)	(4)	(5)
"A" - High	4	10	17	27
	5	19	11	30
	6	20	24	44
"B" - Mid.	4	14	15	29
	5	8	12	20
	6	18	13	31
"C" - Low	4	20	32	52
	5	21	38	59
	6	22	34	56
Totals		152	196	348

The preliminary investigation.-- The principals of the three schools, the high, middle and low, were contacted by the superintendent and informed that the investigator would call for conference and to make available to him all

records he might require. The contact was made and the conferences helped to establish rapport and served as an opportunity for explaining the purpose and procedure. A date for the administration of the pupil free-writing response and for the teacher interview was made and it was agreed that there would be no advance notification of the purpose of the visit. It was desirable that there would be "off-the-cuff" answers; that it would be possible to get closer to the real thinking of the people when there was no time to frame an answer or to have a stock answer ready. There was excellent cooperation in this regard. Following the conference, an arbitrary sampling of a random nature evolved a one-third parent sample plus 20 per cent alternates from the office records. Full name, address, name of child or children and grade in school were recorded. A master list alphabetically by streets was made to expedite the home visits to parents. A free-writing response inquiry form was devised for the pupils, and a parent check-list and educator check-list were devised to expedite notations following the personal interviews. ^{1/}

It was decided that the order of operation for best results would be to administer the free-writing response inquiry form to the pupils first; then interview the

1/ See appendix, pages 237-241

teachers immediately thereafter, and then begin the home visits.

On the appointed day, the interviewer administered the inquiry form to the pupils of grades four, five, and six in the three schools. By pre-arrangement the investigator entered the classroom and the teacher left. The interviewer introduced himself to the children and explained why he was there and how they could help. Illustrations and analogies were made and the boys and girls were assured that no one would know who they were; what we did want to know was what the children thought about the areas in the inquiry. The tendency at first was to raise their hand when the investigator asked a sample question to elicit response. "Don't tell me, tell the paper," was the direction. "Now, do we all know what we are going to do?" There was absolutely no attempt made to steer their thinking. Following explanation of the category, the investigator merely helped them to spell a word now and then. The children followed directions most willingly. The cooperation was excellent.

The teachers were interviewed immediately following their class interview. The interviewer was introduced to the teacher by the principal and the interview was held in private, just the two people, interviewer and respondent. The purpose and procedure was explained and it was made known that information given was absolutely in confidence

with regard to source. Rapport established, there were six basic lead questions.

1. What do you think about the curriculum?
2. What do you think about the teaching methods?
3. What do you think about the school plant?
4. What do you think about the school personnel?
 - a. the principal
 - b. your fellow teachers
 - c. the custodian
 - d. the supervisors
 - e. the superintendent
 - f. the school committee
5. What do you like most about the school (if there is any one thing you like most)?
6. What do you dislike most about the school (if there is any one thing you dislike greatly)?

Upon completion of the interviews, in many instances educational subjects were further discussed. In almost all instances, the teachers seemed pleased and willing to communicate. Following the interview, the investigator, in private, immediately recorded that of note on the check-list form.

Next the investigator began the task of personally interviewing the parent sample. The home interview technique involves time, patience, persistence, and a sincere approach upon the part of the interviewer. Credentials were carried as identification.

Following self-introduction and purpose of the call, the investigator was welcomed into the homes of 91 of the 104 homes visited. The front-step interviews were the brief ones, yet they, too, were contributory. It was

noted that the more the respondents talked, the more interested they became. The investigator found that they truly wanted to know more about the schools. The lead questions were the same as those used with the educators, with explanation whenever necessary. Following the interview, the investigator recorded salient information gleaned.

One hundred and four personal calls were made to homes of parents of children in grades four, five, and six in the high, medium, and low socio-economic areas of the city. This does not include some 20 repeated calls to the "not-at-home" nor the two and three call-backs to many homes to get the interview. Interview time ranged from approximately seven minutes to two hours and thirty-five minutes. There was a mutual sharing of experience apparent, and many thanked the interviewer for coming.

3. Construction of the instrument

Upon completion of the parent interviews, the preliminary investigation for information gathering was concluded. Analysis of the information followed. The responses were transferred to three by five colored cards, blue for the curriculum category, orange for the teaching methods category, yellow for the school plant category, and white for the school personnel category. The subclasses were kept in separate piles. Each statement of an idea or an issue was put on a separate card according to its inferred category.

This done, the idea or issue assumed a place on the included list according to its frequency of mention. The original list contained thirty statements for each category, ten ideas from the pupils, ten from the parents, and ten from the educators. This list was ultimately refined to twenty-four items per category, producing a ninety-six item inquiry form.

The inquiry form was so set up that every third statement beginning with number one was a pupil statement; every third statement beginning with number two was a parent statement; and every third statement beginning with number three was an educator statement. There were six combinations within the framework of the 96 statements that involve similar thoughts of teacher-parent, teacher-child, and parent-child. Statements appear in almost all instances in the exact language in which they were given to the interviewer. The format was decided upon, a place for keyed identification was allowed for in the upper right-hand corner, a complete set of directions appeared on page one; and on page four a place was included for any additional comment the respondent desired. ^{1/} Letters to the parents and educators were prepared and final plans were made for the city-wide survey. ^{2/}

1/ See format of Inquiry p. 243

2/ See letters pp. 251, 252

The sampling procedure.-- The population of pupils in the fourth, fifth, and sixth grades was 3072. With this as a base, the live file in the office of records was consulted and each child listed on a card was assigned a number from 1 to 3072. According to accepted procedure the table of random numbers was employed to produce a sample of ten per cent of the total population. The child's full name, school, grade level, home address, and full name of parent or guardian was recorded. After attaining a ten-per-cent sample, re-entry into the table of random numbers produced an additional twenty per cent of alternates to cover any absentees from the selected sample. ^{1/} The parent sample was evolved from the pupil sample. The educators were not sampled.

The final survey.-- All inquiry forms were assigned a code number in the upper right-hand corner. The parent form was placed in a self-addressed franked envelope with two enclosures explaining the purpose of the inquiry form. The educator form was placed in a self-addressed envelope with an enclosed letter explaining the purpose and asking for cooperation. All forms were arranged in a numerical sequence according to the school attended by the child, and

1/ James E. Wert, Charles O. Neidt, and J. Stanley Ahmann, Statistical Methods in Educational and Psychological Research, New York, Appleton-Century-Crofts, Inc., 1954, pp. 109, 110, 416, 417.

each school had an assigned number rating indicating high, medium, or low classification. A schedule was established for administration of the instrument to the children of the 29 schools involved. All principals were informed, via a bulletin from the office of the superintendent of schools, of the schedule of visitations by the investigator.

At each school, the interviewer contacted the principal, distributed the forms for the teachers with instructions to seal the envelopes securely following completion and return to the principal's office where they would be collected, and then requested the principal to call the children selected in the sample to a common meeting place for the group interview. Absentees were replaced by alternates. At each school, in order to establish a sense of participation, the principal was asked to select a boy and a girl whom he would like to be included in the group interview. These responses were not used in the analysis as they were not a part of the sample.

The interviewer entered the room alone and introduced himself to the children. Explanation of the purpose of the visit was made, the children were told how they came to be selected from all the other children in the school, and were informed that the parents and teachers would be asked how they felt about the statements mentioned in the inquiry form also. The interviewer distributed the forms in a

numerical sequence. It was impressed that anonymity was assured, samples were done with the children to insure familiarity with the procedure, and directions were read aloud while they read them on their inquiry forms. When all was in readiness, the group interview began. To overcome any reading difficulty, each statement was read aloud to the children and following each statement, the question was asked, "how do you feel about that?", or "what do you think about that?". The children would mark their response on the indicated page. At the end of each series of 24 statements, a stop was made and before beginning the next category, a check was made to be sure that each child was on the right page and ready to begin with the right statement.

When the statements were completed, the children were asked if they could think of anything else they would like to tell the paper. If they so desired, they could use the space provided on the back page. When they were finished, a child was asked if he would kindly collect the inquiry forms.

The interviewer then held the parent envelopes in his hand and asked the children if they would help by seeing that the parents filled out the forms and mailed them back as quickly as possible. The envelopes were then distributed to the children according to the same sequence so that each

child received the same code number on the parent form that he had appearing on his. This was not made known to any of the participants. Quick to note inquisitiveness, the interviewer would go up to a child in the middle of the group, or to one who might naturally begin to open the envelope, pick it up and inform them that this contains exactly the same form that they had just filled out, and in addition, a letter from their superintendent and a letter from the interviewer asking for cooperation. The envelope would be opened and the contents displayed. Having taken them into confidence, the children seemed eager to help in insuring parent response. This procedure was repeated throughout the visitations to all participating schools. Cooperation was excellent throughout.

4. Statistical Design

The plan of any study requires consideration of available and proven techniques for ascertaining statistical significance from which valid interpretations or implications may be drawn. For perspective and direction, an hypothesis will be stated. Testing the hypothesis is the area of statistical inference which is of major concern in this study.

The tentative assumption which is to be tested from the sample in this study is postulated as a null hypothesis,

that, the responses to the items are independent of socio-economic status and/or group. The evidence has been assembled to ascertain whether the hypothesis is tenable or untenable.

For purposes of clarification, at the outset it should be known that the term group refers to either pupil, parent, or teacher; the term classification refers to high, middle, or low socio-economic status; and the term category refers to the curriculum, teaching methods, school plant, or school personnel. There are 24 items or statements in each category.

It was decided that an item analysis could best be made by testing each item among classifications and within groups for each category by the chi square test of significance. These were dichotomized since a valid division could be made between 'yes' and 'agree' and 'disagree' and 'no'. The 'no opinion' area has not been disregarded, yet it was not deemed contributory to this analysis, nor was its lack of inclusion in this test of significance detrimental to the test. Essentially, a multiple cell contingency table was made for each of the two hundred and eighty-eight tests to be performed by use of the formula:

$$\chi^2 = \sum \frac{(f_o - f_t)^2}{f_t}$$

where f_0 represents the observed frequency and f_t represents the theoretical or expected frequency, and where the degrees of freedom were established for the contingency table by $(r-1)(c-1)$ where r represents rows and c represents columns. ^{1/}

It was also decided to tabulate a comparison of within group chi square values between groups and indicate the differential X^2 value, as well as to rank order the chi square values for each statement and for each group according to category. This treatment resolved the item analysis for this study. The succeeding chapter presents detailed tabular results

The analysis of variance technique developed by Fisher has proven most useful in analyzing variation to which observational material is subject.

"While in experimentation the special value of the analysis of variance is manifest, it has many other applications in dealing with observational material. The efficiency of its use in testing if a group of samples may be regarded as having come from the same homogeneous population is clearly illustrated by comparison with the traditional biometric method used for such purposes. In the latter it is customary to calculate independently a standard error for each of the possible comparisons of the means of the several samples. The labor involved in this procedure is not its only objection. The chief objection is that in many cases the obtained estimates of standard errors may not differ

^{1/} Palmer O. Johnson, Statistical Methods in Research, Prentice-Hall, Inc., 1949, pp. 93, 94.

beyond merely sampling errors. In such cases it may be concluded that the larger part of the observed differences is attributable to random sampling errors, and that a more accurate as well as a much less complicated analysis would result by pooling the sums of squares of deviations from the different means by applying the combined estimate in the test of significance. This change, introduced by the analysis of variance method serves to provide an exact test of the null hypothesis and hence is used habitually by the modern research worker. Thus the method makes use of the relevant information contained in the data, since it takes into account the sampling distribution of statistics of the same kind."^{1/}

It was felt that a modification or elaboration of this technique could well test the hypothesis for the assignable causes of variation are identifiable, and the chance causes of variation can be restricted.

The ordinary methods of computing analysis of variance with multiple classification are applicable only when the numbers of cases in the subclasses are proportional.^{2/} Because of the fact that in this study there is unequal or disproportionate representation in the subclasses, the ordinary method of analysis of variance is not applicable. Thus, a method described by Patterson^{3/} involving double classification analysis of variance with means adjusted

^{1/} Ibid., pp. 216, 217.

^{2/} James Wert, Charles Neidt and J. Stanley Ahmann, Statistical Methods in Educational and Psychological Research, Appleton-Century-Crofts, Inc., New York, 1954, p. 211.

^{3/} R. E. Patterson, "The Use of Adjusting Factors In The Analysis of Data With Disproportional Subclass Numbers," Journal of the American Statistical Association, 41:334-346, (September, 1946).

for disproportionality among the subclasses was employed in this study as a test of the significance of the differences of the groups. It applies a check-test to the postulated hypothesis of the study.

In the analysis of a set of data, two problems are confronted: one of estimating the variance due to several sources, and the other of testing the significance of these effects producing the variance. That all information at the disposal of the investigator be employed in the analysis, a process of adjusting was accomplished by substituting in the following equation:

$$X_{ij} - \bar{X}_j + \bar{X} = A_{ij}$$

where X_{ij} represents the i th individual in j th row or column; \bar{X}_j represents the mean of j the row or column; \bar{X} represents the grand mean; and A_{ij} represents the adjusted i the individual in j the row or column. Thus, there results:

$$\frac{s (X_{ij} - \bar{X}_j + \bar{X})}{N_j} = \bar{X}$$

However, since this is a type of coding that does not affect the variability within the subclasses, it is necessary only to correct the mean of the subclasses where \bar{X}_{ij} is the mean of the i th subclass in the j th row or column; \bar{X}_j is the mean of the j the row or column; \bar{X} is the grand mean; and \bar{A}_{ij} is the adjusted mean of the i th subclass

in the j th row or column. Thus, the process of adjusting is accomplished by substituting in the following equation:

$$\bar{X}_{ij} - \bar{X}_j + \bar{X} = \bar{A}_{ij}$$

The method is based upon the assumption that the weighted sum of squares of the subclass means that are adjusted for the border mean effects is an efficient estimate of the variance due to interaction. Justification for this assumption is indicated by the fact that the difference between the differences of subclass means for a given classification is unchanged by the adjusting process. It is further demonstrated that if a sufficient number of adjustments are carried out, the results will be the same as those obtained by the method of fitting constants.^{1/} Too, when this method of adjusting is applied to data with unequal subclass numbers, it is possible to obtain a sum of squares for each source of variance that is free of the influence of the other effect.^{2/}

Patterson further states,

"There is no question that the subclass means of a set of data are good estimates of the parameter subclass means, even when the numbers are disproportional. However, when the subclass numbers are disproportional, the differences among the border means are not true estimates of the parameter differences,

1/ Ibid., p. 344.

2/ Ibid., p. 346.

because these differences are determined not only by the effects of that classification, but include also some of the effects that are exhibited in the other classifications. In other words, the main effects are not orthogonal due to disproportional subclass numbers." ^{1/}

Orthogonality, that property of an experimental design which makes possible the direct and separate estimates of each of the several effects, and a basic principle of modern experimental design, is assured by the foregoing method of adjusting for disproportionality among the subclasses.

Reliability has been defined as the degree of consistency with which a test measures whatever it does measure or the degree to which all compensating errors are absent. ^{2/} The attitude inquiry form employed in this study was evolved from a personal interview technique heretofore described. The content gleaned from the initial sample, in effect, was employed to test the expressed attitudes of the selected sample representing the entire city. Whenever a test untried is employed, a reliability estimate is definitely indicated.

The traditional method of determining the reliability of a test is through the use of the product-moment

^{1/} Ibid., pp. 339-341.

^{2/} Op cit., Wert, Neidt and Ahmann, p. 329.

correlation coefficient. Until fairly recently, the only methods available for measuring the so-called reliability of a test were the test-retest method; obtaining the correlation between the scores on equivalent forms of the test; and the split-half method wherein correlation between the odd and even items of the test was obtained.^{1/}

In this instance, reliability refers to a measure based on internal analysis of data obtained on a single trial of a test as a coefficient of internal consistency. The coefficients in this study are determined by a formula developed by Hoyt for estimating the reliability of a test by the method of analysis of variance. The data used in the calculations are the number of correct responses to each item and the score on the test for each individual.^{2/} Essentially a Model II analysis of variance is employed.

"By subtracting the 'among subjects' and the 'among items' sums of squares from the total sums of squares we have left the residual sums of squares which is used as the basis for estimating the discrepancy between the obtained variance and the true variance. This estimate of the discrepancy is a better one than that obtained by dividing the test into odd and even halves because in the latter case the particular split of the test, which is only one of many possible ways of splitting a test, may be an unlucky division and may result in either an over

1/ Op. Cit., Palmer O. Johnson, pp. 125-216.

2/ Op. Cit., Palmer O. Johnson, p. 134.

estimate or an underestimate of the coefficient of reliability." ^{1/}

Thus, the formula:

$$r_{tt} = \frac{s - r}{s}$$

where s represents the mean square for subjects and r represents the mean square of the residuals; or, essentially, the same:

$$r_{tt} = 1 - \frac{s_e^2}{s_s^2}$$

where s_e^2 represents the mean square of residuals and s_s^2 represents the mean square of the subjects.

As an estimate between this test and a hypothetical test, the investigator performed 20 tests according to Hoyt to estimate reliability of each group and each category, in addition to computing an overall reliability estimate for all categories and all subjects. Tabulated results appear in Table 43.

Validity is generally described or defined as the degree to which all kinds of errors, compensating and biased, are absent. ^{2/} Validity also implies that a test measures what it purports to measure. ^{3/}

^{1/} Cyril Hoyt, "Test Reliability Obtained By Analysis of Variance," Psychometrika, Vol. VI, Number 3 (June 1941), p.155.

^{2/} Op. cit., Werdt, Neidt and Ahmann, p. 328.

^{3/} Palmer O. Johnson and Robert W. B. Jackson, Introduction to Statistical Methods, Prentice-Hall, Inc., New York 1953, p. 315.

Validity is generally reported in terms of the predictive effectiveness of a test. For any given test, predictive effectiveness is found by computing the correlation between the scores made on the test and other scores assumed to be true scores. ^{1/} In this study, computation of such a correlation is not possible.

The investigator in this study wishes to infer that the individual possesses some trait or quality presumed to be reflected in the test performance. Thus, it is proposed that face validity exists in that the content of the test samples the class of situations or subject matter about which conclusions are to be drawn by the very method in which the test was constructed. Validity is enhanced by the explicitness of directions for taking the test. Stringent sampling procedures and logical techniques have been employed. Logical validity is in evidence.

Further measures of dispersion have been illustrated among the groups. For comparative purposes, variations have been depicted in Table Number 44 which resulted from computations from the following formulae:

For variance--

$$s^2 = \frac{N(\sum X^2) - (\sum X)^2}{N^2}$$

For Standard Deviation--

$$s = \sqrt{\frac{N (\sum x^2) - (\sum x)^2}{N^2}}$$

For Standard Error of the Mean--

$$s_{\bar{x}} = \frac{s}{\sqrt{N}}$$

For the Mean--

$$\bar{x} = \frac{\sum x}{N}$$

For determination of fiducial limits at one per cent--

$$\bar{x} \pm ts_{\bar{x}} \quad \text{where } t \text{ equals } 2.58 \text{ for more than } 120 \text{ df}$$

For determination of fiducial limits at five per cent--

$$\bar{x} \pm ts_{\bar{x}} \quad \text{where } t \text{ equals } 1.96 \text{ for more than } 120 \text{ df}$$

CHAPTER IV

Results of the Survey

The survey of expressed attitudes encompassed a ten per cent sampling of children and parents (associated with grades four, five, and six in the public elementary schools) of the entire city. The educators were not sampled.

The total number of children involved in the study was 365. Of this number 58 were not used in the analysis as they were selected in arbitrary fashion by the principal, merely to establish a sense of participation. Thus, on the basis of a population of 3,072, a ten per cent sample of 307 children was secured.

Three hundred and sixty-five parents received inquiry forms. Parents forms among the 58 arbitrarily selected children's group were not employed in the analysis. Of the 365 parents involved in the operating plan, there were 314 who responded, a percentage of 86.0 of the total population potential. Of this number, 275 parent forms were usable for analysis, 32 being cast out as not a part of the sample, and 7 being discarded for inaccuracy and incompleteness of response. With a base of 307 parents in the sample, a usable percentage of the sample potential proved to be 89.0.

Of the 272 educators eligible for participation in

this survey, 262 took part. The 10 absentees were not replaced as there was no sampling technique employed in the educator area and it was deemed inadvisable to include substitute teachers in the study. Of the 262 educators, 6 forms were cast out for incompleteness or inaccuracy, thus 256 educators' forms were considered for analysis. Ninety-eight per cent of the participating educators' inquiry forms could be employed in the analysis.

1. Curriculum

In the item analysis, the chi square application described in the preceding chapter was employed, based on frequency of response and dichotomized for analysis. Table 3 indicates the pupil responses to the curriculum category as well as the chi square value and the level of significance. Table 4 indicates parent responses within this category, and Table 5 indicates the educator responses within the curriculum category. It should be remembered that the greater the X^2 value that exists, the greater difference of opinion there is between the high, middle, and lower socio-economic groups. The teachers' socio-economic status is that of the school where they teach, not their personal status.

Table No. 3 Comparison of Responses to Each of Twenty-four Statements of Pupils in the High, Middle and Low Socio-Economic Classification Concerning The Curriculum (N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	High	11	10	12	3	0	36	1.549	< .45
	Middle	65	41	26	39	12	183		
	Low	32	20	12	20	4	88		
	Totals	108	71	50	62	16	307		
2.	High	14	12	4	2	4	36	4.189	< .10
	Middle	109	55	5	9	5	183		
	Low	50	28	3	4	3	88		
	Totals	173	95	12	15	12	307		
3.	High	7	11	4	10	4	36	.251	< .90
	Middle	53	37	28	44	21	183		
	Low	22	21	14	25	6	88		
	Totals	82	69	46	79	31	307		
4.	High	12	14	5	4	1	36	1.276	< .50
	Middle	77	45	28	20	13	183		
	Low	42	20	8	9	9	88		
	Totals	131	79	41	33	23	307		

Table No. 3
(Continued)

Comparison of Responses to Each of Twenty-four
Statements of Pupils in the High, Middle and
Low Socio-Economic Classification Concerning
The Curriculum
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5.	High	7	5	12	10	2	36	1.114	< .60
	Middle	57	21	33	62	10	183		
	Low	24	11	15	31	7	88		
	Totals	88	37	60	103	18	307		
6.	High	16	11	4	1	4	36	1.512	< .45
	Middle	109	42	8	14	10	183		
	Low	46	20	5	10	7	88		
	Totals	171	73	17	25	21	307		
7.	High	12	9	12	2	1	36	6.168	< .05
	Middle	50	41	34	49	9	183		
	Low	16	15	22	28	7	88		
	Totals	78	65	68	79	17	307		
8.	High	12	8	5	10	1	36	3.328	< .15
	Middle	69	49	18	34	13	183		
	Low	44	16	14	7	7	88		
	Totals	126	73	36	51	21	307		

Table No. 3
(Continued)

Comparison of Responses to Each of Twenty-four
Statements of Pupils in the High, Middle and
Low Socio-Economic Classification Concerning
The Curriculum

(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
9.	High	16	6	9	3	2	36	1.078	<	.60
	Middle	69	49	22	29	14	183			
	Low	40	20	11	10	7	88			
	Totals	125	75	42	42	23	307			
10.	High	13	8	6	7	2	36	.306	<	.85
	Middle	61	51	23	33	15	183			
	Low	36	15	11	15	11	88			
	Totals	110	74	40	55	28	307			
11.	High	8	5	9	12	2	36	.905	<	.60
	Middle	41	19	36	75	12	183			
	Low	26	7	18	29	8	88			
	Totals	75	31	63	116	22	307			
12.	High	7	9	9	6	5	36	1.091	<	.60
	Middle	56	33	43	40	11	183			
	Low	28	20	13	21	6	88			
	Totals	91	62	65	67	22	307			

Table No. 3
(Continued)

Comparison of Responses to Each of Twenty-four
Statements of Pupils in the High, Middle and
Low Socio-Economic Classification Concerning
The Curriculum

(N=307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
13.	High	12	7	9	7	1	36	2.177	< .35
	Middle	68	35	25	43	12	183		
	Low	30	11	14	26	7	88		
	Totals	110	53	48	76	20	307		
14.	High	11	8	9	7	1	36	2.146	< .35
	Middle	84	34	29	29	7	183		
	Low	36	14	8	21	9	88		
	Totals	131	56	46	57	17	307		
15.	High	15	3	5	11	2	36	.851	< .65
	Middle	52	35	29	42	25	183		
	Low	25	14	14	27	8	88		
	Totals	92	52	48	80	35	307		
16.	High	21	11	1	2	1	36	.527	< .75
	Middle	104	39	14	14	12	183		
	Low	51	17	5	7	8	88		
	Totals	176	67	20	23	21	307		

Table No. 3
(Continued)

Comparison of Responses to Each of Twenty-four Statements of Pupils in the High, Middle and Low Socio-Economic Classification Concerning the Curriculum

(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
17.	High	14	9	6	6	1	36	2.864	<	.25
	Middle	90	44	14	26	9	183			
	Low	33	24	9	16	6	88			
	Totals	137	77	29	48	16	307			
18.	High	17	13	3	1	2	36	9.124	<	.05*
	Middle	89	45	15	24	10	183			
	Low	39	12	12	17	8	88			
	Totals	145	70	30	42	20	307			
19.	High	20	10	4	2	0	36	4.328	<	.15
	Middle	105	40	8	19	11	183			
	Low	39	19	9	12	9	88			
	Totals	164	69	21	33	20	307			
20.	High	18	13	2	2	1	36	1.548	<	.50
	Middle	101	45	21	10	6	183			
	Low	41	23	13	4	7	88			
	Totals	160	81	36	16	14	307			

*Significant Difference

Table No. 3
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum.

(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
21.	High	13	10	6	3	4	36	5.370	< .10
	Middle	73	57	17	21	15	183		
	Low	35	13	12	16	12	88		
	Totals	121	80	35	40	31	307		
22.	High	16	6	4	5	5	36	2.311	< .35
	Middle	73	52	22	22	14	183		
	Low	34	17	11	17	9	88		
	Totals	123	75	37	44	28	307		
23.	High	10	3	4	16	3	36	1.460	< .50
	Middle	62	40	21	44	16	183		
	Low	36	13	10	21	8	88		
	Totals	108	56	35	81	27	307		
24.	High	20	6	5	3	2	36	6.649	< .05*
	Middle	71	42	23	36	11	183		
	Low	49	21	10	7	1	88		
	Totals	140	69	38	46	14	307		

*Significant Difference

Table No. 4

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum.

(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No - Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
1.	High	6	6	8	10	1	31	.535	<	.80
	Middle	44	18	27	71	3	163			
	Low	15	11	15	35	5	81			
	Totals	65	35	50	116	9	275			
2.	High	12	16	2	0	1	31	.827	<	.70
	Middle	87	50	12	7	7	163			
	Low	42	28	4	6	1	81			
	Totals	141	94	18	13	9	275			
3.	High	12	7	3	3	6	31	.160	<	.95
	Middle	59	49	16	14	25	163			
	Low	35	19	10	7	10	81			
	Totals	106	75	29	24	41	275			
4.	High	16	11	2	1	1	31	1.873	<	.45
	Middle	99	43	9	8	4	163			
	Low	46	26	1	3	5	81			
	Totals	161	80	12	12	10	275			

Table No. 4
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5.	High	9	1	16	4	1	31	.891	< .65
	Middle	37	27	47	45	7	163		
	Low	19	16	26	20	0	81		
	Totals	65	44	89	69	8	275		
6.	High	10	10	4	3	4	31	5.550	< .10
	Middle	93	41	11	9	9	163		
	Low	48	20	3	3	7	81		
	Totals	151	71	18	15	20	275		
7.	High	1	7	15	1	7	31	1.702	< .45
	Middle	18	30	63	19	33	163		
	Low	12	18	23	13	15	81		
	Totals	31	55	101	33	55	275		
8.	High	14	8	2	2	5	31	.505	< .80
	Middle	79	51	12	5	16	163		
	Low	40	22	5	2	12	81		
	Totals	133	81	19	9	33	275		

Table No. 4
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum.

(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
9.	High	10	10	4	4	3	31	.069	< .98
	Middle	59	45	29	13	17	163		
	Low	28	20	15	6	12	81		
	Totals	97	75	48	23	32	275		
10.	High	13	10	2	0	6	31	6.209	< .05
	Middle	49	66	18	17	13	163		
	Low	18	30	15	8	10	81		
	Totals	80	106	35	25	29	275		
11.	High	2	2	12	14	1	31	2.192	< .35
	Middle	21	16	55	52	19	163		
	Low	14	6	28	30	3	81		
	Totals	37	24	95	96	23	275		
12.	High	5	8	10	4	4	31	1.148	< .60
	Middle	32	44	39	14	34	163		
	Low	20	22	18	11	10	81		
	Totals	57	74	67	29	48	275		

Table No. 4
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
13.	High	4	6	8	6	7	31	2.603	< .30
	Middle	39	36	29	25	34	163		
	Low	21	18	14	12	16	81		
	Totals	64	60	51	43	57	275		
14.	High	11	2	8	9	1	31	22.607	< .01 *
	Middle	79	46	12	16	10	163		
	Low	37	24	4	9	7	81		
	Totals	127	72	24	34	18	275		
15.	High	14	13	1	2	1	31	9.760	< .01 *
	Middle	31	63	5	56	8	163		
	Low	20	32	3	22	4	81		
	Totals	65	108	9	80	13	275		
16.	High	11	13	3	0	4	31	1.810	< .45
	Middle	79	40	16	9	19	163		
	Low	38	26	6	2	9	81		
	Totals	128	79	25	11	32	275		

* Significant Difference

Table No. 4
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
17.	High	4	7	7	13	0	31	6.661	< .05 *
	Middle	54	27	34	33	15	163		
	Low	28	18	14	13	8	81		
	Totals	86	52	55	59	23	275		
18.	High	26	5	0	0	0	31	4.023	< .15
	Middle	82	59	8	6	8	163		
	Low	43	22	6	3	7	81		
	Totals	151	86	14	9	15	275		
19.	High	12	5	7	4	3	31	6.793	< .05 *
	Middle	81	43	12	15	12	163		
	Low	38	18	6	7	12	81		
	Totals	131	66	25	26	27	275		
20.	High	15	13	1	1	1	31	.989	< .65
	Middle	67	72	19	1	4	163		
	Low	35	35	3	5	3	81		
	Totals	117	120	23	7	8	275		

*Significant Difference

Table No. 4
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
21.	High	7	10	5	2	7	31	.938	<	.65
	Middle	61	50	24	5	23	163			
	Low	24	27	11	5	14	81			
	Totals	92	87	40	12	44	275			
22.	High	12	13	3	0	3	31	2.483	<	.30
	Middle	73	49	18	10	13	163			
	Low	32	30	7	1	11	81			
	Totals	117	92	28	11	27	275			
23.	High	2	4	3	22	0	31	9.556	<	.01 *
	Middle	42	15	28	54	24	163			
	Low	24	13	11	23	10	81			
	Totals	68	32	42	99	34	275			
24.	High	16	9	4	1	1	31	1.937	<	.50
	Middle	73	58	13	12	7	163			
	Low	40	27	3	4	7	81			
	Totals	129	94	20	17	15	275			

* Significant Difference

Table No. 5 Comparison of Responses to Each of Twenty-four Statements of Educators in the High, Middle and Low Socio-Economic Classification Concerning the Curriculum
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	High	4	5	3	10	8	22	.901	< .65
	Middle	27	24	29	74	5	159		
	Low	12	10	12	39	2	75		
	Totals	43	39	44	123	7	256		
2.	High	10	7	4	1	0	22	5.016	<
	Middle	54	57	18	21	9	159		
	Low	18	26	16	13	2	75		
	Totals	82	90	38	35	11	256		
3.	High	5	10	3	4	0	22	.422	< .85
	Middle	55	56	22	20	6	159		
	Low	19	32	15	8	1	75		
	Totals	79	98	40	32	7	256		
4.	High	14	7	0	0	1	22	6.632	< .05 *
	Middle	91	55	5	6	2	159		
	Low	26	34	8	3	4	75		
	Totals	131	96	13	9	7	256		

* Significant Difference

Table No. 5
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5.	High	5	7	4	5	1	22	.346	< .85
	Middle	52	42	42	18	5	159		
	Low	22	21	27	5	0	75		
	Totals	79	70	73	28	6	256		
6.	High	6	12	2	2	0	22	.497	< .80
	Middle	64	67	9	11	8	159		
	Low	23	34	7	1	10	75		
	Totals	93	113	18	14	18	256		
7.	High	1	2	13	6	0	22	3.614	< .20
	Middle	17	23	82	32	5	159		
	Low	4	8	48	13	2	75		
	Totals	22	33	143	51	7	256		
8.	High	7	11	3	0	1	22	.950	< .65
	Middle	84	50	13	9	3	159		
	Low	30	36	6	1	2	75		
	Totals	121	97	22	10	6	256		

Table No. 5
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum

(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
9.	High	2	9	8	2	1	22	1.816	< .45
	Middle	26	58	45	18	12	159		
	Low	16	28	18	5	8	75		
	Totals	44	95	71	25	21	256		
19.	High	2	15	5	0	0	22	6.517	< .05 *
	Middle	41	51	48	17	2	159		
	Low	20	35	12	8	0	75		
	Totals	63	101	65	25	2	256		
11.	High	4	3	8	6	1	22	6.760	< .05 *
	Middle	42	52	36	24	5	159		
	Low	12	24	21	14	4	75		
	Totals	58	79	65	44	10	256		
12.	High	2	10	9	1	0	22	3.392	< .20
	Middle	42	71	33	12	1	159		
	Low	20	27	21	6	1	75		
	Totals	64	108	63	19	2	256		

*Significant Difference

Table No. 5
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum

(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
13.	High	4	1	6	10	1	22	2.889	<	.25
	Middle	17	44	44	38	16	159			
	Low	6	24	25	14	6	75			
	Totals	27	69	75	62	23	256			
14.	High	4	2	6	5	5	22	.721	<	.70
	Middle	18	29	46	47	19	159			
	Low	8	9	18	26	14	75			
	Totals	30	40	70	78	38	256			
15.	High	9	11	1	0	1	22	2.862	<	.25
	Middle	63	68	7	17	4	159			
	Low	26	30	5	9	5	75			
	Totals	98	109	13	26	10	256			
16.	High	2	5	10	3	2	22	2.171	<	.35
	Middle	20	53	41	32	13	159			
	Low	11	25	16	15	8	75			
	Totals	33	83	67	50	23	256			

Table No. 5
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
17.	High	2	3	6	9	2	22	1.531	< .50
	Middle	8	27	40	71	13	159		
	Low	5	6	33	22	9	75		
	Totals	15	36	79	102	24	256		
18.	High	15	7	0	0	0	22	2.789	< .30
	Middle	99	54	3	2	1	159		
	Low	44	24	3	2	2	75		
	Totals	158	85	6	4	3	256		
19.	High	1	3	5	10	3	22	2.710	< .30
	Middle	11	14	59	62	13	159		
	Low	4	14	17	32	8	75		
	Totals	16	31	81	104	24	256		
20.	High	9	9	4	0	0	22	4.589	< .15
	Middle	75	67	9	7	1	159		
	Low	35	35	2	1	2	75		
	Totals	119	111	15	8	3	256		

Table No. 5
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Eduators in the High, Middle and Low Socio-Economic
Classification Concerning the Curriculum
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
21.	High	6	8	6	1	1	22	2.443	< .30
	Middle	53	63	25	8	10	159		
	Low	18	30	18	3	6	75		
	Totals	77	101	49	12	17	256		
22.	High	0	10	7	1	4	22	1.755	< .45
	Middle	22	43	52	26	16	159		
	Low	17	10	27	15	6	75		
	Totals	39	63	86	42	26	256		
23.	High	0	5	7	8	2	22	.052	< .98
	Middle	11	24	35	76	13	159		
	Low	6	12	18	35	4	75		
	Totals	17	41	60	119	19	256		
24.	High	7	5	3	7	0	22	1.781	< .45
	Middle	37	46	34	31	11	159		
	Low	20	25	16	8	6	75		
	Totals	64	76	53	46	17	256		

From the foregoing tabulated data, a rank order distribution according to chi square value was made for the items within the category. There is also indicated the per cent of N responding to the "No Opinion" column. Table 6 shows the pupil result, Table 7 the parent result, and Table 8, the educator result. For statistical significance at the one per cent level, a chi square value of 9.210 is necessary, and for the five per cent level, a value of 5.991 is necessary with two degrees of freedom.^{1/}

^{1/} Op. Cit., Werdt, Neidt and Ahmann - Table VIII, p. 423.

Table No. 6 Pupil Responses Concerning the Curriculum According To A Rank Order Distribution of Within Group Chi Square Values and the Number of No Opinion Responses by Classification

Statement Number	x ² Value	No Opinion Responses				% of N. N = 307
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
18.	9.124	2	10	8	20	6.5
24.	6.649	2	11	1	14	4.6
7.	6.168	1	9	7	17	5.5
21.	5.370	4	15	12	31	10.0
19.	4.328	0	11	9	20	6.5
2.	4.189	4	5	3	12	3.9
8.	3.328	1	13	7	21	6.8
17.	2.864	1	9	6	16	5.2
22.	2.311	5	14	9	28	9.1
13.	2.177	1	12	7	20	6.5
14.	2.146	1	7	9	17	5.5
1.	1.549	0	12	4	16	5.2
20.	1.548	1	6	7	14	4.6
6.	1.512	4	10	7	21	6.8
23.	1.460	3	16	8	27	8.8
4.	1.276	1	13	9	23	7.5
5.	1.114	2	10	7	19	6.2
12.	1.091	5	11	6	22	7.2
9.	1.078	2	14	7	23	7.5
11.	.905	2	12	8	22	7.2
15.	.851	2	25	8	35	11.4
16.	.527	1	12	8	21	6.8
10.	.306	2	15	11	28	9.1
3.	.251	4	21	6	31	10.0

Table No. 7 Parent Responses Concerning the Curriculum According To A Rank Order Distribution of Within Group Chi Square Values and the Number of No Opinion Responses by Classification

Statement Number	χ^2 Value	No Opinion Responses				% of N. N = 275
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
14.	22.607	1	10	7	18	6.5
15.	9.760	1	8	4	13	4.7
23.	9.556	0	24	10	34	12.4
19.	6.793	3	12	12	27	9.8
17.	6.661	0	15	8	23	8.4
10.	6.209	6	13	10	29	10.5
6.	5.550	4	9	7	20	7.3
18.	4.028	0	8	7	15	5.5
13.	2.603	7	34	16	57	20.7
22.	2.483	3	13	11	27	9.8
11.	2.192	1	19	8	23	8.4
24.	1.937	1	7	7	15	5.5
4.	1.873	1	4	5	10	3.6
16.	1.810	4	19	9	32	11.6
7.	1.702	7	33	15	55	20.0
12.	1.148	4	34	10	48	17.5
20.	.989	1	4	3	8	2.9
21.	.938	7	23	14	44	16.0
5.	.891	1	7	0	8	2.9
2.	.827	1	7	1	9	3.3
1.	.535	1	3	5	9	3.3
8.	.505	5	16	12	33	12.0
3.	.160	6	25	10	41	14.9
9.	.069	3	17	12	32	11.6

Table No. 8 Educator Responses Concerning The Curriculum According To A Rank Order Distribution of Within Group Chi Square Values and The Number of No Opinion Responses By Classification

Statement Number	χ^2 Value	No Opinion Responses				% of N. N = 256
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
11.	6.760	1	5	4	10	3.9
4.	6.632	1	2	4	7	2.7
10.	6.517	0	2	0	2	0.8
2.	5.016	0	9	2	11	4.3
20.	4.589	0	1	2	3	1.2
7.	3.614	0	5	2	7	2.7
12.	3.392	0	1	1	2	0.8
13.	2.889	1	16	6	23	9.0
15.	2.862	1	4	5	10	3.9
18.	2.789	0	1	2	3	1.2
19.	2.710	3	13	8	24	9.4
21.	2.443	1	10	6	17	6.6
16.	2.171	2	13	8	23	9.0
9.	1.816	1	12	8	21	8.2
24.	1.781	0	11	6	17	6.6
22.	1.755	4	16	6	26	10.2
17.	1.531	2	13	9	24	9.4
8.	.950	1	3	2	6	2.3
1.	.901	0	5	2	7	2.7
14.	.721	5	19	14	38	14.8
6.	.497	0	8	10	18	7.0
3.	.422	0	6	1	7	2.7
5.	.346	1	5	0	6	2.3
23.	.052	2	13	4	19	7.4

The observed scores may not point to great differences, however, the fact that a chi square computation is based on theoretical as well as observed scores produces the significance of difference factor within the group.

A comparison of pupil, parent, and educator response reveals that of the 24 items in the curriculum category, pupils results indicate no significance of difference at the one per cent level; the parent results indicate that statements 14, 15, and 23 assume significance at the one per cent level.

<u>Parents</u>	<u>Agreement</u>	<u>Disagreement</u>
14. All elementary schools should include grades one through eight.	199	58
15. The children should not have to go to school in shifts.	173	89
23. Religion should be taught in the public school.	100	141

At the five per cent level of significance, pupil results showed that statements 7, 18, and 24 were involved; parent results showed statements 10, 17, and 19 to be significant; and educator results indicate five per cent level of significance for statements 4, 10, and 11.

<u>Pupils</u>	<u>Agreement</u>	<u>Disagreement</u>
7. The stories in the reading program don't seem to be very interesting to the children.	143	147
18. Some of the classes are too large for good teaching to take place	215	72
24. Geography and history should be taught as separate subjects.	209	84

<u>Parents</u>	<u>Agreement</u>	<u>Disagreement</u>
10. The slow learner doesn't get enough attention.	186	60
17. They should have planned activities for the children after school hours.	138	114
19. There should be a hot lunch program at school	197	51

<u>Educators</u>	<u>Agreement</u>	<u>Disagreement</u>
4. There should be a physical education program in all the elementary schools.	227	22
10. The slow learner doesn't get enough attention	164	90
11. The children have too many subjects in school.	137	109

Significance of difference is determined from internal differences in opinions expressed among classifications within groups, and may be noted in tables 3, 4, and 5.

The highest percentage of 'No Opinion' response for the pupils in this category concerned statements 3, 15 and 21; for the parents, statements 3, 7, 8, 9, 10, 12, 13, 16, 21, and 23 were involved; and for the educator group, statements 14 and 22.

<u>Pupils</u>	<u>% of N</u>
3. More time should be spent on spelling.	10.0
15. The children should not have to go to school in shifts.	11.4
21. The supervisors could be a lot more helpful.	10.0
<u>Parents</u>	
3. More time should be spent on spelling.	14.9
7. The stories in the reading program don't seem to be very interesting to the children.	20.0
8. They should spend more time on the 'sounding out' of words in school today.	12.0
9. The arithmetic program at school could be much improved.	11.6
10. The slow learner doesn't get enough attention.	10.5
12. They don't spend enough time on the three 'R's" in the schools today.	17.5
13. They should spend more time on science.	20.7
16. They should have a better sports program for the children at school.	11.6
21. The supervisors could be a lot more helpful.	16.0
23. Religion should be taught in the public schools.	12.4
<u>Educators</u>	
14. All elementary schools should include grades one through eight.	14.8
22. They could be more 'up to date' in Fall River.	10.2

In this study, tenable or untenable implication with regard to the hypothesis lies preferably at the one per cent level of significance. For comparative purposes, both one and five per cent levels are indicated.

The following tables show a comparison of within group chi square values between pupils, parents and educators concerning the curriculum category. It is interesting to note that the items showing greatest disagreement among upper, middle, and lower socio-economic classes within the pupil group may not be the same within the parent or educator groups.

Table No. 9 Comparison of Within Group Chi Square Values Between Pupils and Parents for Statements Concerning the Curriculum

Statement Number	X ² Value Pupil	X ² Value Parent	Differential
(1)	(2)	(3)	(4)
1.	1.549	.535	1.014
2.	4.189	.827	3.362
3.	.251	.160	.091
4.	1.276	1.873	.597
5.	1.114	.891	.223
6.	1.512	5.550	4.038
7.	6.168	1.702	4.466
8.	3.328	.505	2.823
9.	1.078	.069	1.009
10.	.306	6.209	5.903
11.	.905	2.192	1.287
12.	1.091	1.148	.057
13.	2.177	2.603	.426
14.	2.146	22.607	20.461
15.	.851	9.760	8.909
16.	.527	1.810	1.283
17.	2.864	6.661	3.797
18.	9.124	4.023	5.101
19.	4.328	6.793	2.465
20.	1.548	.989	.559
21.	5.370	.938	4.432
22.	2.311	2.483	.172
23.	1.460	9.556	8.096
24.	6.649	1.937	4.712

Table No. 10 Comparison of Within Group Chi Square Values Between Pupils and Educators for Statements Concerning the Curriculum

Statement Number	X ² Value Pupil	X ² Value Educator	Differential
(1)	(2)	(3)	(4)
1.	1.549	.901	.648
2.	4.189	5.016	.827
3.	.251	.422	.171
4.	1.276	6.632	5.356
5.	1.114	.346	.768
6.	1.512	.497	1.015
7.	6.168	3.614	2.554
8.	3.328	.950	2.378
9.	1.078	1.816	.738
10.	.306	6.517	6.211
11.	.905	6.760	5.855
12.	1.091	3.392	2.301
13.	2.177	2.889	.712
14.	2.146	.721	1.425
15.	.851	2.86	2.011
16.	.527	2.171	1.644
17.	2.864	1.531	1.333
18.	9.124	2.789	6.335
19.	4.328	2.710	1.618
20.	1.548	4.589	3.041
21.	5.370	2.443	2.927
22.	2.311	1.755	.556
23.	1.460	.052	1.408
24.	6.649	1.781	4.868

Table No. 11 Comparison of Within Group Chi Square Values Between Parents and Educators for Statements Concerning the Curriculum

Statement Number	X ² Value Parent	X ² Value Educator	Differential
(1)	(2)	(3)	(4)
1.	.535	.901	.366
2.	.827	5.016	4.189
3.	.160	.422	.262
4.	1.873	6.632	4.759
5.	.891	.346	.545
6.	5.550	.497	5.053
7.	1.702	3.614	1.912
8.	.505	.950	.445
9.	.069	1.816	1.747
10.	6.209	6.517	.308
11.	2.192	6.760	4.568
12.	1.148	3.392	2.244
13.	2.603	2.889	.286
14.	22.607	.721	21.886
15.	9.760	2.862	6.898
16.	1.810	2.171	.361
17.	6.661	1.531	5.130
18.	4.023	2.789	1.234
19.	6.793	2.710	4.083
20.	.989	4.589	3.600
21.	.938	2.443	1.505
22.	2.483	1.755	.728
23.	9.556	.052	9.504
24.	1.937	1.781	.156

The largest chi square differential between pupils and parents occurs on the following statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Pupil - Parent</u>	<u>Pupil - Parent</u>	<u>Pupil - Parent</u>	<u>Pupil - Parent</u>
14. All elementary schools should include grades one through eight.	187	199	103	58
15. The children should not have to go to school in shifts.	144	173	128	89
18. Some of the classes are too large for good teaching to take place.	215	237	72	23
23. Religion should be taught in the public school	164	100	116	141

The largest chi square differential between pupils and educators occurs on the following statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Pupil - Educator</u>	<u>Pupil - Educator</u>	<u>Pupil - Educator</u>	<u>Pupil - Educator</u>
4. There should be a physical education program in all the elementary schools.	210	227	74	22
10. The slow learner doesn't get enough attention.	184	164	95	90
11. The children have too many subjects in school.	106	137	179	109
18. Some of the classes are too large for good teaching to take place.	215	243	72	10

The largest chi square differential between parents and educators occurs on the following statements:

	<u>Agreement</u> <u>Parents-Educators</u>		<u>Disagreement</u> <u>Parents-Educators</u>	
14. All elementary schools should include grades one through eight.	199	70	58	148
15. The children should not have to go to school in shifts	173	207	89	39
23. Religion should be taught in the public school.	100	58	141	179

2. Teaching Methods

With regard to the teaching methods category, tables 12, 13 and 14 indicate the pupil, parent and educator responses to each item and depict chi square value and level of significance of statements numbered 25 through 48.

Table No. 12

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods

(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
25.	High	22	11	1	2	0	36	1.585	< .50
	Middle	118	41	7	9	8	183		
	Low	55	26	2	2	3	88		
	Totals	195	78	10	13	11	307		
26.	High	3	8	7	14	4	36	6.955	< .05 *
	Middle	71	33	21	52	6	183		
	Low	37	15	12	24	0	88		
	Totals	111	56	40	90	10	307		
27.	High	0	3	10	18	5	36	5.296	< .10
	Middle	27	21	36	93	6	183		
	Low	15	11	15	44	3	88		
	Totals	42	35	61	155	14	307		
28.	High	10	14	4	5	3	36	1.539	< .50
	Middle	68	35	28	40	12	183		
	Low	30	18	14	19	7	88		
	Totals	108	67	46	64	22	307		

*Significant Difference

Table No. 1-2
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
29.	High	2	3	7	18	6	36	4.624	<	.10
	Middle	46	14	33	80	10	183			
	Low	17	13	18	31	9	88			
	Totals	65	30	58	129	25	307			
30.	High	13	12	6	3	2	36	.406	<	.85
	Middle	71	44	17	34	17	183			
	Low	33	21	11	15	8	88			
	Totals	117	77	34	52	27	307			
31.	High	15	7	3	6	5	36	5.558	<	.10
	Middle	65	35	14	58	11	183			
	Low	26	15	6	39	2	88			
	Totals	106	57	23	103	18	307			
32.	High	2	4	13	15	2	36	10.322	<	.01 *
	Middle	56	25	22	71	9	183			
	Low	26	13	14	30	5	88			
	Totals	84	42	49	116	16	307			

*Significant Difference

Table No. 12
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
33.	High	14	9	6	6	1	36	1.305	<	.55
	Middle	79	48	18	31	7	183			
	Low	34	29	7	13	5	88			
	Totals	127	86	31	50	13	307			
34.	High	16	12	6	0	2	36	.361	<	.85
	Middle	91	43	16	21	12	183			
	Low	38	27	3	16	4	88			
	Totals	145	82	25	37	18	307			
35.	High	8	5	5	14	4	36	3.408	<	.20
	Middle	61	38	29	48	7	183			
	Low	33	18	11	24	2	88			
	Totals	102	61	45	86	13	307			
36.	High	7	6	8	13	2	36	4.099	<	.15
	Middle	61	34	32	47	9	183			
	Low	36	12	14	20	6	88			
	Totals	104	52	54	80	17	307			

Table No. 12
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
37.	High	23	8	3	1	1	36	.640	< .75
	Middle	111	46	6	15	5	183		
	Low	47	26	6	7	2	88		
	Totals	181	80	15	23	8	307		
38.	High	10	6	5	12	3	36	.286	< .90
	Middle	49	37	31	50	16	183		
	Low	29	11	20	23	5	88		
	Totals	88	54	56	85	24	307		
39.	High	9	14	5	6	2	36	.983	< .65
	Middle	71	48	25	28	11	183		
	Low	41	21	13	8	5	88		
	Totals	121	83	43	42	18	307		
40.	High	19	10	1	3	3	36	5.919	< .05 *
	Middle	83	53	13	24	10	183		
	Low	45	11	10	16	6	88		
	Totals	147	74	24	43	19	307		

*Significant Difference

Table No. 12
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
41.	High	5	14	9	6	2	36	1.199	< .60
	Middle	39	41	34	58	11	183		
	Low	23	14	13	32	6	88		
	Totals	67	69	56	96	19	307		
42.	High	17	13	2	2	2	36	4.221	< .15
	Middle	97	57	10	11	8	183		
	Low	43	19	4	13	9	88		
	Totals	157	89	16	26	19	307		
43.	High	5	5	10	12	4	36	6.639	< .05 *
	Middle	58	25	48	38	14	183		
	Low	33	14	17	17	7	88		
	Totals	96	44	75	67	25	307		
44.	High	19	8	5	0	4	36	5.524	< .10
	Middle	84	40	27	22	10	183		
	Low	34	18	15	16	5	88		
	Totals	137	66	47	38	19	307		

*Significant Difference

Table No. 12
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
45.	High	1	4	10	20	1	36	4.773	< .10
	Middle	34	16	41	82	10	183		
	Low	20	9	20	36	3	88		
	Totals	55	29	71	138	14	307		
46.	High	14	7	5	4	6	36	.064	< .98
	Middle	81	34	14	40	14	183		
	Low	37	19	9	18	5	88		
	Totals	132	60	28	62	25	307		
47.	High	15	12	6	0	3	36	.254	< .90
	Middle	86	47	16	19	15	183		
	Low	48	18	7	12	3	88		
	Totals	149	77	29	31	21	307		
48.	High	17	14	1	3	1	36	1.072	< .60
	Middle	105	36	6	25	11	183		
	Low	48	20	7	9	4	88		
	Totals	170	70	14	37	16	307		

Table No. 13 Comparison of Responses to Each of Twenty-four Statements of Parents in the High, Middle and Low Socio-Economic Classification Concerning the Teaching Methods
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
25.	High	14	13	0	1	3	31	.254	< .90
	Middle	82	60	7	2	12	163		
	Low	40	28	2	2	9	81		
	Totals	136	101	9	5	24	275		
26.	High	3	9	8	10	1	31	.312	< .90
	Middle	34	37	29	56	7	163		
	Low	21	14	16	27	3	81		
	Totals	58	60	53	93	11	275		
27.	High	0	4	10	13	4	31	7.673	< .05 *
	Middle	27	21	38	38	39	163		
	Low	9	15	14	14	29	81		
	Totals	36	40	62	65	72	275		
28.	High	6	12	3	3	7	31	.202	< .95
	Middle	48	56	25	18	16	163		
	Low	28	24	18	2	9	81		
	Totals	82	92	46	23	32	275		

*Significant Difference

Table No. 13
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
29.	High	2	5	12	10	2	31	.596	<	.75
	Middle	18	16	60	49	20	163			
	Low	8	12	28	22	11	81			
	Totals	28	33	100	81	33	275			
30.	High	6	16	2	2	5	31	1.023	<	.65
	Middle	52	68	7	6	30	163			
	Low	28	30	0	9	14	81			
	Totals	86	114	9	17	49	275			
31.	High	9	14	3	2	3	31	3.484	<	.20
	Middle	35	67	18	32	11	163			
	Low	18	37	4	14	8	81			
	Totals	62	118	25	48	22	275			
32.	High	6	5	9	7	4	31	3.700	<	.20
	Middle	34	31	42	36	20	163			
	Low	19	20	13	15	14	81			
	Totals	59	56	64	58	38	275			

Table No. 13
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
33.	High	13	10	1	2	5	31	.224	< .90
	Middle	56	61	10	9	27	163		
	Low	29	30	5	3	14	81		
	Totals	98	101	16	14	46	275		
34.	High	9	13	4	1	4	31	.505	< .80
	Middle	58	48	16	16	25	163		
	Low	26	21	5	11	18	81		
	Totals	93	82	25	28	47	275		
35.	High	5	9	6	10	1	31	10.216	< .01 *
	Middle	63	46	17	29	8	163		
	Low	33	25	8	8	7	81		
	Totals	101	80	31	47	16	275		
36.	High	2	6	15	5	3	31	1.632	< .50
	Middle	20	31	56	23	33	163		
	Low	9	15	27	5	25	81		
	Totals	31	52	98	33	61	275		

* Significant Difference

Table No. 13
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
37.	High	15	16	31	3	4	31	.674	< .75
	Middle	60	58	19	8	18	163		
	Low	32	21	13	3	12	81		
	Totals	97	95	35	14	34	275		
38.	High	4	9	14	3	1	31	.879	< .70
	Middle	29	51	59	14	10	163		
	Low	14	26	29	7	5	81		
	Totals	47	86	102	24	16	275		
39.	High	12	7	5	1	6	31	1.789	< .45
	Middle	53	66	14	7	23	163		
	Low	28	33	6	3	11	81		
	Totals	93	106	25	11	40	275		
40.	High	8	9	6	2	6	31	2.647	< .30
	Middle	54	48	16	6	39	163		
	Low	18	33	10	4	16	81		
	Totals	80	90	32	12	61	275		

Table No. 13
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods.
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
41.	High	8	7	9	3	4	31	.726	< .70
	Middle	28	57	39	19	20	163		
	Low	14	34	16	11	6	81		
	Totals	50	98	64	33	30	275		
42.	High	19	12	0	0	0	31	3.111	< .25
	Middle	78	69	8	6	2	163		
	Low	43	31	4	1	2	81		
	Totals	140	112	12	7	4	275		
43.	High	0	2	20	7	2	31	8.316	< .05 *
	Middle	26	18	90	13	16	163		
	Low	14	12	40	8	7	81		
	Totals	40	32	150	28	25	275		
44.	High	21	10	0	0	0	31	7.052	< .05 *
	Middle	79	62	10	5	7	163		
	Low	33	31	10	3	4	81		
	Totals	133	103	20	8	11	275		

*Significant Difference

Table No. 13
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
45.	High	1	3	17	3	7	31	1.542	< .50
	Middle	10	13	74	38	28	163		
	Low	6	11	31	23	10	81		
	Totals	17	27	122	64	45	275		
46.	High	11	7	4	5	4	31	2.482	< .30
	Middle	64	41	21	16	21	163		
	Low	31	25	7	6	12	81		
	Totals	106	73	32	27	37	275		
47.	High	3	7	3	1	17	31	.469	< .80
	Middle	45	50	18	7	43	163		
	Low	18	26	10	3	24	81		
	Totals	66	83	31	11	84	275		
48.	High	7	9	1	1	13	31	3.827	< .20
	Middle	63	64	8	3	25	163		
	Low	28	25	7	4	17	81		
	Totals	98	98	16	8	55	275		

Table No. 14 Comparison of Responses to Each of Twenty-four Statements of Educators in the High, Middle and Low Socio-Economic Classification Concerning the Teaching Methods
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
25.	High	6	10	2	3	1	22	3.564	< .20
	Middle	21	68	39	23	8	159		
	Low	8	40	11	11	5	75		
	Totals	35	118	52	37	14	256		
26.	High	5	6	6	3	2	22	1.948	< .40
	Middle	33	75	22	24	5	159		
	Low	19	30	6	15	5	75		
	Totals	57	111	34	42	12	256		
27.	High	5	4	10	3	0	22	3.374	< .20
	Middle	29	43	49	38	0	159		
	Low	16	7	31	17	4	75		
	Totals	50	54	90	58	4	256		
28.	High	1	3	12	6	0	22	.659	< .75
	Middle	12	17	70	52	8	159		
	Low	3	14	29	26	3	75		
	Totals	16	34	111	84	11	256		

Table No. 14 Comparison of Responses to Each of Twenty-four Statements of Educators in the High, Middle and Low Socio-Economic Classification Concerning the Teaching Methods (N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
29.	High	0	3	9	9	1	22	2.205	< .35
	Middle	17	20	66	47	9	159		
	Low	10	11	30	19	5	75		
	Totals	27	34	105	75	15	256		
30.	High	4	12	1	0	5	22	3.088	< .25
	Middle	32	67	17	15	28	159		
	Low	19	26	7	8	15	75		
	Totals	55	105	25	23	48	256		
31.	High	0	8	3	4	7	22	.631	< .75
	Middle	24	56	37	21	21	159		
	Low	16	26	15	10	8	75		
	Totals	40	90	55	35	36	256		
32.	High	5	12	3	0	2	22	2.618	< .30
	Middle	39	68	30	16	6	159		
	Low	24	31	11	6	3	75		
	Totals	68	111	44	22	11	256		

Table No. 14
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
33.	High	4	14	3	1	0	22	.756	< .70
	Middle	41	81	9	7	21	159		
	Low	27	30	6	2	10	75		
	Totals	72	125	18	10	31	256		
34.	High	4	6	6	3	3	22	1.932	< .40
	Middle	27	66	26	18	22	159		
	Low	16	26	17	8	8	75		
	Totals	47	98	49	29	33	256		
35.	High	5	6	3	5	3	22	.283	< .90
	Middle	29	49	36	37	8	159		
	Low	9	28	13	22	3	75		
	Totals	43	83	52	64	14	256		
36.	High	1	0	16	4	1	22	3.214	< .20
	Middle	11	19	85	26	18	159		
	Low	6	9	46	13	1	75		
	Totals	18	28	147	43	20	256		

Table No. 14
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the Teaching Methods
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
37.	High	5	6	5	4	2	22	.043	<	.98
	Middle	20	63	40	22	14	159			
	Low	8	34	18	13	2	75			
	Totals	33	103	63	39	18	256			
38.	High	4	10	6	2	0	22	.160	<	.95
	Middle	29	61	47	14	8	159			
	Low	21	22	26	4	2	75			
	Totals	54	93	79	20	10	256			
39.	High	5	12	1	3	1	22	13.986	<	.01 *
	Middle	63	78	10	3	5	159			
	Low	26	28	13	7	1	75			
	Totals	94	118	24	13	7	256			
40.	High	5	6	6	4	1	22	3.641	<	.20
	Middle	26	53	40	21	19	159			
	Low	21	28	10	12	4	75			
	Totals	52	87	56	37	24	256			

*Significant Difference

Table No. 14 Comparison of Responses to Each of Twenty-four Statements of Educators in the High, Middle and Low Socio-Economic Classification Concerning the Teaching Methods
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
41.	High	3	6	5	6	2	22	.926	<	.65
	Middle	17	43	66	23	10	159			
	Low	14	18	26	10	7	75			
	Totals	34	67	97	39	19	256			
42.	High	13	8	0	0	1	22	.462	<	.80
	Middle	92	64	2	1	0	159			
	Low	44	30	1	0	0	75			
	Totals	149	102	3	1	1	256			
43.	High	1	2	14	5	0	22	.154	<	.95
	Middle	5	18	106	27	3	159			
	Low	6	6	46	15	2	75			
	Totals	12	26	166	47	5	256			
44.	High	15	7	0	0	0	22	2.099	<	.40
	Middle	92	62	2	2	1	159			
	Low	46	25	3	1	0	75			
	Totals	153	94	5	3	1	256			

Table No. 14
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio Economic
Classification Concerning the Teaching Methods

(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
45.	High	4	3	5	9	1	22	7.999	< .05 *
	Middle	21	25	68	32	13	159		
	Low	6	4	35	26	4	75		
	Totals	31	32	108	67	18	256		
46.	High	5	6	4	4	3	22	4.956	< .10
	Middle	61	50	14	22	12	159		
	Low	24	21	9	17	4	75		
	Totals	90	77	27	43	19	256		
47.	High	5	8	6	0	3	22	.071	< .98
	Middle	45	51	37	12	14	159		
	Low	18	27	16	8	6	75		
	Totals	68	86	59	20	23	256		
48.	High	10	7	3	0	2	22	.005	< .99
	Middle	45	73	12	8	21	159		
	Low	15	37	4	5	14	75		
	Totals	70	117	19	13	37	256		

*Significant Difference

Again, a rank order distribution follows according to chi square value for items within the teaching methods category. Tables 15, 16 and 17 indicate the pupil, parent, and educator results according to this distribution for these items.

Table No. 15 Pupil Responses According to a Rank Order of Chi Square Values, and the Number of No Opinion Responses by Classification Concerning Teaching Methods

Statement Number	χ^2 Value	No Opinion Responses				% of N. n = 307
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
32.	10.322	2	9	5	16	5.2
26.	6.955	4	6	0	10	3.3
43.	6.639	4	14	7	25	8.1
40.	5.919	3	10	6	19	6.2
31.	5.558	5	11	2	18	5.9
44.	5.524	4	10	5	19	6.2
27.	5.296	5	6	3	14	4.6
45.	4.773	1	10	3	14	4.6
29.	4.624	6	10	9	25	8.1
42.	4.221	2	8	9	19	6.2
36.	4.099	2	9	6	17	5.5
35.	3.408	4	7	2	13	4.2
25.	1.585	0	8	3	11	3.6
28.	1.539	3	12	7	22	7.2
33.	1.305	1.	7	5	13	4.2
41.	1.199	2	11	6	19	6.2
48.	1.072	1	11	4	16	5.2
39.	.983	2	11	5	18	5.9
37.	.640	1	5	2	8	2.6
30.	.406	6	10	9	25	8.1
34.	.361	2	12	4	18	5.9
38.	.286	3	16	5	24	7.8
47.	.254	3	15	3	21	6.8
46.	.064	6	14	5	25	8.1

Table No. 16 Parent Responses According to a Rank Order of Chi Square Values, and the Number of No Opinion Responses by Classification Concerning Teaching Methods

Statement Number	χ^2 Value	No Opinion Responses				% of N. N = 275
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
35.	10.216	1	8	7	16	5.8
43.	8.316	2	16	7	25	9.1
27.	7.673	4	39	29	72	26.2
44.	7.052	0	7	4	11	4.0
48.	3.827	13	25	17	55	20.0
32.	3.700	4	20	14	38	12.8
31.	3.484	3	11	8	22	8.0
42.	3.111	0	2	2	4	1.5
40.	2.647	6	39	16	61	22.2
46.	2.482	4	21	12	37	13.5
39.	1.789	6	23	11	40	14.5
36.	1.632	3	33	25	61	22.2
45.	1.542	7	28	10	45	16.4
30.	1.023	5	30	14	49	17.8
38.	.879	1	10	5	16	5.8
41.	.726	4	20	6	30	10.9
37.	.674	4	18	12	34	12.4
29.	.596	2	20	11	33	12.0
34.	.505	4	25	18	47	17.1
47.	.469	17	43	24	84	30.5
26.	.312	1	7	3	11	4.0
25.	.254	3	12	9	24	8.7
33.	.224	5	27	14	46	16.7
28.	.202	7	16	9	32	11.6

Table No. 17 Educator Responses According to a Rank Order of Chi Square Values, and the Number of No Opinion Responses by Classification Concerning Teaching Methods

Statement Number	χ^2 Value	No Opinion Responses				% of N. N = 256
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
39.	13.986	1	5	1	7	2.7
45.	7.999	1	13	4	18	7.0
46.	4.956	3	12	4	19	7.4
40.	3.641	1	19	4	24	9.4
25.	3.564	1	8	5	14	5.5
27.	3.374	0	0	4	4	1.6
36.	3.214	1	18	1	20	7.8
30.	3.088	5	28	15	48	18.8
32.	2.618	2	6	3	11	4.3
29.	2.205	1	9	5	15	5.9
44.	2.099	0	1	0	1	0.4
26.	1.948	2	5	5	12	4.7
34.	1.932	3	22	8	33	12.9
41.	.926	2	10	7	19	7.4
33.	.756	0	21	10	31	12.1
28.	.659	0	8	3	11	4.3
31.	.631	7	21	8	36	14.1
42.	.462	1	0	0	1	0.4
35.	.283	3	8	3	14	5.5
38.	.160	0	8	2	10	3.9
43.	.154	0	3	2	5	2.0
47.	.071	3	14	6	23	9.0
37.	.043	2	14	2	18	7.0
48.	.005	2	21	14	37	14.5

A comparison of chi square values among pupil, parent and educator responses for the 24 items in the teaching methods category reveal that for the pupils, statement number 32 assumes significance of difference at the one per cent level; for the parents, statement number 35 assumes significance at the one per cent level; and for the educator group, statement number 39 is significant at the one per cent level.

<u>Pupils</u>	<u>Agreement</u>	<u>Disagreement</u>
32. The teachers should be more strict with the children.	126	165
<u>Parents</u>		
35. They should give homework in the elementary school.	181	78
<u>Educators</u>		
39. They should have more time for drill in all school subjects.	212	37

At the five per cent level of significance, pupil results showed that statements 26 and 43 were involved; parent results indicated 27, 43, and 44 were significant; and educator results indicate that statement number 45 was significant.

<u>Pupils</u>	<u>Agreement</u>	<u>Disagreement</u>
26. Some teachers use children to teach other children. I like this idea.	167	130
43. I don't think workbooks help the children.	140	142
<u>Parents</u>		
27. There is too much stress on audio-visual materials in the schools today.	76	127
43. I don't think workbooks help the children.	72	178
44. Some of the classes are too large for the teachers to teach the children properly.	236	28
<u>Educators</u>		
45. They spend too much time showing pictures to the children in school today.	63	175

The highest percentage of no opinion responses for the pupils in this category was 0.081 and concerned statements 29, 30, 43 and 46; for the parents, statement number 27 showed 26.2, statements 36 and 40 showed 22.2, statement number 47 showed 30.5 and statement 48 showed 20.0, statement number 30, 17.8, number 34, 17.1, number 33, 16.7, number 45 16.4, number 39, 14.5, number 32, 13.8, number 46, 12.5, number 37, 12.4, number 29, 12.0, number 28, 11.6, number 41, 10.9; and for the educators, statement number 30, 18.8, number 48, 14.5, number 31, 14.1, number 34, 12.9, and number 33, 12.1.

<u>Pupils</u>	<u>% of N.</u>
29. The old methods of teaching were better than the new ways they use today.	8.1
30. They should have group work in the fourth, fifth and sixth grades in all schools.	8.1
43. I don't think workbooks help the children.	8.1
46. They should lower the retirement age for teachers.	8.1
<u>Parents</u>	
27. There is too much stress on the audio-visual materials in the schools today.	26.2
28. The children have too much written work and not enough explanation.	11.6
29. The old ways of teaching were better than the new ways they use today.	12.0
30. They should have group work in the fourth, fifth and sixth grades in all schools.	17.8
32. The teachers should be more strict with the children.	13.8
33. I would like to see some group work done in arithmetic.	16.7
34. They should have more science experiments in class for the children.	17.1
36. The schools are not catering to the needs of the children.	22.2
37. The teachers should take the children on more field trips.	12.4
39. They should have more time for drill in all school subjects.	14.5

<u>Parents (Continued)</u>	<u>% of N.</u>
41. Printing is no way to teach writing.	10.9
45. They spend too much time showing pictures to the children.	16.4
46. They should lower the retirement age for teachers.	13.5
48. They could use more large maps in school.	20.0
47. The time of day they have for certain subjects could be changed for the better.	30.5

Educators

30. They should have group work in the fourth, fifth and sixth grades in all the schools.	18.8
31. They should not use old-fashioned pens in writing lessons.	14.1
33. I would like to see some group work done in arithmetic.	12.1
34. They should have more science experiments in class for the children.	12.9
48. They could use more large maps in school.	14.5

The following tables show a comparison of within group chi square values between pupils, parents, and educators concerning this category.

Table No. 18 Comparison of Within Group Chi Square Values Between Pupils and Parents for Statements Concerning the Teaching Methods

Statement Number	χ^2 Value Pupil	χ^2 Value Parent	Differential
(1)	(2)	(3)	(4)
25.	1.585	.254	1.331
26.	6.955	.312	6.643
27.	5.296	7.673	2.377
28.	1.539	.202	1.337
29.	4.624	.596	4.028
30.	.406	1.023	.617
31.	5.558	3.484	2.074
32.	10.322	3.700	6.622
33.	1.305	.224	1.081
34.	.361	.505	.144
35.	3.408	10.216	6.808
36.	4.099	1.632	2.467
37.	.640	.674	.034
38.	.286	.879	.593
39.	.983	1.789	.806
40.	5.919	2.647	3.272
41.	1.199	.726	.473
42.	4.221	3.111	1.110
43.	6.639	8.316	1.677
44.	5.524	7.052	1.528
45.	4.773	1.542	3.231
46.	.064	2.482	2.418
47.	.254	.469	.215
48.	1.072	3.827	2.755

Table No. 19 Comparison of Within Group Chi Square Values Between Pupils and Educators for Statements Concerning the Teaching Methods

Statement Number	X ² Value Pupil	X ² Value Educator	Differential
(1)	(2)	(3)	(4)
25.	1.585	3.564	1.979
26.	6.955	1.948	5.007
27.	5.296	3.374	1.922
28.	1.539	.659	.880
29.	4.624	2.205	2.419
30.	.406	3.088	2.682
31.	5.558	.631	4.927
32.	10.322	2.618	7.704
33.	1.305	.756	.549
34.	.361	1.932	1.571
35.	3.408	.283	3.125
36.	4.099	3.214	.885
37.	.640	.043	.597
38.	.286	.160	.126
39.	.983	13.986	13.003
40.	5.919	3.641	2.278
41.	1.199	.926	.273
42.	4.221	.462	3.759
43.	6.639	.154	6.485
44.	5.524	2.099	3.425
45.	4.773	7.999	3.226
46.	.064	4.956	4.892
47.	.254	.071	.183
48.	1.072	.005	1.067

Table No. 20 Comparison of Within Group Chi Square Values Between Parents and Educators for Statements Concerning the Teaching Methods

Statement Number	X ² Value Parents	X ² Value Educator	Differential
(1)	(2)	(3)	(4)
25.	.254	3.564	3.310
26.	.312	1.948	1.636
27.	7.673	3.374	4.299
28.	.202	.659	.457
29.	.596	2.205	1.609
30.	1.023	3.088	2.065
31.	3.484	.631	2.853
32.	3.700	2.618	1.082
33.	.224	.756	.532
34.	.505	1.932	1.427
35.	10.216	.283	9.933
36.	1.632	3.214	1.582
37.	.674	.043	.631
38.	.879	.160	.719
39.	1.789	13.986	12.197
40.	2.647	3.641	.994
41.	.726	.926	.200
42.	3.111	.462	2.649
43.	8.316	.154	8.162
44.	7.052	2.099	4.953
45.	1.542	7.999	6.457
46.	2.482	4.956	2.474
47.	.469	.071	.398
48.	3.827	.005	3.822

The largest chi square differential between pupils and parents occurs on statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Pupil</u> - <u>Parent</u>	<u>Pupil</u> - <u>Parent</u>	<u>Pupil</u> - <u>Parent</u>	<u>Pupil</u> - <u>Parent</u>
26. Some teachers use children to teach other children. I like this idea.	167	118	130	146
32. The teachers should be more strict with the children.	126	115	165	122
35. They should give homework in the elementary school.	163	181	131	78

The largest chi square differential between pupils and educators occurs on statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Pupil</u> - <u>Educator</u>	<u>Pupil</u> - <u>Educator</u>	<u>Pupil</u> - <u>Educator</u>	<u>Pupil</u> - <u>Educator</u>
32. The teachers should be more strict with the children.	126	179	165	66
39. They should have more time for drill in all school subjects.	204	212	85	37
43. I don't think work-books help the children.	140	38	142	213

The largest differential between parents and educators occurs on statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Parent</u> - <u>Educator</u>	<u>Parent</u> - <u>Educator</u>	<u>Parent</u> - <u>Educator</u>	<u>Parent</u> - <u>Educator</u>
35. They should give homework in the elementary schools.	181	126	78	116
39. They should have more time for drill in all school subjects.	199	212	36	37
43. I don't think workbooks help the children.	72	38	178	213
45. They spend too much time showing pictures to the children in school today.	44	63	186	175

It must be remembered that the significance of difference is not determined from the total agreement or disagreement, but from the internal differences in opinions expressed among the upper, middle, and lower socio-economic groups. The reader can note these differences by referring to tables 12, 13, and 14 for particular statements.

3. School Plant

Concerning the school plant category, tables 21, 22, and 23 indicate the pupil, parent and educator response to each item and reveal the chi square value and level of significance for statements numbered 49 through 72.

Table No. 21 Comparison of Responses to Each of Twenty-four Statements of Pupils in the High, Middle and Low Socio-Economic Classification Concerning the School Plant
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
49.	High	18	11	6	0	1	36	23.227	< .001 *
	Middle	66	29	21	59	8	183		
	Low	20	10	23	32	3	88		
	Totals	104	50	50	91	12	307		
50.	High	15	11	4	5	1	36	1.978	< .46
	Middle	68	43	19	48	5	183		
	Low	33	25	12	17	1	88		
	Totals	116	79	35	70	7	307		
51.	High	20	9	3	2	2	36	2.998	< .25
	Middle	80	42	25	24	12	183		
	Low	42	20	8	12	6	88		
	Totals	142	71	36	38	20	307		
52.	High	10	12	4	6	4	36	1.164	< .60
	Middle	99	35	11	28	10	183		
	Low	43	21	9	10	5	88		
	Totals	152	68	24	44	19	307		

*Significant Difference

Table No. 21
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant

(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
53.	High	7	2	14	10	3	36	6.645	< .05 *
	Middle	51	19	45	56	12	183		
	Low	25	19	22	18	4	88		
	Totals	83	40	81	84	19	307		
54.	High	21	12	0	0	3	36	3.111	< .25
	Middle	115	47	6	8	7	183		
	Low	57	22	6	2	1	88		
	Totals	193	81	12	10	11	307		
55.	High	24	9	2	0	1	36	.245	< .90
	Middle	129	42	3	4	5	183		
	Low	59	24	2	2	1	88		
	Totals	212	75	7	6	7	307		
56.	High	21	10	2	1	2	36	.716	< .70
	Middle	107	47	8	16	5	183		
	Low	41	31	4	5	7	88		
	Totals	169	88	14	22	14	307		

*Significant Difference

Table No. 21
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, middle, and Low Socio-Economic
Classification Concerning the School Plant
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
57.	High	21	7	6	2	0	36	.906	< .65
	Middle	81	42	21	32	7	183		
	Low	40	19	11	13	5	88		
	Totals	142	68	38	47	12	307		
58.	High	22	5	2	3	4	36	2.207	< .35
	Middle	89	46	14	19	15	183		
	Low	48	24	4	6	6	88		
	Totals	159	75	20	28	25	307		
59.	High	10	8	0	8	10	36	1.599	< .50
	Middle	69	43	14	31	26	183		
	Low	36	29	4	14	5	88		
	Totals	115	80	18	53	41	307		
60.	High	13	6	8	8	1	36	.891	< .65
	Middle	55	25	41	52	10	183		
	Low	32	10	16	26	4	88		
	Totals	100	41	65	86	15	307		

Table No. 21 Comparison of Responses to Each of Twenty-four Statements
 (Continued) of Pupils in the High, Middle and Low Socio-Economic
 Classification Concerning the School Plant.

(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
61.	High	24	8	2	2	0	36	.220	< .90
	Middle	122	38	5	11	7	183		
	Low	58	18	3	4	5	88		
	Totals	204	64	10	17	12	307		
62.	High	18	12	5	0	1	36	.503	< .80
	Middle	118	39	11	9	6	183		
	Low	52	22	4	8	2	88		
	Totals	188	73	20	17	9	307		
63.	High	15	13	3	3	2	36	.130	< .95
	Middle	96	42	10	24	11	183		
	Low	49	18	4	11	6	88		
	Totals	160	73	17	38	19	307		
64.	High	12	7	7		3	36	3.221	< .20
	Middle	49	24	33	70	7	183		
	Low	29	11	15	29	4	88		
	Totals	90	42	55	106	14	307		

Table No. 21
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
65.	High	20	7	5	2	2	36	1.538	< .50
	Middle	89	31	23	28	12	183		
	Low	40	20	10	18	0	88		
	Totals	149	58	38	48	14	307		
66.	High	20	8	6	1	1	36	3.094	< .25
	Middle	72	43	30	31	7	183		
	Low	42	13	12	18	3	88		
	Totals	134	64	48	50	11	307		
67.	High	19	13	3	0	1	36	1.902	< .40
	Middle	98	54	12	12	7	183		
	Low	51	26	2	5	4	88		
	Totals	168	93	17	17	12	307		
68.	High	7	8	6	10	5	36	2.431	< .30
	Middle	54	33	25	39	32	183		
	Low	31	21	13	16	7	88		
	Totals	92	62	44	65	44	307		

Table No. 21
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
69.	High	18	8	8	0	2	36	1.460	< .50
	Middle	107	43	9	18	6	183		
	Low	53	16	7	8	4	88		
	Totals	178	67	24	26	12	307		
70.	High	23	10	1	1	1	36	.218	< .90
	Middle	118	45	6	8	6	183		
	Low	48	30	1	5	4	88		
	Totals	189	85	8	14	11	307		
71.	High	20	13	1	0	2	36	7.479	< .05 *
	Middle	116	46	5	10	6	183		
	Low	43	27	7	8	3	88		
	Totals	179	86	13	18	11	307		
72.	High	12	18	0	2	4	36	6.672	< .05 *
	Middle	87	42	16	30	8	183		
	Low	39	22	9	15	3	88		
	Totals	138	82	25	47	15	307		

*Significant Difference

Table No. 22 Comparison of Responses to Each of Twenty-four Statements of Parents in the High, Middle and Low Socio-Economic Classification Concerning the School Plant
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
49.	High	19	8	2	0	2	31	5.039	< .10
	Middle	71	40	25	14	13	163		
	Low	37	18	7	9	10	81		
	Totals	125	66	34	23	25	275		
50.	High	4	11	4	0	12	31	.932	< .65
	Middle	39	62	29	16	17	163		
	Low	19	29	12	11	10	81		
	Totals	62	102	45	27	39	275		
51.	High	12	14	0	0	5	31	7.499	< .05 *
	Middle	59	57	19	6	22	163		
	Low	31	30	4	2	14	81		
	Totals	102	101	23	8	41	275		
52.	High	11	9	1	6	4	31	6.879	< .05 *
	Middle	79	61	8	6	9	163		
	Low	32	35	1	6	7	81		
	Totals	122	105	10	18	20	275		

*Significant Difference

Table No. 22
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
53.	High	3	3	13	7	5	31	2.034	< .40
	Middle	20	23	66	13	41	163		
	Low	9	14	29	7	22	81		
	Totals	32	40	108	27	68	275		
54.	High	19	8	3	1	0	31	3.937	< .15
	Middle	75	70	5	1	12	163		
	Low	34	30	3	2	12	81		
	Totals	128	108	11	4	24	275		
55.	High	20	9	1	1	0	31	5.403	< .10
	Middle	98	62	1	0	2	163		
	Low	49	26	0	3	3	81		
	Totals	167	97	2	4	5	275		
56.	High	19	6	1	1	4	31	1.443	< .50
	Middle	77	52	7	4	23	163		
	Low	39	23	5	4	10	81		
	Totals	135	81	13	9	37	275		

Table No. 22
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
57.	High	12	4	8	3	4	31	2.112	<	.40
	Middle	52	41	20	14	36	163			
	Low	23	23	12	8	15	81			
	Totals	87	68	40	25	55	275			
58.	High	15	8	4	3	1	31	4.733	<	.10
	Middle	64	55	5	8	31	163			
	Low	34	32	4	3	8	81			
	Totals	113	95	13	14	40	275			
59.	High	10	8	2	9	2	31	.793	<	.70
	Middle	58	31	19	25	30	163			
	Low	31	18	9	11	12	81			
	Totals	99	57	30	45	44	275			
60.	High	6	5	9	3	8	31	.405	<	.85
	Middle	25	31	39	29	39	163			
	Low	12	20	21	11	17	81			
	Totals	43	56	69	43	64	275			

Table No. 22
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
61.	High	12	5	5	6	3	31	7.549	< .05 *
	Middle	66	58	11	17	11	163		
	Low	33	26	6	5	11	81		
	Totals	111	89	22	28	25	275		
62.	High	13	10	3	4	1	31	6.471	< .05 *
	Middle	72	53	12	14	12	163		
	Low	29	19	14	9	10	81		
	Totals	114	82	29	27	23	275		
63.	High	8	9	3	9	2	31	2.384	< .35
	Middle	55	39	25	28	16	163		
	Low	29	24	13	7	8	81		
	Totals	92	72	41	44	26	275		
64.	High	3	4	11	4	9	31	3.121	< .25
	Middle	26	24	48	20	45	163		
	Low	14	17	17	14	19	81		
	Totals	43	45	76	38	73	275		

*Significant Difference

Table No. 22
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
65.	High	8	4	11	6	2	31	2.127	< .40
	Middle	35	29	53	26	20	163		
	Low	21	19	21	13	7	81		
	Totals	64	52	85	45	29	275		
66.	High	17	7	0	4	3	31	3.173	< .25
	Middle	48	44	24	16	31	163		
	Low	21	30	8	9	13	81		
	Totals	86	81	32	29	47	275		
67.	High	12	11	1	4	3	31	.638	< .75
	Middle	68	60	13	5	17	163		
	Low	35	26	5	4	11	81		
	Totals	115	97	19	13	31	275		
68.	High	5	8	9	4	5	31	4.358	< .15
	Middle	31	53	27	10	42	163		
	Low	18	20	20	6	17	81		
	Totals	54	81	56	20	64	275		

Table No. 22
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
69.	High	5	3	9	11	3	31	26.314	< .001 *
	Middle	50	58	24	11	20	163		
	Low	25	29	9	8	10	81		
	Totals	80	90	42	30	33	275		
70.	High	13	10	3	3	2	31	.142	< .95
	Middle	61	55	17	12	18	163		
	Low	30	29	9	4	9	81		
	Totals	104	94	29	19	29	275		
71.	High	12	7	3	5	4	31	.270	< .90
	Middle	52	56	16	20	19	163		
	Low	30	24	10	8	9	81		
	Totals	94	87	29	33	32	275		
72.	High	9	8	5	7	2	31	.743	< .70
	Middle	43	50	25	21	24	163		
	Low	21	24	9	14	13	81		
	Totals	73	82	39	42	39	275		

*Significant Difference

Table No. 23 Comparison of Responses to Each of Twenty-four Statements of Educators in the High, Middle and Low Socio-Economic Classification Concerning the School Plant
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5) _m	(6)	(7)	(8)	(9)	(10)
49.	High	6	10	4	2	0	22	1.966	< .40
	Middle	62	57	19	12	9	159		
	Low	28	24	15	6	2	75		
	Totals	96	91	38	20	11	256		
50.	High	0	3	12	5	2	22	1.086	< .60
	Middle	10	28	91	20	10	159		
	Low	7	11	39	14	4	75		
	Totals	17	42	142	39	16	256		
51.	High	9	9	2	1	1	22	.900	< .65
	Middle	53	66	20	6	14	159		
	Low	24	32	12	4	3	75		
	Totals	86	107	34	11	18	256		
52.	High	8	7	1	2	4	22	.175	< .95
	Middle	44	82	9	12	12	159		
	Low	23	34	8	3	7	75		
	Totals	75	123	18	17	23	256		

Table No. 23
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
53.	High	1	0	15	6	0	22	1.267	<	.55
	Middle	5	14	101	31	8	159			
	Low	3	6	46	15	5	75			
	Totals	9	20	162	52	13	256			
54.	High	12	5	3	0	2	22	1.882	<	.45
	Middle	74	64	7	5	9	159			
	Low	29	38	1	3	4	75			
	Totals	115	107	11	8	15	256			
55.	High	16	5	0	0	1	22	2.229	<	.35
	Middle	84	56	9	6	4	159			
	Low	37	28	6	1	3	75			
	Totals	137	89	15	7	8	256			
56.	High	15	6	0	0	1	22	4.895	<	.10
	Middle	87	65	0	4	3	159			
	Low	40	29	4	2	0	75			
	Totals	142	100	4	6	4	256			

Table No. 23
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
57.	High	12	5	2	3	0	22	14.637	< .001 *
	Middle	46	39	38	32	4	159		
	Low	13	12	22	25	3	75		
	Totals	71	56	62	60	7	256		
58.	High	13	5	0	3	1	22	5.336	< .10
	Middle	65	54	12	21	7	159		
	Low	33	34	2	5	1	75		
	Totals	111	93	14	29	9	256		
59.	High	7	6	4	3	2	22	.006	< .99
	Middle	41	50	19	31	18	159		
	Low	21	22	12	12	8	75		
	Totals	69	78	35	46	28	256		
60.	High	8	2	4	7	1	22	.396	< .85
	Middle	37	41	47	30	4	159		
	Low	20	20	19	15	1	75		
	Totals	65	63	70	52	6	256		

*Significant Difference

Table No. 23
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
61.	High	6	5	5	4	2	22	.252	< .90
	Middle	31	47	34	38	9	159		
	Low	14	20	15	20	6	75		
	Totals	51	72	54	62	17	256		
62.	High	6	3	5	7	1	22	4.233	< .15
	Middle	15	19	49	58	18	159		
	Low	3	11	21	32	8	75		
	Totals	24	33	75	97	27	256		
63.	High	12	6	2	2	0	22	1.603	< .50
	Middle	61	57	19	17	5	159		
	Low	26	21	7	13	8	75		
	Totals	99	84	28	32	13	256		
64.	High	4	4	4	10	0	22	3.665	< .20
	Middle	13	19	74	50	3	159		
	Low	7	6	28	33	1	75		
	Totals	24	29	106	93	4	256		

Table No. 23
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
65.	High	2	4	8	8	0	22	3.578	< .20
	Middle	19	25	71	39	5	159		
	Low	5	7	31	28	4	75		
	Totals	26	36	110	75	9	256		
66.	High	12	3	2	4	1	22	11.880	< .01 *
	Middle	25	34	46	48	6	159		
	Low	16	24	19	12	4	75		
	Totals	53	61	67	64	11	256		
67.	High	4	5	0	9	4	22	.539	< .80
	Middle	21	56	42	30	10	159		
	Low	10	28	17	12	8	75		
	Totals	35	89	59	51	22	256		
68.	High	2	7	6	4	3	22	.336	< .85
	Middle	25	37	57	19	21	159		
	Low	12	20	23	10	10	75		
	Totals	39	64	86	33	34	256		

(*Significant Difference

Table No. 23
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Plant
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
69.	High	10	4	3	3	2	22	1.279	< .55
	Middle	48	99	23	21	8	159		
	Low	21	24	14	12	4	75		
	Totals	79	87	40	36	14	256		
70.	High	6	4	5	6	1	22	4.628	< .10
	Middle	48	59	28	17	7	159		
	Low	18	26	15	10	6	75		
	Totals	72	89	48	33	14	256		
71.	High	6	10	2	4	0	22	4.095	< .15
	Middle	58	63	19	16	3	159		
	Low	24	22	14	11	4	75		
	Totals	88	95	35	31	7	256		
72.	High	4	9	5	3	1	22	1.852	< .45
	Middle	31	41	42	34	11	159		
	Low	11	20	20	18	6	75		
	Totals	46	70	67	55	18	256		

*Significant Difference

A rank order distribution according to chi square value for items 49 through 72 within the school plant category follows. Tables 24, 25, and 26 show the pupil, parent, and educator results according to said distribution for these items, and also the number of no opinion responses by classification.

Table No. 24 Pupil Responses According to a Rank Order of Chi Square Values, and the Number of No Opinion Responses by Classification Concerning the School Plant

Statement Number	χ^2 Value	No Opinion Responses				% of N. N = 307
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
49.	23.227	1	8	3	12	3.9
71.	7.479	2	6	3	11	3.6
72.	6.672	4	8	3	15	4.9
53.	6.645	3	12	4	19	6.2
64.	3.221	3	7	4	14	4.6
54.	3.111	3	7	1	11	3.6
66.	3.094	1	7	3	11	3.6
51.	2.998	2	12	6	20	6.5
68.	2.431	5	32	7	44	14.3
58.	2.207	4	15	6	25	8.1
50.	1.978	1	5	1	7	2.2
57.	1.902	1	7	4	12	3.9
52.	1.164	4	10	5	19	6.2
59.	1.599	10	26	5	41	13.4
65.	1.538	2	12	0	14	4.6
69.	1.460	2	6	4	12	3.9
57.	.906	0	7	5	12	3.9
60.	.891	1	10	4	15	4.9
56.	.716	2	5	7	14	4.6
62.	.503	1	6	2	9	2.9
55.	.245	1	5	1	7	2.2
61.	.220	0	7	5	12	3.9
70.	.218	1	6	4	11	3.6
63.	.130	2	11	6	19	6.2

Table No. 25 Parents Responses According to a Rank Order of Chi Square Values, and the Number of No Opinion Responses by Classification Concerning the School Plant

Statement Number	x ² Value	No Opinion Responses				% of N. N = 275
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
69.	26.314	3	20	10	33	12.00
61.	7.549	3	11	11	25	9.1
51.	7.499	5	22	14	41	14.9
52.	6.879	4	9	7	20	7.3
62.	6.451	1	12	10	23	8.4
55.	5.403	0	2	3	5	1.8
49.	5.039	2	13	10	25	9.1
58.	4.733	1	31	8	40	14.5
68.	4.358	5	42	17	64	23.3
54.	3.937	0	12	12	24	8.7
66.	3.173	3	31	13	47	17.1
64.	3.121	9	45	19	73	26.5
63.	2.384	2	16	8	26	9.5
65.	2.127	2	20	7	29	10.5
57.	2.112	4	36	15	55	20.0
53.	2.034	5	41	22	68	24.7
56.	1.443	4	23	10	37	13.5
50.	.932	12	17	10	39	14.2
59.	.793	2	30	12	44	16.0
72.	.743	2	24	13	39	14.2
67.	.638	3	17	11	31	11.3
60.	.405	8	39	17	64	23.3
71.	.270	4	19	9	32	11.6
70.	.142	2	18	9	29	10.5

Table No. 26 Educator Responses According to a Rank Order of Chi Square Values, and the Number of No opinion Responses by Classification Concerning the School Plant

Statement Number	x ² Value	No Opinion Responses				%of N. N = 256
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
57.	14.637	0	4	3	7	2.7
66.	11.880	1	6	4	11	4.3
58.	5.336	1	7	1	9	3.5
56.	4.895	1	3	0	4	1.6
70.	4.628	1	7	6	14	5.5
62.	4.233	1	18	8	27	10.5
71.	4.095	0	3	4	7	2.7
64.	3.665	0	3	1	4	1.6
65.	3.578	0	5	4	9	3.5
55.	2.229	1	4	3	8	3.1
49.	1.966	0	9	2	11	4.3
54.	1.882	2	9	4	15	5.9
72.	1.854	1	11	6	18	7.0
63.	1.603	0	5	8	13	5.1
69.	1.279	2	8	4	14	5.5
53.	1.267	0	8	5	13	5.1
50.	1.086	2	10	4	16	6.3
51.	.900	1	14	3	18	7.0
67.	.539	4	10	8	22	8.6
60.	.396	1	4	1	6	2.3
68.	.336	3	21	10	34	13.3
61.	.252	2	9	6	17	6.6
52.	.175	4	12	7	23	9.0
59.	.006	2	18	8	28	10.9

A comparison of chi square differential values among pupil, parent, and educator responses for the 24 items in the school plant category reveal that for the pupils, statement number 49 assumes significance of difference at the one per cent level; for the parents, statement number 69 is significant at the one per cent level, and for the educator group, statements number 57 and 66 are significant at the one per cent level.

<u>Pupils</u>	<u>Agreement</u>	<u>Disagreement</u>
49. All elementary schools should be one-story buildings.	154	141
<u>Parents</u>		
69. They should have a special room at school for showing films.	170	72
<u>Educators</u>		
57. We need larger places for the children to hang their coats.	127	122
66. We need a lot more space in our school.	114	131

At the five per cent level of significance, pupil results showed that statements number 53, 71, and 72 were involved; parent results indicated 51, 52, 61 and 62 were significant, and educator results indicate no items significant at the five per cent level.

<u>Pupils</u>	<u>Agreement</u>	<u>Disagreement</u>
53. The school building is not very safe.	123	165
71. The children should have hot water available in school.	265	31
72. They should have a special room in school for music instruction.	220	72
<u>Parents</u>		
51. The heating and ventilating systems could be much improved in the school buildings.	203	31
52. The playground at school should be covered with a black top surface	227	28
61. We should have a gymnasium in our school.	200	50
62. They should have a lunch room at school.	96	56

The highest percentages of no opinion responses in this category revealed:

<u>Pupils</u>	<u>% of N.</u>
59. I would be willing to pay more taxes for new and better schools.	13.4
68. We can't afford new schools. Taxes are too high now.	14.3
<u>Parents</u>	
50. They don't have enough fire drills in the old school buildings	14.2

<u>Parents (Continued)</u>	<u>% of N.</u>
51. The heating and ventilating systems could be much improved in the school buildings.	14.9
53. The school building is not very safe.	24.7
56. The school building is in good condition considering its age.	13.5
57. We need larger places for the children to hang their coats.	20.0
58. We need an assembly room at school.	14.5
59. I would be willing to pay more taxes for new and better schools.	16.0
60. The lighting in the classrooms is very poor.	23.3
64. The desks and chairs in our school are very uncomfortable.	26.5
65. Instead of repairing all the old schools they should build new ones.	10.5
66. We need a lot more space in our school.	17.1
67. The children should have a basketball court on the playground.	11.3
68. We can't afford new schools. Taxes are too high now.	23.3
69. They should have a special room at school for showing films.	12.0
70. The children could use a lot more playground equipment.	10.5
71. The children should have hot water available in school.	11.6

Responses of parents indicate that 16 of 24 statements assumed a no opinion response percentage of over ten per cent of the total respondents in this category.

<u>Educators</u>	<u>% of N.</u>
59. I would be willing to pay more taxes for new and better schools.	10.9
62. They should have a lunch room at school.	10.5
68. We can't afford new schools. Taxes are too high now.	13.3

The following tables show a comparison of within group chi square values between pupils, parents and educators concerning the school plant category.

Table No. 27 Comparison of Within Group Chi Square Values Between Pupils and Parents For Statements Concerning the School Plant

Statement Number	X ² Value Pupil	X ² Value Parent	Differential
(1)	(2)	(3)	(4)
49.	23.227	5.039	18.188
50.	1.978	.932	1.046
51.	2.998	7.499	4.501
52.	1.164	6.879	5.715
53.	6.645	2.034	4.611
54.	3.111	3.937	.826
55.	.245	5.403	5.158
56.	.716	1.443	.727
57.	.906	2.112	1.206
58.	2.207	4.733	2.526
59.	1.599	.793	.806
60.	.891	.405	.486
61.	.220	7.549	7.329
62.	.503	6.471	5.968
63.	.130	2.384	2.254
64.	3.221	3.121	.100
65.	1.538	2.127	.589
66.	3.094	3.173	.079
67.	1.902	.638	1.264
68.	2.431	4.358	1.927
69.	1.460	26.314	24.854
70.	.218	.142	.076
71.	7.479	.270	7.209
72.	6.672	.743	5.929

Table No. 28 Comparison of Within Group Chi Square Values Between Pupils and Educators for Statements Concerning the School Plant

Statement Number	X ² Value Pupil	X ² Value Educator	Differential
(1)	(2)	(3)	(4)
49.	23.227	1.966	21.261
50.	1.978	1.086	.892
51.	2.998	.900	2.098
52.	1.164	.175	.989
53.	6.645	1.267	5.378
54.	3.111	1.882	1.229
55.	.245	2.229	1.984
56.	.716	4.895	4.179
57.	.906	14.637	13.731
58.	2.207	5.336	3.129
59.	1.599	.006	1.593
60.	.891	.396	.495
61.	.220	.252	.032
62.	.503	4.233	3.725
63.	.130	1.603	1.473
64.	3.221	3.665	.444
65.	1.538	3.578	2.040
66.	3.094	11.880	8.786
67.	1.902	.539	1.363
68.	2.431	.336	2.095
69.	1.460	1.279	.181
70.	.218	4.628	4.410
71.	7.479	4.095	3.384
72.	6.672	1.854	4.818

Table No. 29 Comparison of Within Group Chi Square Values Between Parents and Educators for Statements Concerning the School Plant

Statement Number	χ^2 Value Parent	χ^2 Value Educator	Differential
(1)	(2)	(3)	(4)
49.	5.039	1.966	3.073
50.	.932	1.086	.154
51.	7.499	.900	6.599
52.	6.879	.175	6.704
53.	2.034	1.267	.767
54	3.937	1.882	2.055
55.	5.403	2.229	3.174
56.	1.443	4.895	3.452
57.	2.112	14.637	12.525
58.	4.733	5.336	.603
59.	.793	.006	.787
60.	.405	.396	.009
61.	7.549	.252	7.297
62.	6.471	4.233	2.238
63.	2.384	1.603	.781
64.	3.121	3.665	.544
65.	2.127	3.578	1.451
66.	3.173	11.880	8.707
67.	.638	.539	.099
68.	4.358	.336	4.022
69.	26.314	1.279	25.035
70.	.142	4.628	4.486
71.	.270	4.095	3.825
72.	.743	1.854	1.111

The largest chi square differential between pupils and parents concerns the following statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Pupil</u> - <u>Parent</u>	<u>Pupil</u> - <u>Parent</u>	<u>Pupil</u> - <u>Parent</u>	<u>Pupil</u> - <u>Parent</u>
49. All elementary schools should be one-story buildings.	154	193	141	57
61. We should have a gymnasium in our school.	268	200	27	50
69. They should have a special room at school for showing films.	245	170	50	72
71. The children should have hot water available in school.	265	181	31	62

The largest chi square differential between pupils and educators concerns the following statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Pupil</u> - <u>Educator</u>	<u>Pupil</u> - <u>Educator</u>	<u>Pupil</u> - <u>Educator</u>	<u>Pupil</u> - <u>Educator</u>
49. All elementary schools should be one-story buildings.	154	187	141	58
57. We need larger places for the children to hang their coats.	210	127	85	122
66. We need a lot more space in our school.	198	114	98	131

The largest chi square differential between parents and educators occurs on statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Parent</u> - <u>Educator</u>	<u>Parent</u> - <u>Educator</u>	<u>Parent</u> - <u>Educator</u>	<u>Parent</u> - <u>Educator</u>
51. The heating and ventilating systems could be much improved in the school buildings.	203	193	31	45
52. The playground at school should be covered with a black top surface.	227	198	28	35
57. We need larger places for the children to hang their coats.	155	127	65	122
61. We should have a gymnasium in our school.	200	123	50	116
66. We need a lot more space in our school.	167	114	61	131
69. They should have a special room at school for showing films.	170	166	72	76

4. School Personnel

With regard to the school personnel category, tables 30, 31, and 32 indicate the pupil, parent, and educator responses to each item and reveal the chi square value and level of significance for statements numbered 73 through 96.

Table No. 30

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
n (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
73.	High	15	15	2	3	1	36	1.249	< .55
	Middle	122	43	6	9	3	183		
	Low	57	23	4	4	0	88		
	Totals	194	81	12	16	4	307		
74.	High	11	14	5	5	1	36	3.011	< .25
	Middle	81	55	9	25	13	183		
	Low	45	29	6	7	1	88		
	Totals	137	98	20	37	15	307		
75.	High	15	13	2	3	3	36	3.803	< .20
	Middle	91	42	14	20	16	183		
	Low	39	21	13	12	3	88		
	Totals	145	76	29	35	22	307		
76.	High	17	11	7	1	0	36	5.054	< .10
	Middle	91	35	14	40	3	183		
	Low	47	24	5	10	2	88		
	Totals	155	70	26	51	5	307		

Table No. 30
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
77.	High	12	15	2	5	2	36	3.160	< .25
	Middle	103	49	10	17	4	183		
	Low	49	24	5	7	3	88		
	Totals	164	88	17	29	9	307		
78.	High	15	18	2	0	1	36	.662	< .75
	Middle	114	51	5	11	2	183		
	Low	55	23	4	5	1	88		
	Totals	184	92	11	16	4	307		
79.	High	13	11	6	6	0	36	2.987	< .25
	Middle	55	37	25	57	9	183		
	Low	30	22	10	24	2	88		
	Totals	98	70	41	87	11	307		
80.	High	18	17	0	1	0	36	3.863	< .20
	Middle	91	54	6	10	22	183		
	Low	47	23	6	6	6	88		
	Totals	156	94	12	17	28	307		

Table No. 30
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel.
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
81.	High	18	13	2	2	1	36	1.601	<	.50
	Middle	110	51	6	6	10	183			
	Low	50	27	2	2	7	88			
	Totals	178	91	10	10	18	307			
82.	High	21	11	3	0	1	36	2.324	<	.35
	Middle	109	35	11	18	10	183			
	Low	52	16	5	12	3	88			
	Totals	182	62	19	30	14	307			
83.	High	10	11	4	8	3	36	.097	<	.98
	Middle	64	48	24	35	12	183			
	Low	28	24	9	17	10	88			
	Totals	102	83	37	60	25	307			
84.	High	9	21	2	1	3	36	4.427	<	.15
	Middle	91	63	9	10	10	183			
	Low	49	20	10	7	2	88			
	Totals	149	104	21	18	15	307			

Table No. 30
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
85.	High	14	10	3	6	3	36	2.188	< .35
	Middle	101	46	7	22	7	183		
	Low	44	24	5	11	4	88		
	Totals	159	80	15	39	14	307		
86.	High	8	5	11	6	6	36	1.058	< .60
	Middle	49	24	37	59	14	183		
	Low	22	8	13	39	6	88		
	Totals	79	37	61	104	26	307		
87.	High	17	18	0	1	0	36	2.474	< .30
	Middle	100	66	5	5	7	183		
	Low	48	26	4	4	6	88		
	Totals	165	110	9	10	13	307		
88.	High	9	8	9	3	7	36	10.600	< .01 *
	Middle	94	37	11	24	17	183		
	Low	46	18	4	5	15	88		
	Totals	149	63	24	32	39	307		

*Significant Difference

Table No. 30
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel

(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
89.	High	11	14	6	1	4	36	1.051	<	.60
	Middle	83	44	20	24	12	183			
	Low	42	22	7	9	8	88			
	Totals	136	80	33	34	24	307			
90.	High	17	7	5	4	3	36	.066	<	.98
	Middle	81	41	16	35	10	183			
	Low	34	27	12	13	2	88			
	Totals	132	75	33	52	15	307			
91.	High	9	3	14	7	3	36	2.704	<	.30
	Middle	47	25	35	72	4	183			
	Low	18	6	14	43	7	88			
	Totals	74	34	63	122	14	307			
92.	High	11	13	9	1	2	36	2.186	<	.35
	Middle	79	41	26	30	7	183			
	Low	41	23	10	9	5	88			
	Totals	131	77	45	40	14	307			

Table No. 30
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Pupils in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel

(N = 307)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
93.	High	10	6	9	3	8	36	1.488	< .50
	Middle	57	41	19	29	37	183		
	Low	35	16	7	15	15	88		
	Totals	102	63	35	47	60	307		
94.	High	5	4	16	7	4	36	9.765	< .01 *
	Middle	42	35	38	49	19	183		
	Low	17	7	22	38	4	88		
	Totals	64	46	76	94	27	307		
95.	High	17	18	0	1	0	36	1.052	< .60
	Middle	108	53	6	7	9	183		
	Low	52	27	3	3	3	88		
	Totals	177	98	9	11	12	307		
96.	High	16	12	2	2	4	36	.556	< .80
	Middle	108	50	6	12	7	183		
	Low	52	25	6	1	2	88		
	Totals	176	89	14	15	13	307		

*Significant Difference

Table No., 31

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel

(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
73.	High	14	13	1	3	0	31	.368	< .85
	Middle	76	57	12	4	14	163		
	Low	38	27	6	4	6	81		
	Totals	128	97	19	11	20	275		
74.	High	8	10	5	6	2	31	8.012	< .05 *
	Middle	67	59	15	8	14	163		
	Low	36	23	10	7	5	81		
	Totals	111	92	30	21	21	275		
75.	High	7	6	7	0	11	31	3.691	< .20
	Middle	51	61	19	4	28	163		
	Low	18	28	8	5	22	81		
	Totals	76	95	34	9	61	275		
76.	High	10	5	8	5	3	31	7.648	< .05 *
	Middle	66	50	28	11	8	163		
	Low	39	25	12	4	1	81		
	Totals	115	80	48	20	12	275		

*Significant Difference

Table No. 31
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
77.	High	10	6	4	1	10	31	2.321	<	.35
	Middle	58	63	10	6	26	163			
	Low	25	34	7	2	13	81			
	Totals	93	103	21	9	49	275			
78.	High	20	10	0	1	0	31	.563	<	.80
	Middle	84	55	7	3	14	163			
	Low	41	29	2	3	6	81			
	Totals	145	94	9	7	20	275			
79.	High	7	10	7	5	2	31	.136	<	.95
	Middle	19	65	22	44	13	163			
	Low	13	28	12	22	6	81			
	Totals	39	103	41	71	21	275			
80.	High	14	10	4	1	2	31	2.935	<	.25
	Middle	83	60	11	1	8	163			
	Low	38	35	4	2	2	81			
	Totals	135	105	19	4	12	275			

Table No. 31
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel

(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
81.	High	21	10	0	0	0	31	.000	<	.000
	Middle	93	66	0	0	4	163			
	Low	44	34	0	0	3	81			
	Totals	158	110	0	0	7	275			
82.	High	16	9	2	1	3	31	.260	<	.90
	Middle	83	55	11	4	10	163			
	Low	41	28	2	4	6	81			
	Totals	140	92	15	9	19	275			
83.	High	13	9	6	1	2	31	1.687	<	.45
	Middle	61	61	17	6	18	163			
	Low	28	27	8	7	11	81			
	Totals	102	97	31	14	31	275			
84.	High	2	11	7	7	4	31	19.966	<	.001 *
	Middle	42	70	15	6	30	163			
	Low	20	38	7	3	13	81			
	Totals	64	119	29	16	47	275			

*Significant Difference

Table No. 31
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
85.	High	13	11	1	3	3	31	1.292	< .55
	Middle	56	57	7	6	37	163		
	Low	21	32	4	6	18	81		
	Totals	90	100	12	15	58	275		
86.	High	0	0	14	10	7	31	6.729	< .05 *
	Middle	10	9	57	39	48	163		
	Low	5	10	29	21	16	81		
	Totals	15	19	100	70	71	275		
87.	High	20	10	1	0	0	31	3.205	< .25
	Middle	73	86	0	1	3	163		
	Low	37	40	0	0	4	81		
	Totals	130	136	1	1	7	275		
88.	High	7	13	1	1	9	31	.143	< .95
	Middle	69	58	8	2	26	163		
	Low	34	31	4	2	10	81		
	Totals	110	102	13	5	45	275		

*Significant Difference

Table No. 31
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel

(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
89.	High	10	14	4	0	3	31	1.500	< .50
	Middle	51	59	19	6	28	163	1.500	
	Low	22	28	12	4	15	81		
	Totals	83	101	35	10	46	275		
90.	High	12	14	1	1	3	31	1.735	< .45
	Middle	76	66	8	5	8	163		
	Low	39	25	6	4	7	81		
	Totals	127	105	15	10	18	275		
91.	High	2	0	15	10	4	31	3.867	< .20
	Middle	16	15	63	41	28	163		
	Low	6	10	34	13	18	81		
	Totals	24	25	112	64	50	275		
92.	High	17	9	1	1	3	31	3.293	< .20
	Middle	67	62	14	5	15	163		
	Low	27	29	8	6	11	81		
	Totals	111	100	23	12	29	275		

Table No. 31
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Parents in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 275)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
93.	High	7	7	5	3	9	31	.281	< .90
	Middle	29	34	26	6	68	163		
	Low	10	21	11	8	31	81		
	Totals	46	62	42	17	108	275		
94.	High	0	6	14	1	10	31	.702	< .75
	Middle	12	20	58	12	61	163		
	Low	7	12	29	5	27	81		
	Totals	19	39	101	18	98	275		
95.	High	14	14	2	0	1	31	3.700	< .20
	Middle	69	82	3	0	9	163		
	Low	30	41	4	1	5	81		
	Totals	113	137	9	1	15	275		
96.	High	10	16	1	3	1	31	3.106	< .25
	Middle	77	63	4	3	16	163		
	Low	39	25	2	3	12	81		
	Totals	126	104	7	9	29	275		

Table No. 32

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
73.	High	17	3	1	0	1	22	2.867	<	.25
	Middle	104	51	1	0	3	159			
	Low	52	20	2	0	1	75			
	Totals	173	74	4	0	5	256			
74.	High	6	8	6	1	1	22	.229	<	.90
	Middle	52	45	28	22	12	159			
	Low	20	24	17	9	5	75			
	Totals	78	77	51	32	18	256			
75.	High	8	7	3	3	1	22	1.243	<	.55
	Middle	47	54	35	7	16	159			
	Low	23	22	18	8	4	75			
	Totals	78	83	56	18	21	256			
76.	High	7	6	3	5	1	22	2.475	<	.30
	Middle	47	54	34	21	3	159			
	Low	22	31	15	3	4	75			
	Totals	76	91	52	29	8	256			

Table No. 32
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel

(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
77.	High	18	7	1	1	5	22	3.793	< .20
	Middle	44	62	20	6	27	159		
	Low	34	25	6	0	10	75		
	Totals	86	94	27	7	42	256		
78.	High	15	4	1	1	1	22	.141	< .95
	Middle	85	54	7	4	9	159		
	Low	46	19	4	1	5	75		
	Totals	146	77	12	6	15	256		
79.	High	3	10	6	1	2	22	.042	< .98
	Middle	29	67	40	10	13	159		
	Low	17	30	18	8	2	75		
	Totals	49	107	64	19	17	256		
80.	High	6	10	4	2	0	22	3.558	< .20
	Middle	28	76	36	9	10	159		
	Low	10	31	20	10	4	75		
	Totals	44	117	60	21	14	256		

Table No. 32
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	χ^2 Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
81.	High	13	8	0	0	1	22	2.458	< .30
	Middle	99	58	0	0	2	159		
	Low	41	33	0	1	0	75		
	Totals	153	99	0	1	3	256		
82.	High	6	9	2	3	2	22	3.286	< .20
	Middle	31	48	48	15	17	159		
	Low	21	13	22	9	10	75		
	Totals	58	70	72	27	29	256		
83.	High	15	7	0	0	0	22	8.231	< .05 *
	Middle	78	57	14	5	5	159		
	Low	44	28	2	0	1	75		
	Totals	137	92	16	5	6	256		
84.	High	7	5	5	2	3	22	2.395	< .35
	Middle	33	67	23	6	30	159		
	Low	18	25	13	5	14	75		
	Totals	58	97	41	13	47	256		

Table No. 32
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
85.	High	18	8	2	3	1	22	8.512	< .05 *
	Middle	60	80	4	4	11	159		
	Low	35	27	6	1	6	75		
	Totals	103	115	12	8	18	256		
86.	High	0	0	9	13	0	22	3.943	< .15
	Middle	1	5	73	59	21	159		
	Low	0	0	35	31	9	75		
	Totals	1	5	117	103	30	256		
87.	High	9	12	0	0	1	22	1.139	< .60
	Middle	83	73	2	0	1	159		
	Low	38	31	1	1	4	75		
	Totals	130	116	3	1	6	256		
88.	High	8	7	3	1	3	22	5.790	< .10
	Middle	49	73	16	8	13	159		
	Low	18	32	14	8	3	75		
	Totals	75	112	33	17	19	256		

*Significant Difference

Table No. 32
(Continued)

Comparison of Responses to Each of Twenty-four Statements
of Educators in the High, Middle and Low Socio-Economic
Classification Concerning the School Personnel
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	x ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
89.	High	4	5	9	3	1	22	1.697	< .45
	Middle	18	41	64	17	19	159		
	Low	12	26	25	11	1	75		
	Totals	34	72	98	31	21	256		
90.	High	9	7	4	2	0	22	7.167	< .05 *
	Middle	69	73	8	5	4	159		
	Low	35	32	6	2	0	75		
	Totals	113	112	18	9	4	256		
91.	High	0	0	12	9	1	22	1.008	< .65
	Middle	0	7	87	58	7	159		
	Low	0	3	36	35	1	75		
	Totals	0	10	135	102	9	256		
92.	High	5	12	2	1	2	22	3.767	< .20
	Middle	27	68	39	14	11	159		
	Low	13	32	18	9	3	75		
	Totals	45	112	59	24	16	256		

*Significant Difference

Table No. 32 Comparison of Responses to Each of Twenty-four Statements of Educators in the High, Middle and Low Socio-Economic Classification Concerning the School Personnel
(N = 256)

Statement Number	Class	Yes	Agree	Disagree	No	No Opinion	Totals	X ² Value	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
93.	High	3	4	4	4	7	22	3.440	< .20
	Middle	10	21	57	28	43	159		
	Low	3	10	25	19	18	75		
	Totals	16	35	86	51	68	256		
94.	High	0	3	8	9	2	22	1.772	< .45
	Middle	7	7	101	32	12	159		
	Low	2	9	38	23	3	75		
	Totals	9	19	147	64	17	256		
95.	High	6	11	0	2	3	22	2.169	< .35
	Middle	40	71	22	8	18	159		
	Low	15	33	12	5	10	75		
	Totals	61	115	34	15	31	256		
96.	High	17	5	0	0	0	22	4.094	< .15
	Middle	103	51	1	0	4	159		
	Low	47	25	3	0	0	75		
	Totals	167	81	4	0	4	256		

A rank order distribution according to chi square value for items 73 through 96 within the school plant category follows. Tables 33, 34, and 35 show the pupil, parent, and educator results according to this distribution. The number of no opinion responses by classification are also indicated.

Table No. 33 Pupil Responses According to a Rank Order of Chi Square Values, and the Number of No Opinion Responses by Classification Concerning the School Personnel

Statement Number	X ² Value	No Opinion Responses				% of N. N = 307
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
88.	10.600	7	17	15	39	12.7
94.	9.765	4	19	4	27	8.8
76.	5.054	0	3	2	5	1.6
84.	4.427	3	10	2	15	4.9
80.	3.863	0	22	6	28	9.1
75.	3.803	3	16	3	22	7.2
77.	3.160	2	4	3	9	2.9
74.	3.011	1	13	1	15	4.9
79.	2.987	0	9	2	11	3.6
91.	2.704	3	4	7	14	4.6
87.	2.474	0	7	6	13	4.2
82.	2.324	1	10	3	14	4.6
85.	2.188	3	7	4	14	4.6
92.	2.186	2	7	5	14	4.6
81.	1.601	1	10	7	18	5.9
93.	1.488	8	37	15	60	19.5
73.	1.249	1	3	0	4	1.3
86.	1.058	6	14	6	26	8.5
95.	1.052	0	9	3	12	3.9
89.	1.051	4	12	8	24	7.8
78.	.662	1	2	1	4	1.3
96.	.556	4	7	2	13	4.2
83.	.097	3	12	10	25	8.1
90.	.066	3	10	2	15	4.9

Table No. 34 Parent Responses According to a Rank Order of Chi Square Values, and the Number of No Opinion Responses by Classification Concerning the School Personnel

Statement Number	X ² Value	No Opinion Responses				% of N. N. = 275
		High	Middle	Low	Total	
(1)	(a)	(3)	(4)	(5)	(6)	(7)
84.	19.966	4	30	13	47	17.1
74.	8.012	2	14	5	21	7.6
76.	7.648	3	8	1	12	4.4
86.	6.729	7	48	16	71	25.8
91.	3.867	4	28	18	50	18.2
95.	3.700	1	9	5	15	5.5
75.	3.691	11	28	22	61	22.2
92.	3.293	3	15	11	29	10.5
87.	3.205	0	3	4	7	2.5
96.	3.106	1	16	12	29	10.5
80.	2.935	2	8	2	12	4.4
77.	2.321	10	26	13	49	17.8
90.	1.735	3	8	7	18	6.5
83.	1.687	2	18	11	31	11.3
89.	1.500	3	28	15	46	16.7
85.	1.292	3	37	18	58	21.1
94.	.702	10	61	27	98	35.6
78.	.563	0	14	6	20	7.3
73.	.368	0	14	6	20	7.3
93.	.281	9	68	31	108	39.3
82.	.260	3	10	6	19	6.9
88.	.143	9	26	10	45	16.4
79.	.136	2	13	6	21	7.6
81.	0.000	0	4	3	7	2.5

Table No. 35 Educator Responses According to a Rank Order of Chi Square Values, and the Number of No Opinion Responses by Classification Concerning the School Personnel

Statement Number	χ^2 Value	No Opinion Responses				% of N. N = 256
		High	Middle	Low	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
85.	8.512	1	11	6	18	7.0
83.	8.231	0	5	1	6	2.3
90.	7.167	0	4	0	4	1.6
88.	5.790	3	13	3	19	7.4
96.	4.094	0	4	0	4	1.6
86.	3.943	0	21	9	30	11.7
77.	3.793	5	27	10	42	16.4
92.	3.767	2	11	3	16	6.3
80.	3.558	0	10	4	14	5.5
93.	3.440	7	43	18	68	26.6
82.	3.286	2	17	10	29	11.3
73.	2.867	1	3	1	5	2.0
76.	2.475	1	3	4	8	3.1
81.	2.458	1	2	0	3	1.2
84.	2.395	3	30	14	47	18.4
95.	2.169	3	18	10	31	12.1
94.	1.772	2	12	3	17	6.6
89.	1.697	1	19	1	21	8.2
75.	1.243	1	16	4	21	8.2
87.	1.139	1	1	4	6	2.3
91.	1.008	1	7	1	9	3.5
74.	.229	1	12	5	18	7.0
78.	.141	1	9	5	15	5.9
79.	.042	2	13	2	17	6.6

A comparison of chi square values among pupil, parent, and educator responses for the 24 items in the school personnel category reveal that for the pupils, statements 88 and 94 assume significance of difference at the one per cent level; for the parents, statement 84 is significant at the one per cent level; and that no statements in this category assumed the one per cent level of significance for the educator group.

<u>Pupils</u>	<u>Agreement</u>	<u>Disagreement</u>
88. The student monitors in our school are helpful.	212	56
94. The supervisors and special teachers do not seem interested in the children.	110	170

Parents

84. The members of the school committee are doing the best job they can.	183	45
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At the five per cent level of significance, pupil results reveal that no statements were involved; parent results showed that statements 74, 76, and 86 were significant; and educator results indicate that statements 83, 85, and 90 were significant at the five per cent level.

<u>Parents</u>	<u>Agreement</u>	<u>Disagreement</u>
74. We need more police protection for our children.	203	51
76. They should close the schools on all stormy days.	195	68

<u>Parents(Continued)</u>	<u>% of N.</u>
88. The student monitors in our school are helpful.	16.4
89. The teachers could do a lot more to keep up with the latest methods.	16.7
91. The teachers are much too strict.	18.2
92. All teachers should be required to take courses for improvement.	10.5
93. The superintendent of schools is prevented from doing many good things by the school committee.	39.3
94. The supervisors and special teachers do not seem interested in the children.	35.6
96. I think we have a very good group of teachers.	10.5

Responses of parents indicate that 13 of 24 statements assumed a no opinion response percentage of over ten per cent of the total respondents in this category.

<u>Educators</u>	<u>% of N.</u>
77. The superintendent of buildings is doing the best job he can.	16.4
82. We should have more young teachers in Fall River.	11.3
84. The members of the school committee are doing the best job they can.	18.4
86. The superintendent of schools is too strict.	11.7
93. The superintendent of schools is prevented from doing many good things by the school committee.	26.6
95. The school committee, the teachers and the parents should get together more on their ideas.	12.1

The following tables show a comparison of within group chi square values between pupils, parents, and educators concerning the school personnel category.

Table No. 36 Comparison of Within Group Chi Square Values Between Pupils and Parents for Statements Concerning the School Personnel

Statement Number	Pupil X^2 Value	Parent X^2 Value	Differential
(1)	(2)	(3)	(4)
73.	1.249	.368	.881
74.	3.011	8.012	5.001
75.	3.803	3.691	.112
76.	5.054	7.648	2.594
77.	3.160	2.321	.839
78.	.662	.563	.099
79.	2.987	.136	2.851
80.	3.863	2.935	.928
81.	1.601	0.000	1.601
82.	2.324	.260	2.064
83.	.097	1.687	1.590
84.	4.427	19.966	15.539
85.	2.188	1.292	.896
86.	1.058	6.729	5.671
87.	2.474	3.205	.731
88.	10.600	.143	10.457
89.	1.051	1.500	.449
90.	.066	1.735	1.669
91.	2.704	3.867	1.163
92.	2.186	3.293	1.107
93.	1.488	.281	1.207
94.	9.765	.702	9.063
95.	1.052	3.700	2.648
96.	.556	3.106	2.550

Table No. 37 Comparison of Within Group Chi Square Values Between Pupils and Educators for Statements Concerning the School Personnel

Statement Number	X ² Value Pupil	X ² Value Educator	Differential
(1)	(2)	(3)	(4)
73.	1.249	2.867	1.618
74.	3.011	.229	2.782
75.	3.803	1.243	2.560
76.	5.054	2.475	2.579
77.	3.160	3.793	.633
78.	.662	.141	.521
79.	2.987	.042	2.945
80.	3.863	3.558	.305
81.	1.601	2.458	.857
82.	2.324	3.286	.962
83.	.097	8.231	8.134
84.	4.427	2.395	2.032
85.	2.188	8.512	6.324
86.	1.058	3.943	2.885
87.	2.474	1.139	1.335
88.	10.600	5.790	4.810
89.	1.051	1.697	.646
90.	.066	7.167	7.101
91.	2.704	1.008	1.696
92.	2.186	3.767	1.581
93.	1.488	3.440	1.952
94.	9.765	1.772	7.993
95.	1.052	2.169	1.117
96.	.556	4.094	3.538

Table No. 38 Comparison of Within Group Chi Square Values Between Parents and Educators for Statements Concerning the School Personnel

Statement Number	X ² Value Parent	X ² Value Educator	Differential
(1)	(2)	(3)	(4)
73.	.368	2.867	2.499
74.	8.012	.229	7.783
75.	3.691	1.243	2.448
76.	7.648	2.475	5.173
77.	2.321	3.793	1.472
78.	.563	.141	.422
79.	.136	.042	.094
80.	2.935	3.558	.623
81.	0.000	2.458	2.458
82.	.260	3.286	3.026
83.	1.687	8.231	6.544
84.	19.966	2.395	17.571
85.	1.292	8.512	7.220
86.	6.729	3.943	2.786
87.	3.205	1.139	2.066
88.	.143	5.790	5.647
89.	1.500	1.697	5.844
90.	1.735	7.167	5.432
91.	3.867	1.008	2.859
92.	3.293	3.767	.474
93.	.281	3.440	3.159
94.	.702	1.772	1.070
95.	3.700	2.169	1.531
96.	3.106	4.904	.988

The largest chi square differential between pupils and parents occurs on the following statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Pupil</u>	<u>-Parent</u>	<u>Pupil</u>	<u>- Parent</u>
84. The members of the school committee are doing the best job they can.	253	183	39	45
88. The student monitors in our school are helpful.	212	212	56	18
94. The supervisors and special teachers do not seem interested in the children.	110	58	170	119

The largest chi square differential between pupils and educators occurs on the following statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Pupil-Educator</u>	<u>Pupil-Educator</u>	<u>Pupil-Educator</u>	<u>Pupil-Educator</u>
83. The way to get and keep good teachers is to pay them more money.	185	229	97	21
85. The janitor is a good person to have around the children.	239	218	54	20
90. Teaching school is a difficult job.	207	225	85	27
94. The supervisors and special teachers do not seem interested in the children.	110	28	170	211

Internal differences among classifications within groups may be noted in tables 30, 31, and 32.

The largest chi square differential between parents and educators occurs on the following statements:

	<u>Agreement</u>		<u>Disagreement</u>	
	<u>Parent-Educator</u>		<u>Parent-Educator</u>	
74. We need more police protection for our children.	203	155	51	83
83. The way to get and keep good teachers is to pay them more money.	199	229	45	21
84. The members of the school committee are doing the best job they can.	183	155	45	54
85. The janitor is a good person to have around the children.	190	218	27	20

5. Item Summary

Statements attaining the highest within group chi square value and their point of origin follow:

<u>Number</u>	<u>X² Value</u>	<u>Group</u>	<u>Point of Origin</u>
69.	26.314	Parent	Educator Statement
49.	23.227	Pupil	Pupil Statement
14.	22.607	Parent	Parent Statement
84.	19.966	Parent	Educator Statement
57.	14.637	Educator	Educator Statement
39.	13.986	Educator	Educator Statement
66.	11.880	Educator	Educator Statement
88.	10.600	Pupil	Pupil Statement
32.	10.322	Pupil	Parent Statement
35.	10.216	Parent	Parent Statement
94.	9.765	Pupil	Pupil Statement
15.	9.760	Parent	Educator Statement
23.	9.556	Parent	Parent Statement

Of the 96 items in the inquiry, four statements assumed significance at the one per cent level among the pupil group, or a percentage of 4.2; six statements assumed one per cent level of significance among the parent group, or a percentage of 6.3; and three statements assumed one per cent level of significance among the educator group, or a percentage of 3.1.

Concerning the origin of the statements that assumed significance at the one per cent level, discrepancy existed among groups only on statements 15, 69, and 84, where the parent group deviated on an educator-made statement; and on statement number 32, where the pupil group deviated on a parent-made statement. All other deviations were within group variances and concerned statements originating from within the group.

The six combinations within the framework of the inquiry that involve similar thoughts, and employed herein as a consistency check, were responded to in the following manner:

<u>Statement Number</u>	<u>Pupil</u>		<u>Parent</u>		<u>Educator</u>	
	<u>Agree</u>	<u>-Disagree</u>	<u>Agree</u>	<u>-Disagree</u>	<u>Agree</u>	<u>-Disagree</u>
18.	215	72	237	23	243	10
44.	203	85	236	28	247	8
Consistent response within groups						
19.	233	54	197	51	47	185*
62.	261	37	196	56	57	172*
Consistent response within groups						
21.	201	75	179	52	178	61
75.	221	64	171	43	161	74
Consistent response within groups						
27.	77	216	76	127	104	148
45.	84	209	44	186	63	175
Consistent response within groups						
46.	192	90	179	54	167	70
82.	244	49	232	24	128	99
Consistent response within groups						
73.	275	28	225	30	247	4
96.	265	29	230	16	248	4
Consistent response within groups						

The dichotomized tabulation of responses to the statements with similar thought reveal that the respondents were attempting to interpret the statements and that their expressed attitudes concerning these statements were, in the overall, consistent.

6. Analysis of Variance

The analysis of variance procedure has been described in the preceding chapter concerning the statistical design.

Since every answer was a correct answer, and since the data was expressed in descriptive units, it was necessary to quantify these descriptive units that means, deviations, and other relationships be explored.

"Common practice suggests the assumption of a normal curve. It is possible, however, to assume a distribution of any shape. In most cases, little relative difference is found when numerical units are substituted for descriptive units whether computed by assuming a normal curve or by assuming some other shape of distribution which appears more logical." 1/

The scoring technique employed was an arbitrary method of assigning a numerical value of:

- 1 for a "yes" response
- 2 for an "agree" response
- 3 for a "no opinion" response
- 4 for a "disagree" response
- 5 for a "no" response.

This valid procedure expedited punch card and I.B.M. 2/ tabulating operations and produced the sums, sums of squares and cross products essential to the analysis of variance procedure.

1/ Op. Cit., Wert, Neidt, and Ahmann, p.67.

2/ International Business Machine

The following tables depict comparisons among groups and subclasses with regard to total sums of scores, unadjusted means, adjusted means, and double classification analysis of variance with means adjusted for disproportionality among the subclasses.

In computing the analysis of variance,

$$Ss \text{ for total} = \sum X^2 - \frac{(\sum X)^2}{N}$$

$$Ss \text{ for Class} = \frac{(\sum X_{c_1})^2}{n} + \frac{(\sum X_{c_2})^2}{n} + \frac{(\sum X_{c_3})^2}{n} - \frac{(\sum X)^2}{N}$$

where $C_1 = \text{High}$, $C_2 = \text{Medium}$, and $C_3 = \text{Low}$

$$Ss \text{ for Groups} = \frac{(\sum X_{G_1})^2}{n} + \frac{(\sum X_{G_2})^2}{n} + \frac{(\sum X_{G_3})^2}{n} - \frac{(\sum X)^2}{N}$$

where $G_1 = \text{Pupils}$, $G_2 = \text{Parents}$, and $G_3 = \text{Educators}$

Ss for Interaction =

$$\begin{aligned} & \frac{(\sum X_{G_1 C_1})^2}{n} + \frac{(\sum X_{G_1 C_2})^2}{n} + \frac{(\sum X_{G_1 C_3})^2}{n} \\ + & \frac{(\sum X_{G_2 C_1})^2}{n} + \frac{(\sum X_{G_2 C_2})^2}{n} + \frac{(\sum X_{G_2 C_3})^2}{n} \\ + & \frac{(\sum X_{G_3 C_1})^2}{n} + \frac{(\sum X_{G_3 C_2})^2}{n} + \frac{(\sum X_{G_3 C_3})^2}{n} - \frac{(\sum X)^2}{N} \end{aligned}$$

and $S_s \text{ for Within} = SST - (SSG + SSI + SSC)$

The results of the analysis of variance are non-significant, thus it may be assumed that the hypothesis is tenable; that there is insufficient evidence from the analysis to reject the idea that people in the various groups or classifications differ appreciably because of classification in their responses as represented by this test. To assume one per cent level of significance 99.50 for 2 and 829 degrees of freedom, and 13.46 for 4 and 829 degrees of freedom is necessary; and for five per cent level, 19.50 for 2 and 829 degrees of freedom and 5.63 for 4 and 829 degrees of freedom is essential.^{1/}

1/ Op. Cit., Wert, Neidt and Ahmann, Table VII, p. 419.

Table No. 39 A Comparison of the Sums of
Attitude Scores Among Groups
and Sub-classes.

Groups	Classification						Total	
	High		Medium		Low			
	N	ΣX	N	ΣX	N	ΣX	N	ΣX
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Pupils	36	8243	183	41393	88	20001	307	69637
Parents	31	7472	163	38025	81	18409	275	63906
Educators	22	5610	195	40557	75	19473	256	65640
Total	89	21325	505	119975	244	57883	838	199183

Table No. 40 A Comparison of the Unadjusted Means of Attitudes Scores Among Groups and Sub-classes

Groups	Classification							
	High		Medium		Low		Total	
	N	\bar{X}	N	\bar{X}	N	\bar{X}	N	\bar{X}
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Pupils	36	228.97222	183	226.19125	88	227.28409	307	226.83061
Parents	31	241.03322	163	233.28220	81	227.27160	275	232.38545
Educators	22	255.00000	159	255.07540	75	259.64000	256	256.40625
Total	89	239.60674	505	237.57425	244	237.22131	838	237.68854*

*Denotes overall grand mean, within and among groups

Table No. 41 A Comparison of the Adjusted Means of Attitude Scores Among Groups and Sub-classes

Groups	Classification						Total	
	High		Medium		Low			
	N	\bar{x}	N	\bar{x}	N	\bar{x}	N	\bar{x}
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Pupils	36	236.33656	183	237.45549	83	238.72642	307	237.68854
Parents	31	242.82325	163	238.97213	81	233.13962	275	237.68854
Educators	22	232.66561	159	236.64091	75	241.38360	256	237.68854
Total	89	237.68854	505	237.68854	244	237.68854	838	237.68854

Border means for rows and columns adjusted to grand mean.

Table No. 42 Double Classification Analysis of Variance of Attitude Scores With Means Adjusted for Disproportionality Among the Sub-classes.

Source of Variation	Degrees of Freedom	Sum of Squares		Mean Square
		Unadjusted	Adjusted	
(1)	(2)	(3)	(4)	(5)
Classification	2	386.4062	3,939.3596	1969.6798
Groups	2	133,617.6260	137,160.5794	68,580.2897
Interaction	4	139,552.0286	136,009.0752	34,002.2688
Within	829	96,875,255.6493		116,857.9682
Total	837	97,148,811.7101		

$$\text{For Classification } * F_{2,829} = \frac{1969.6798}{116,857.9682} = 0.02 *$$

$$\text{For Groups: } F_{2,829} = \frac{68,580.2897}{116,857.9682} = 0.58 *$$

$$\text{For Interaction: } F_{4,829} = \frac{34,002.2688}{116,857.9682} = 0.29 *$$

*Non-significant

7. Reliability Estimate

The reliability herein refers to a measure based on internal analysis of data obtained on a single trial of this test as a coefficient of internal consistency. As explained in chapter three under statistical design, the coefficients are determined by the Hoyt ^{1/} method.

Data employed in computing the reliability estimates are the number of responses and the base score for the response, squared. Specifically, the items, individuals, and residuals are treated in a model two analysis of variance procedure and the residual sum of squares is employed to estimate the discrepancy between the obtained and true variance. Table 43 depicts the reliability estimates of each category within and among groups and denotes overall reliability estimate for the instrument.

1/ Op. Cit., Cyril Hoyt, pp. 153-160.

Table No. 43 Reliability Estimates of Each Category Within and Among Groups and Overall Reliability for All Categories and All Groups.

Groups	Categories				
	Curricu- lum	Methods	School Plant	School Personnel	All Items
(1)	(2)	(3)	(4)	(5)	(6)
Pupils	.927	.899	.912	.908	.909
Parents	.932	.915	.965	.907	.925
Educators	.807	.838	.916	.825	.841
All Subjects	.981	.979	.982	.981	.952 *

* Indicates overall reliability estimate of the instrument

8. Variations

Whenever a population consists of sub populations, greater confidence can be placed in an estimate of a mean if random samples are obtained within each sub class. The following variations have been computed to show dispersion from the mean and to attempt inference from estimation of fiducial limits. Table 44 reveals the dispersion of the separate groups and of the combined population.

Table No. 44 A Comparison of Variations Among Groups and Estimates of Population Parameters for Homogeneous Populations at the One and Five per cent Fiducial Limits.

Measures of Variability	Pupils df 306	Parents df 274	Educators df 255	All Groups df 837
(1)	(2)	(3)	(4)	(5)
s^2	524.14	448.16	365.06	152.67
s	22.90	21.17	19.11	12.35
$s_{\bar{x}}$	1.32	1.28	1.19	.43
\bar{X}	226.83	232.39	256.41	237.69
$1\% \bar{X} \pm ts_{\bar{x}}$	223.43-230.23	229.09-235.69	253.34-259.48	236.58-238.80
$5\% \bar{X} \pm ts_{\bar{x}}$	224.24-229.42	229.88-234.90	254.08-258.74	236.85-238.53

9. Free Response

The inquiry form provided a space on the final page for additional comment if the respondent so desired. The following are some of the comments as written, under "Is there anything else you would like to tell us?"

PARENTS

Classes are too large. If politics were taken out of the municipal government the same tax rate now in effect would be more than sufficient to build better schools and pay higher salaries. In other words, we need a real businesslike administration in this city and it would aid and clear up a very poor situation that now exists in our municipal government. (High)

Some teachers are too old to teach and they have no patience. Hot meals is a good thing in school because some children have too far to walk. (Middle)

To me the old teachers should be replaced 'cause they have no patience. I have four children in school and two has old teachers and they tell me all sorts of things like the teacher never corrects their papers. I guess they have a tough job though, because they have lots of children to take care of, so its not their fault if they get mad often. (Middle)

I think they should have more schools with eight grades so that children would not have to be changing schools and traveling too far from home. I also think they ought to spend more money on the schools for new ones as the biggest part of the schools are too old to repair. (Middle)

The biggest problem, I feel, is the lack of adequate schools and lack of good salaries for teachers. I think the teachers would do a lot better job if they had smaller classes. Also, I think a lot of parents are falling down on the

job--they think they can leave all the discipline of their children to the teachers. That's impossible. (High)

I am very happy you asked my opinion in the school matters. I think our teachers are doing a very good job. It's the parents that make the schools what they are today. (Middle)

I think the teachers pay attention to the pupils when they feel like it. Many times I know the teacher does not let the children go to the basement when it is necessary. (Low)

I would like to say that in some schools there are teachers and principals who are much too strict with the children. I say this from past experience on my child. (Middle)

Children with perfect attendance in elementary school should be given some recognition. There are so few cases of that today. (Middle)

There should be something done for slow or retarded children, not by-passed. (Low)

I would like to say that there should be some help toward a clinic for the teeth to be taken care of. (Low)

Teachers could be put on a short temporary basis, then placed on a permanent basis. Why should good teachers from this city teach in another city? (Low)

The children need more supervision and they should have more sports in school. (Low)

Each time a child is absent he has to chase around different schools for the nurse or doctor for a permit. Who ever heard of anything so foolish to get back into school? (Low)

I would like to have the school gates open for the children after school hours. To me this would prevent accidents. All wooden schools should have fire escapes. Teachers should not hit the child. Teachers at 65 should be made to retire. (Low)

All schools should participate in the P.T.A. program. (Middle)

My opinion is that the teachers are doing the best under the circumstances but it isn't good enough. The classes are too large and the results show in the children's work that they don't fully understand their lessons. (Middle)

We badly need to have a new school completed. (High)

I think the teachers, principals and the school committee are doing a fine job for our children. (Middle)

Elderly spinster teachers should be required to take some kind of psycho-analysis test at reasonable intervals. Teachers should not be allowed to administer punishment, it should be left to the principal. More hygiene education is needed, and better preparation for high school is needed. (Middle)

I think the school committee could do better in getting things done. Our school has been two years getting completed and the children have been displaced for two years. (Middle)

It would be wonderful to have new schools for the children but taxes are too high. The school committee should appropriate funds for this. In many areas there is not enough police protection for the children. This deserves immediate attention. (Middle)

There should be no special privileges for a child who has a parent on the school board and teachers shouldn't hit a child or call him down in class. (Middle)

The children need more new books. The ones they bring home now are falling apart. They need more time to think when they are doing their arithmetic. The teacher gives them five minutes to do it and they get it all wrong. They don't all think fast. (Middle)

Some of the older teachers feel that they don't need extra courses. If they had extra teachers in the lower grades just to help the slower children with reading I believe retardation would be reduced in the upper grades. (High)

I feel very fortunate that my daughter has attended school here in Fall River. The teachers seem very interested and are cooperative. (High)

The progressive system of education used in the public schools today is very inferior. The idea of promoting a child who for all practical purposes has failed, in order to keep him with his own age group, is a particularly shocking one. The teachers are unwilling to give time to individual help for children who are below average. (High)

I would be willing to pay more taxes for better schooling, not schools. You can learn under an apple tree. (Low)

I am of the opinion that hot lunches are important in our schools. (Low)

The best thing for our children is that teachers and parents should get together more often and discuss their children. (Low)

The janitor should keep away from the girls' basement when they are at school. He sometimes is right there when they have to use the basement and the children don't go because he's hanging around and no doors. (Middle)

I know its hard to please everybody but I think the superintendent has done a wonderful job. Thank you. (Middle)

Children who have to go to school in shifts are at a great disadvantage. (Low)

At present the salaries seem adequate to me. (High)

My six year old son is going to the same school my 25 year old daughter went to when she was six. In 19 years I haven't seen any change except in the teachers. (Middle)

I think the P.T.A. should keep their nose out of school affairs. (Middle)

The women's auxillary police don't do a very good job and if everything here didn't seem to cost thousands and thousands of dollars and nothing gets done about it, we would be glad to pay more taxes. And they should have doors on the toilets. We know how we felt about it when we were in school. (Middle)

When a fire drill bell rings I don't think the children should go first for their coats and hats like my son in the fourth grade tells me his class does. And the kids need longer recess periods too. (Low)

I feel that the school year is much too short and the summer vacation much too long. My wife's cousin who teaches in England is amazed at all this wasted time. She has four weeks in summer. The question enters my mind, would we need such an enormous school building program if schools were used more than eight months a year. (Middle)

Some principals object so there is no P.T.A. in that school. It's only by parents and teachers working together that we can have success. (Middle)

To whom it may concern: I think and believe that the schools today are 100% better than in my time, and are doing a very good job all around, and I was happy to get this form. (Middle)

Fifty-six of the two hundred and seventy-five respondents in this group, or 20.3 per cent of all parents replying wrote comment on the final page of the inquiry form.

EDUCATORS

I feel that the married women who have been recalled are doing a fine job. I think experience should be a greater issue than age. (Low)

Teachers have to furnish a great many things needed in the classroom. An allowance should be made whereby materials needed could be paid for by the school department. We also need greater room for the children's clothing. (Middle)

A personal displeasure which I exhibit at this moment is that people with professional ability are forced into teaching positions which are below their capacity and liking. (Middle)

Most classes are too large today. Teachers cannot feel direct contact with each child. (Middle)

More help for gifted children who will be our leaders of tomorrow and less emphasis on retarded children. (Middle)

One of the things not covered is the extra amount of work the teachers are required to do outside of teaching. Too much collecting of money which I feel is not necessary and too time consuming. (Middle)

The system at one of the schools at least is not to give anything higher than a "G" the first term. I think the report cards are a waste of time because they do not give a true report. Also, the P.T.A. is a one man affair and the meetings are most unpleasant to attend. (Middle)

Folk dancing every month takes too much time away from other lessons. Also, children should not be deprived of afternoon recesses from December through April just because some of the younger children "take too much time to put on their ski suits." (Middle)

Is there any way school building construction can be speeded up, especially if a school has been burned down and children are spread all over the place and being taught in auditoriums, etc.? (Middle)

I would like to see the P.T.A. get down to real problems, some of which stem from children's lack of home training. (Middle)

There should be much more provision for help for the slower learner. There should also be more attention paid to the challenging of gifted children. (Middle)

Communities should find other sources of money other than by taxing real estate. (Middle)

The good teacher will take necessary courses without being required to do so. (Low)

The old schools are kept in excellent condition. We would like new schools if taxes can be kept within the taxpayer's means. (Low)

I would like to see sabbatical leave instituted. Professional improvement or further study would be the only reason for allowing such leave. I also feel corporal punishment should be extended to teachers on a more liberal basis. (Middle)

I feel that children should be given released time for religious instruction. I also think that experience in the Fall River schools should be given greater recognition. (Low)

Teachers should be allowed to order supplies freely within reason but certainly not be at the mercy of a principal's over-thrifty ideas. Supervisors should teach at least one lesson a year in their particular subject. Let teachers observe their methods. All teachers of same grades should meet periodically for an inter change of "suggestions and methods." Civic pride, courtesy, patriotism and good grooming are very neglected in our present set-up. (Middle)

What is the purpose of the P.T.A.? (High)

Actually there is little "System" in this system. Antiquated ideas and methods, if such they may be called, prevail. As a young teacher, I have found a tendency to belittle these "new fangled" methods and also these "four year graduates who think they know everything because they have a

degree." It is a most depressing situation. Perhaps as more young teachers enter the system the situation will change. (Low)

Movable furniture is an abomination. All desks and chairs in primary grades should definitely be nailed to the floor. Classrooms made for twenty-five should not have to seat thirty-five and forty. (Middle)

Too much stress is placed on degrees. As a result we are losing many of our good teachers to surrounding towns. We believe in courses for improvement, but not the way it has been used as a "club" over the heads of teachers here. (Middle)

Experienced trained teachers understand the child better than many with degrees. Many taking courses while teaching aren't giving the children in the classroom the needed time because they are putting time in on credits. (High)

Our big problem is shortage of qualified personnel. I would like to see new buildings, but I would far rather see more capable young people entering our system. (Low)

There is too much stress placed on new methods of teaching and too many old fashioned tests given. Also, the improvement in the lot of the grade teacher has not kept pace with that of the 'upper brass'. (Middle)

Most supervisors are doing a splendid job. A few could be of greater help to both teacher and pupil. (Middle)

We have too many interruptions and too many collections. (Middle)

There are too many incompetent substitutes being sent into the classrooms. There should be a training program for them. (Middle)

Twenty-six of two hundred and fifty-six educators made comment on the final page or a percentage of 10.1 per cent.

PUPILS

We need a bigger playground. This is a good idea. (Middle)

We should have more sports in school. (Middle)

We need a bigger school building. (Middle)

There should be a nurse or doctor in every school all the time. (High)

Some schools are fire traps like the Highland. I think the janitor should have no right to take the children from the recess games to do his work. (High)

Our teacher may be a good one but she hasn't enough respect for the principal. She is always telling us about herself and her family. (High)

We should not have to go to school in shifts. (Low)

I think school should begin at nine o'clock. We should have longer recesses. (Middle)

Why don't they have doors in the girls' bathroom? (Middle)

We should have a big and quiet library. (Low)

I think our teachers are doing a very good job. (Low)

This survey is a good idea. (Low)

I think old teachers should quit. (Middle)

We should have better desks in our school. (Low)

We children should take part in making the rules. (Middle)

We should have more sewing time and a special room for it. The parents should come to school once a month to check on their children. (Low)

We get out of school too late at night. (Middle)

The teachers should have more things to work with. (Low)

The teacher should not hit the children. (Middle)

We need more books. (Middle)

I would like to have a place to eat at school. (Middle)

The seats in our school are not very comfortable. (Middle)

I think we should have better dressing rooms and not so much beautiful teachers rooms. (Middle)

I think the teachers should pay more attention to the poor children. (Middle)

I think the school should let the children have some responsibility. (High)

Forty-two of the three hundred and seven children attempted comment on the final page of the inquiry form, or a percentage of 13.6 of the total.

10. Composite Table of Responses

The following table indicates dichotomized responses for all groups and depicts the total results of the survey.

Table No. 45

A COMPOSITE TABLE OF DICHOTOMIZED RESPONSES FOR ALL GROUPS

STATEMENT	PUPIL		PARENT		EDUCATOR		TOTALS		Disagreement Between or Among Groups
	Agree	Disagree	Agree	Disagree	Agree	Disagree	Agree	Disagree	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. I would like to see a single session so the children would get home earlier each day.....	178*	112	100	166	82	167	360	445	*Pupil
2. The schools are doing a lot better job today than they used to do.....	268	27	235	31	172	73	675	131	
3. More time should be spent on spelling.....	151	125	181	53	177	72	509	250	
4. There should be a physical education program in all the elementary schools.....	210	74	241	24	227	22	678	120	
5. Children should not go to school until they are six years old.....	125	163	109	158	149*	101	383	422	*Educator
6. I think they should have a course in wood-working for boys.....	244	42	222	33	206	32	672	107	
7. The stories in the reading program don't seem to be very interesting to the children.....	143	147	86	134	55	194	284	475	
8. They should spend more time on the "sounding out" of words in school today.....	199	87	214	28	218	32	631	147	
9. The arithmetic program at school could be much improved.....	200	84	172	71	139	96	511	251	
10. The slow learner doesn't get enough attention..	184	95	186	60	164	90	534	245	
11. The children have too many subjects in school..	106	179	61	191	137*	109	304	479	*Educator
12. They don't spend enough time on the "three R's" in the schools today.....	153	132	131	96	172	82	456	310	
13. They should spend more time on science.....	163	124	124	94	96	137*	383	355	*Educator
14. All elementary schools should include grades one through eight.....	187	103	199	58	70	148*	456	309	*Educator
15. The children should not have to go to school in shifts.....	144	128	173	89	207	39	524	256	
16. They should have a better sports program for the children at school.....	243	43	207	36	116	117*	566	196	*Educator
17. They should have planned activities for the children after school hours.....	214	77	138	114	51	181*	403	372	*Educator
18. Some of the classes are too large for good teaching to take place.....	215	72	237	23	243	10	695	105	
19. There should be a hot lunch program at school..	233	54	197	51	47	185*	477	290	*Educator
20. The idea of just so many minutes for each subject is not a good one. Sometimes children need more time for certain things.....	241	52	237	30	230	23	708	105	
21. The supervisors could be a lot more helpful....	201	75	179	52	178	61	558	188	
22. They could be more "up to date" in Fall River..	198	81	209	39	102	128*	509	148	*Educator
23. Religion should be taught in the public school,	164*	116	100	141	58	179	322	436	*Pupil
24. Geography and history should be taught as separate subjects.....	209	84	223	37	140	99	572	220	

Table No. 45
(Continued)

A COMPOSITE TABLE OF DICHOTOMIZED RESPONSES FOR ALL GROUPS (Continued)

STATEMENT (1)	PUPIL		PARENT		EDUCATOR		TOTALS		Disagreement Between or Among Groups (10)
	Agree (2)	Disagree (3)	Agree (4)	Disagree (5)	Agree (6)	Disagree (7)	Agree (8)	Disagree (9)	
25. More project work in school would make the lessons more interesting.....	273	23	237	14	153	89	663	126	
26. Some teachers use children to teach other children. I like this idea.....	167	130	118	146*	168	76	453	352	*Parent
27. There is too much stress on audio-visual materials in the schools today.....	77	216	76	127	104	148	257	491	
28. The children have too much written work and not enough explanation.....	175	110	174	69	50	195*	399	374	*Educator
29. The old methods of teaching were better than the new ways they use today.....	95	187	61	181	61	180	217	548	
30. They should have group work in the fourth, fifth and sixth grades in all schools.....	194	86	200	26	160	48	554	160	
31. They should not use old fashioned pens in writing lessons.....	163	126	180	73	130	90	473	289	
32. The teachers should be more strict with the children.....	126	165	115	122	179*	66	420	353	*Educator
33. I would like to see some group work done in arithmetic.....	213	81	199	30	197	28	609	139	
34. They should have more science experiments in class for the children.....	227	62	175	53	145	78	547	193	
35. They should give homework in the elementary school.....	163	131	181	78	126	116	470	325	
36. The schools are not catering to the needs of the children.....	156*	134	83	131	46	190	285	455	*Pupil
37. The teachers should take the children on more field trips.....	261	38	192	49	136	102	589	189	
38. The report cards don't really tell me how the child is doing.....	142	141	133	126	147	99	422	366	
39. They should have more time for drill in all school subjects.....	204	85	199	36	212	37	615	158	
40. They should have better moving pictures.....	221	67	170	44	139	93	530	204	
41. Printing is no way to teach writing.....	136	152	148*	97	101	136	385	385	*Parent
42. All children should be made to accept responsibilities in school today.....	246	42	252	19	251	4	749	65	
43. I don't think workbooks help the children.....	140	142	72	178	38	213	250	533	
44. Some of the classes are too large for the teachers to teach the children properly.....	203	85	236	28	247	8	686	121	
45. They spend too much time showing pictures to the children in school today.....	84	209	44	186	63	175	191	570	
46. They should lower the retirement age for teachers.....	192	90	179	59	167	70	538	219	
47. The time of day they have for certain subjects could be changed for the better.....	226	60	149	42	154	79	529	181	
48. They could use more large maps in school.....	240	51	196	24	187	32	623	107	

Table No. 45
(Continued)

A COMPOSITE TABLE OF DICHOTOMIZED RESPONSES FOR ALL GROUPS (Continued)

STATEMENT	PUPIL		PARENT		EDUCATOR		TOTALS		Disagreement Between or Among Groups
	Agree	Disagree	Agree	Disagree	Agree	Disagree	Agree	Disagree	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
49. All elementary schools should be one story buildings.....	154	141	193	57	187	58	534	256	
50. They don't have enough fire drills in the old school buildings.....	195	105	164	72	59	181*	418	358	*Educator
51. The heating and ventilating systems could be much improved in the school buildings.....	213	74	203	31	193	45	609	150	
52. The playground at school should be covered with a blacktop surface.....	220	68	227	28	198	35	645	131	
53. The school building is not very safe.....	123	165	72	135	29	214	224	514	
54. We should have a library in our school.....	274	22	236	15	222	19	732	56	
55. All basement toilets should have doors.....	287	13	264	6	226	22	777	41	
56. The school building is in good condition considering its age.....	257	36	216	22	242	10	715	68	
57. We need larger places for the children to hang their coats.....	210	85	155	65	127	122	492	272	
58. We need an assembly room at school.....	234	48	208	27	204	43	646	118	
59. I would be willing to pay more taxes for new and better schools.....	195	71	156	75	147	81	498	227	
60. The lighting in the classrooms is very poor....	141	151	99	112	128*	122	368	385	*Educator
61. We should have a gymnasium in our school.....	268	27	200	50	123	116	591	143	
62. They should have a lunch room at school.....	261	37	196	56	57	172*	514	315	*Educator
63. All classrooms should be equipped with sinks and running water.....	233	55	164	85	183	60	580	200	
64. The desks and chairs in our school are very uncomfortable.....	132	161	88	114	53	199	273	474	
65. Instead of repairing all the old schools, they should build new ones.....	207*	86	116	130	62	185	385	401	*Pupil
66. We need a lot more space in our school.....	198	98	167	61	114	131*	479	290	*Educator
67. The children should have a basketball court on the playground.....	261	34	212	32	124	110	597	176	
68. We can't afford new schools. Taxes are too high now.....	154	109	135	76	103	119*	392	304	*Educator
69. They should have a special room at school for showing films.....	245	50	170	72	186	76	601	198	
70. The children could use a lot more playground equipment.....	274	22	198	48	161	81	633	151	
71. The children should have hot water available in school.....	265	31	181	62	183	66	629	159	
72. They should have a special room in school for music instruction.....	220	72	155	81	116	122*	491	275	*Educator

Table No. 45
(Continued)

A COMPOSITE TABLE OF DICHOTOMIZED RESPONSES FOR ALL GROUPS (Continued)

STATEMENT (1)	PUPIL		PARENT		EDUCATOR		TOTALS		Disagreement Between or Among Groups (10)
	Agree (2)	Disagree (3)	Agree (4)	Disagree (5)	Agree (6)	Disagree (7)	Agree (8)	Disagree (9)	
73. The teachers do a good job in our school.....	275	28	225	30	247	4	747	62	
74. We need more police protection for our children..	235	57	203	51	155	83	593	191	
75. The special supervisors could be a lot more helpful to the children and teachers.....	221	64	171	43	161	74	553	181	
76. They should close the schools on all stormy days.	225	77	195	68	167	81	587	226	
77. The superintendent of buildings is doing the best job he can.....	252	46	196	30	180	34	628	110	
78. The principal is a very helpful person.....	276	27	239	16	223	18	738	61	
79. The children should not have to help the janitor.	168	128	142	112	156	83	466	323	
80. The schools should keep the parents and public better informed on what's going on.....	250	29	240	23	161	81	651	133	
81. Parent cooperation is very necessary if the child is to get the most out of his schooling.....	269	20	268	0	252	1	789	21	
82. We should have more young teachers in Fall River.	244	49	232	24	128	99	604	172	
83. The way to get and keep good teachers is to pay them more money.....	185	97	199	45	229	21	613	163	
84. The members of the school committee are doing the best job they can.....	253	39	183	45	155	54	591	138	
85. The janitor is a good person to have around the children.....	239	54	190	27	218	20	647	101	
86. The superintendent of schools is too strict.....	116	165	34	170	6	220	156	555	
87. More parents should take an interest in the school that their child attends.....	275	19	266	2	246	4	787	25	
88. The student monitors in our school are helpful...	212	56	212	18	187	50	611	124	
89. The teachers could do a lot more to keep up with the latest methods.....	216	67	184	45	106	129*	506	241	*Educator
90. Teaching school is a difficult job.....	207	85	232	25	225	27	664	137	
91. The teachers are much too strict.....	108	185	49	176	10	237	167	598	
92. All teachers should be required to take courses for improvement.....	208	85	211	35	157	83	576	203	
93. The superintendent of schools is prevented from doing many good things by the school committee...	165	82	108	59	51	137*	324	278	*Educator
94. The supervisors and special teachers do not seem interested in the children.....	110	170	58	119	28	211	196	500	
95. The school committee, the teachers and the parents should get together more on their ideas..	275	20	250	10	176	49	701	79	
96. I think we have a very good group of teachers....	265	29	230	16	248	4	743	49	

CHAPTER V

SUMMARY AND CONCLUSIONS

1. Purpose of the Study

The major objective of this study has been to study the expressed attitudes of pupils, parents, and educators with regard to the curriculum, teaching methods, school plant, and school personnel in conjunction with the elementary school program. This study has attempted to obtain the real thinking of these people concerning their school problems and to present a media whereby the assessment of their thinking might result in a more purposeful program designed to inform people about their schools.

Specifically, it was the intention of this study:

1. To survey the expressed attitudes of elementary school children, their parents, and elementary school educators with respect to the categories included in this study.
2. To explore the relationship, if any, of the influence of socio-economic class on these expressed attitudes toward the elementary school.
3. To explore the relationship among groups surveyed concerning these expressed attitudes toward the elementary school.
4. To develop an instrument and a technique that will aid educators to systematically survey the attitudes held by children, parents, and educators toward the elementary school program.

2. Plan of the Study

This study involved a population that was singular with respect to association with a common interest, the elementary school. The overall population involved sub-classification and sub-strata with reference to group and classification.

The initial procedures included a partial sampling from three schools of different socio-economic structure. From a free-writing response technique administered to the children, and from personal interview of parents and educators, the inquiry form was evolved. The final survey encompassed a city of 105,195 population in southeastern Massachusetts, and was set up on a strict sampling basis of ten per cent of the total population of children of the fourth, fifth, and sixth grades from 29 schools. Three hundred and sixty-five children, 365 parents and 262 educators participated in the final survey.

Concerning the item content, statements gathered from the interviews of the preliminary investigation were analyzed and categorized. A final list of statements was composed from the ideas most frequently mentioned. This instrument was evolved from the ideas of the people within the population to be sampled. By the nature of its operation, this study performed an instructional role through

the media of personal contact with a sampling of the total population. In addition, the study has presented a useful tool for an evaluative and instructive program of educational public relations in a community; and the instrument, evolved by the people, was presented to them in their own language.

3. Limitations of the Study

This study intended to report only the facts gleaned from the survey of expressed attitudes. There is no attempt made to evaluate the school program. The purpose is merely to indicate results of this investigation so that the items and areas may be analyzed for aid in improving the particular aspect of the program under each category, and to aid in a public relations program intent on informing all as to what is really being done in the school program.

As indicated in the scope and plan of this study, results and analysis of data are applicable only to the given population and the given areas within the confines of this particular investigation. The instrument, having originated from this population, remains peculiar to this community, though the technique of this survey may be universal in application.

Additional limitations apparent involve:

1. The time element elapsing between personal interview and application of the instrument to the city-wide sample.

2. The assumption that the expressed attitudes are true attitudes. Attempt was made to control chance variations by employing strict sampling techniques, however.
3. The personality of the investigator.
4. The absence of statistical validity due to the nature of the instrument.

4. Findings of the Study

The investigation revealed that pupils and parents as groups were in agreement in their thinking, according to their responses on 22 of 24 statements in the curriculum category; on 21 of 24 statements in the methods category; on 23 of 24 statements in the school plant category; and on 24 of 24 statements in the school personnel category. Therefore, pupil-parent agreement on 90 of 96 statements results in a percentage of 93.75 for the total inquiry, which might substantiate the idea of pupils acquiring and maintaining parent-made attitudes.

With regard to pupil-educator grouping, they were in agreement in their thinking, according to their responses, on 14 of 24 statements in the curriculum category; on 21 of 24 statements in the methods category; on 17 of 24 statements in the school plant category; and on 22 of 24 statements in the school personnel category. Therefore, pupil-educator agreement on 74 of 96 statements results in a percentage of 77.08 for the total inquiry.

Concerning parent and educator groups, there was agreement in their thinking, according to their responses, on 16 of 24 statements in the curriculum category; on 20 of 24 statements in the methods category; on 18 of 24 statement in the school plant category; and on 22 of 24 statements in the school personnel category. Therefore, parent-educator agreement on 76 of 96 statements results in a percentage of 79.16 for the total inquiry.

Regarding the relationship of classification (socio-economic) within the pupil group upon attitudes as expressed by their responses, the chi square application revealed no statistical significance of difference within the curriculum category; one statement in the methods category; one statement in the school plant category; and two statements in the school personnel category. Of the total number of statements in the inquiry form, according to the pupil responses the statistical implication reveals that four of 96 statements were affected by classification at the one-per-cent level of significance, or a percentage of 4.16.

Concerning the relationship of socio-economic classification within the parent group upon attitudes as expressed by their responses, statistical treatment revealed that three statements within the curriculum category assumed one per cent level of statistical significance; one statement within the methods category; one statement in the

school plant category; and one statement in the school personnel category attained statistical significance of difference. According to the parent responses, the statistical implication reveals that six of 96 statements were affected by classification at the one-per-cent level of significance, or a percentage of 6.25.

The relationship of socio-economic classification by school within the educator group upon attitudes as expressed by their responses, according to statistical computation, revealed no statistical significance of difference within the curriculum category; one statement in the methods category; two statements in the school plant category; and no statements in the school personnel category. According to educator responses, the statistical implication reveals that three of 96 statements were affected by classification at the one-per-cent level of significance, or a percentage of 3.12.

The chi square test of significance of difference according to classification was performed within groups. The overall effect of classification assumes a percentage for the total number of statements of 4.51, or in terms of the hypothesis, the responses to 95.49 per cent of the total number of statements in the inquiry form were made independent of classification according to statistical computation.

Application of the analysis of variance procedure heretofore described indicated that each source of variation, free from the influence of the others; that is, the classification, the group, or the interaction, have produced no statistical significance of difference; in other words, responses to the statements in this inquiry are independent of class or group, according to this statistical measure.

The findings of this study indicate that the popular notion that people are not interested in their schools may not be quite correct. The pupil and educator groups could be termed captive groups, thus a high percentage of response would naturally ensue. The parent group, however, those who are supposedly not interested in their schools, produced a response of 89 per cent from the sample potential. Their responses were mailed. Other findings of this study indicate that perhaps socio-economic status has been over-emphasized with regard to attitudes toward school. The chi square application revealed little significance of difference in this regard, and the analysis of variance revealed no statistical significance of difference. Sharing the common problems of schools apparently produces, in the overall, a common interest and a mutual type of thinking.

The estimate of reliability factor in this study has implication for the technique employed in evolving the instrument. To elicit response satisfactorily, one must

secure the confidence of the respondent. And, in this study, the personal interview produced most satisfactory results. Concerning the measures of dispersion, there is a consistency and there is a minimum, and their usefulness in estimation is evident.

It may be inferred then, that the implications of this study present a responsibility on the part of the educator to consider well a program for the periodic assessment of attitudes of pupils, parents, and teachers; and to consider well the operating techniques of such a program, that valid results ensue. Unknown attitudes, or those of a dispersed nature, are difficult to cope with. Attitudes expressed are a matter of record and present a sensible ground or framework for an intelligent, personal, and far-reaching program for an effective public relations plan that will result in greater understanding on the part of all concerned.

This instrument was successful in revealing minority attitudes. On only one statement was there complete agreement within one group. The instrument was successful in differentiating attitudes within and among groups. This technique provides the school administrator with valuable information for a constructive public relations program.

5. Implication of the Study

1. Although there was general agreement, the disagreement on some statements and the presence of minority disagreement on others points out the need for action on the part of educators with regard to the curriculum, teaching methods, school plant, and school personnel.
2. Educators appear reluctant to accept change.
3. Parents and children appear to be more forward looking than educators on many items surveyed.
4. Parents have the responsibility of visiting the schools since satisfaction or dissatisfaction may hinge upon factual condition or misunderstanding.
5. There should be closer cooperation among school administrators, teachers, and parents.
6. A continuous evaluation, plus an informative public relations program, is essential for a good educational program.

6. Suggestions for Further Research

As a result of this study, the stated hypothesis stands tenable. However, further confirmation of this hypothesis is suggested by:

1. An investigation by a team of experts to study these things as reported and to establish statistical validity.
2. A follow-up study employing this instrument in the same community.
3. A follow-up study in the same community employing the same operational techniques used in this investigation.
4. Individuals or teams of experts employing these techniques in other communities, a further validity check.
5. An investigation of these categories using the same techniques and applied to parents and non-parents within a community.
6. An investigation of these categories using the same techniques and applied to educators and non-parents within a community.
7. A similar investigation of these categories employing the same operational techniques concerning:
 - a. Junior high school
 - b. Senior high school
 - c. Private school education
 - d. Parochial school education
 - e. Junior College education
 - f. Collegiate education
8. Application of the critical incidence technique as a supplementary tool for the study of attitudes.

Before an intelligent program of educational information can be presented to the public to correct erroneous thinking, prevalent attitudes must be recognized. The writer would hope that this study, its techniques, statistical design, and analysis will prove to be a valuable addition to existing procedures, and will provide a logical and systematic method of appraisal for school administrators.

This investigation has pointed to this end.

A P P E N D I X

A

Pupil Inquiry Form
Preliminary Group Interview

<u>Encircle One</u>	<u>Boy</u>	<u>Girl</u>
<u>Grade</u>	4	5 6
<u>How old are you?</u>	_____	

Dear Pupil:

We would like to make your school a better school for you. Will you please help us?

We know that many children like some school subjects better than others. Some school children say they like the way some teachers teach things better than other ways of teaching. Some children have said that they have seen better school buildings than yours. And some children like some teachers and principals better than others.

We want to know how you feel about these things. We know that you can help us, and from what you write, we feel we can help you to have a better school.

We don't want to know your name - so don't sign your name.

We do want to know what you think about the things mentioned, so please tell us just what you think, and just how you feel about them.

.....

I. THE SUBJECTS YOU HAVE IN SCHOOL
{like reading, writing, arithmetic}
{geography, history, music, etc. }

Pupil Inquiry Form
Page Two

II. THE WAY THE TEACHERS TEACH YOU THE SUBJECTS
{like practice in writing, or using the film}
{strips, or projects or reading, or games-- }

III. YOUR OWN SCHOOL BUILDING
{like your room, the assembly room}
{the playground, the basements, etc.}

IV. THE MEN AND WOMEN WHO RUN YOUR SCHOOL
{like the teachers, the principal, the}
{supervisors, the janitor, etc. -- }

What do you like most about your school?

What do you dislike most about your school?

Is there anything else that you would like to tell us that might help us to make your school a better school?

PARENT INQUIRY FORM

(Personal Interview - Encircle A through F)

- A. Sex: Male Female
- B. Education: 1. Grade School 1-8 3. College 13-16
2. High School 9-12 4. Graduate - more than 16 or advanced
- C. Occupation: 1. Professional (prop. large bus.) 5. Proprietor - small business.
2. Semi-professional (smaller official large business) 6. Semi-skilled worker
3. Clerk-kindred worker 7. Unskilled worker
4. Skilled worker
- D. Source of Income: 1. Inherited wealth 5. Wages
2. Earned wealth 6. Private relief
3. Profits and fees 7. Public relief and non-respectable income
4. Salary
- E. House Type: 1. Excellent house 5. Fair house
2. Very good house 6. Poor house
3. Good House 7. Very poor house
4. Average house
- F. Dwelling Area: 1. Very high
2. High-better suburb (apt. area-spac. yard)
3. Above average - residen.
4. Average - (no deterioration (in neighborhood))
5. Below average - bus. section (some deterioration)
6. Low - considerably deteriorated
7. Very low - slum

I. The Curriculum

Parent Inquiry - Interview
Page Two

II. Methods

III. School Plant

IV. School Personnel

What respondent likes most about school:

What respondent dislikes most about school:

PLEASE DO NOT WRITE IN THIS SPACE

I.

--	--	--	--	--

Merely place a circle around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
1. I would like to see a single session so the children would get home earlier each day.....	1	2	3	4	0
2. The schools are doing a lot better job today than they used to do.....	1	2	3	4	0
3. More time should be spent on spelling.....	1	2	3	4	0
4. There should be a physical education program in all the elementary schools.....	1	2	3	4	0
5. Children should not go to school until they are six years old.....	1	2	3	4	0
6. I think they should have a course in wood-working for boys.....	1	2	3	4	0
7. The stories in the reading program don't seem to be very interesting to the children.....	1	2	3	4	0
8. They should spend more time on the "sounding out" of words in school today.....	1	2	3	4	0
9. The arithmetic program at school could be much improved.....	1	2	3	4	0
10. The slow learner doesn't get enough attention..	1	2	3	4	0
11. The children have too many subjects in school..	1	2	3	4	0
12. They don't spend enough time on the "three R's" in the schools today.....	1	2	3	4	0
13. They should spend more time on science.....	1	2	3	4	0
14. All elementary schools should include grades one through eight.....	1	2	3	4	0
15. The children should not have to go to school in shifts.....	1	2	3	4	0
16. They should have a better sports program for the children at school.....	1	2	3	4	0
17. They should have planned activities for the children after school hours.....	1	2	3	4	0
18. Some of the classes are too large for good teaching to take place.....	1	2	3	4	0
19. There should be a hot lunch program at school..	1	2	3	4	0
20. The idea of just so many minutes for each subject is not a good one. Sometimes children need more time for certain things.....	1	2	3	4	0
21. The supervisors could be a lot more helpful....	1	2	3	4	0
22. They could be more "up to date" in Fall River..	1	2	3	4	0
23. Religion should be taught in the public school.	1	2	3	4	0
24. Geography and history should be taught as separate subjects.....	1	2	3	4	0

Merely place a circle around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
25. More project work in school would make the lessons more interesting.....	1	2	3	4	0
26. Some teachers use children to teach other children. I like this idea.....	1	2	3	4	0
27. There is too much stress on audio-visual materials in the schools today.....	1	2	3	4	0
28. The children have too much written work and not enough explanation.....	1	2	3	4	0
29. The old methods of teaching were better than the new ways they use today.....	1	2	3	4	0
30. They should have group work in the fourth, fifth and sixth grades in all schools.....	1	2	3	4	0
31. They should not use old fashioned pens in writing lessons.....	1	2	3	4	0
32. The teachers should be more strict with the children.....	1	2	3	4	0
33. I would like to see some group work done in arithmetic.....	1	2	3	4	0
34. They should have more science experiments in class for the children.....	1	2	3	4	0
35. They should give homework in the elementary school.....	1	2	3	4	0
36. The schools are not catering to the needs of the children.....	1	2	3	4	0
37. The teachers should take the children on more field trips.....	1	2	3	4	0
38. The report cards don't really tell me how the child is doing.....	1	2	3	4	0
39. They should have more time for drill in all school subjects.....	1	2	3	4	0
40. They should have better moving pictures.....	1	2	3	4	0
41. Printing is no way to teach writing.....	1	2	3	4	0
42. All children should be made to accept responsibilities in school today.....	1	2	3	4	0
43. I don't think workbooks help the children.....	1	2	3	4	0
44. Some of the classes are too large for the teachers to teach the children properly.....	1	2	3	4	0
45. They spend too much time showing pictures to the children in school today.....	1	2	3	4	0
46. They should lower the retirement age for teachers.....	1	2	3	4	0
47. The time of day they have for certain subjects could be changed for the better.....	1	2	3	4	0
48. They could use more large maps in school.....	1	2	3	4	0

Merely place a circle around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>No Opinion</u>
49. All elementary schools should be one story buildings.....	1	2	3	4	0
50. They don't have enough fire drills in the old school buildings.....	1	2	3	4	0
51. The heating and ventilating systems could be much improved in the school buildings.....	1	2	3	4	0
52. The playground at school should be covered with a blacktop surface.....	1	2	3	4	0
53. The school building is not very safe.....	1	2	3	4	0
54. We should have a library in our school.....	1	2	3	4	0
55. All basement toilets should have doors.....	1	2	3	4	0
56. The school building is in good condition considering its age.....	1	2	3	4	0
57. We need larger places for the children to hang their coats.....	1	2	3	4	0
58. We need an assembly room at school.....	1	2	3	4	0
59. I would be willing to pay more taxes for new and better schools.....	1	2	3	4	0
60. The lighting in the classrooms is very poor....	1	2	3	4	0
61. We should have a gymnasium in our school.....	1	2	3	4	0
62. They should have a lunch room at school.....	1	2	3	4	0
63. All classrooms should be equipped with sinks and running water.....	1	2	3	4	0
64. The desks and chairs in our school are very uncomfortable.....	1	2	3	4	0
65. Instead of repairing all the old schools, they should build new ones.....	1	2	3	4	0
66. We need a lot more space in our school.....	1	2	3	4	0
67. The children should have a basketball court on the playground.....	1	2	3	4	0
68. We can't afford new schools. Taxes are too high now.....	1	2	3	4	0
69. They should have a special room at school for showing films.....	1	2	3	4	0
70. The children could use a lot more playground equipment.....	1	2	3	4	0
71. The children should have hot water available in school.....	1	2	3	4	0
72. They should have a special room in school for music instruction.....	1	2	3	4	0

Merely place a circle around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
73. The teachers do a good job in our school.....	1	2	3	4	0
74. We need more police protection for our children..	1	2	3	4	0
75. The special supervisors could be a lot more helpful to the children and teachers.....	1	2	3	4	0
76. They should close the schools on all stormy days.	1	2	3	4	0
77. The superintendent of buildings is doing the best job he can.....	1	2	3	4	0
78. The principal is a very helpful person.....	1	2	3	4	0
79. The children should not have to help the janitor.	1	2	3	4	0
80. The schools should keep the parents and public better informed on what's going on.....	1	2	3	4	0
81. Parent cooperation is very necessary if the child is to get the most out of his schooling.....	1	2	3	4	0
82. We should have more young teachers in Fall River.	1	2	3	4	0
83. The way to get and keep good teachers is to pay them more money.....	1	2	3	4	0
84. The members of the school committee are doing the best job they can.....	1	2	3	4	0
85. The janitor is a good person to have around the children.....	1	2	3	4	0
86. The superintendent of schools is too strict.....	1	2	3	4	0
87. More parents should take an interest in the school that their child attends.....	1	2	3	4	0
88. The student monitors in our school are helpful...	1	2	3	4	0
89. The teachers could do a lot more to keep up with the latest methods.....	1	2	3	4	0
90. Teaching school is a difficult job.....	1	2	3	4	0
91. The teachers are much too strict.....	1	2	3	4	0
92. All teachers should be required to take courses for improvement.....	1	2	3	4	0
93. The superintendent of schools is prevented from doing many good things by the school committee...	1	2	3	4	0
94. The supervisors and special teachers do not seem interested in the children.....	1	2	3	4	0
95. The school committee, the teachers and the parents should get together more on their ideas..	1	2	3	4	0
96. I think we have a very good group of teachers....	1	2	3	4	0

Is there anything else you would like to tell us?

If you feel like it, you may write anything you wish in the space below.

Thank you very much for your help. Please place this form in the envelope provided, seal securely, and mail.

Philip O. Coakley
34 Summer Street
North Attleboro
Massachusetts

PARENT INQUIRY FORM

A. Please underline:

This form is being filled out by: Mother and Father together
Mother
Father
Guardian

.....

DIRECTIONS

1. This will take about fifteen minutes of your time. It is not a test. It is a checklist seeking your opinion. Every answer is a right answer. It is your opinion.
2. All you have to do is read the statement. What do you think about it? That's just what we want to know.... your first impression is the answer you should give. Don't try to study the statements, because it is your first thought that is your best thought in this inquiry.
3. You have certain ideas about things. Everyone 'leans' one way or another in their feelings toward certain things. In this instance, you will 'lean' toward either agreement or disagreement with the statements mentioned. BUT, we want you to try to show us just how forcefully you 'lean' toward one way or another. It is important that you try to show just how you feel.
NOW, here is how to go about it.....

<u>SAMPLE STATEMENTS</u>	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
(1) They should close the schools on all stormy days.....	1	②	3	4	0
What do you think about this statement? If you 'lean' toward <u>agreement</u> and you feel reasonably sure that it would be a good plan to close the schools on stormy days, then you might put a circle around the ② BUT, if you feel quite sure that it is very wrong to make the children walk back and forth to school four times during a stormy day, then you would put a circle around the 1, under the Yes.					
(2) We need a new school building.....	1	2	3	④	0
What do you think about this statement? If you 'lean' toward <u>disagreement</u> and you feel reasonable sure that they do not need a new school, then you might put a circle around the 3; BUT, if you feel quite sure that it would be very wrong to build a new school when the present building is all right, then you would put a circle around the ④ under the No.					

4. Now, you are ready to begin. Use either pen or pencil, whichever you wish. It is important that you answer every statement.
5. When you have finished, there is a space where you may write about anything you wish....if you feel like it. Then, you merely place the inquiry form, unsigned, into the self addressed stamped envelope and drop it in the mail.

PLEASE DO NOT WRITE IN THIS SPACE

I.

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Merely place a circle around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>No Opinion</u>
1. I would like to see a single session so the children would get home earlier each day.....	1	2	3	4	0
2. The schools are doing a lot better job today than they used to do.....	1	2	3	4	0
3. More time should be spent on spelling.....	1	2	3	4	0
4. There should be a physical education program in all the elementary schools.....	1	2	3	4	0
5. Children should not go to school until they are six years old.....	1	2	3	4	0
6. I think they should have a course in wood-working for boys.....	1	2	3	4	0
7. The stories in the reading program don't seem to be very interesting to the children.....	1	2	3	4	0
8. They should spend more time on the "sounding out" of words in school today.....	1	2	3	4	0
9. The arithmetic program at school could be much improved.....	1	2	3	4	0
10. The slow learner doesn't get enough attention..	1	2	3	4	0
11. The children have too many subjects in school..	1	2	3	4	0
12. They don't spend enough time on the "three R's" in the schools today.....	1	2	3	4	0
13. They should spend more time on science.....	1	2	3	4	0
14. All elementary schools should include grades one through eight.....	1	2	3	4	0
15. The children should not have to go to school in shifts.....	1	2	3	4	0
16. They should have a better sports program for the children at school.....	1	2	3	4	0
17. They should have planned activities for the children after school hours.....	1	2	3	4	0
18. Some of the classes are too large for good teaching to take place.....	1	2	3	4	0
19. There should be a hot lunch program at school..	1	2	3	4	0
20. The idea of just so many minutes for each subject is not a good one. Sometimes children need more time for certain things.....	1	2	3	4	0
21. The supervisors could be a lot more helpful....	1	2	3	4	0
22. They could be more "up to date" in Fall River..	1	2	3	4	0
23. Religion should be taught in the public school.	1	2	3	4	0
24. Geography and history should be taught as separate subjects.....	1	2	3	4	0

Merely place a circle ○ around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
25. More project work in school would make the lessons more interesting.....	1	2	3	4	0
26. Some teachers use children to teach other children. I like this idea.....	1	2	3	4	0
27. There is too much stress on audio-visual materials in the schools today.....	1	2	3	4	0
28. The children have too much written work and not enough explanation.....	1	2	3	4	0
29. The old methods of teaching were better than the new ways they use today.....	1	2	3	4	0
30. They should have group work in the fourth, fifth and sixth grades in all schools.....	1	2	3	4	0
31. They should not use old fashioned pens in writing lessons.....	1	2	3	4	0
32. The teachers should be more strict with the children.....	1	2	3	4	0
33. I would like to see some group work done in arithmetic.....	1	2	3	4	0
34. They should have more science experiments in class for the children.....	1	2	3	4	0
35. They should give homework in the elementary school.....	1	2	3	4	0
36. The schools are not catering to the needs of the children.....	1	2	3	4	0
37. The teachers should take the children on more field trips.....	1	2	3	4	0
38. The report cards don't really tell me how the child is doing.....	1	2	3	4	0
39. They should have more time for drill in all school subjects.....	1	2	3	4	0
40. They should have better moving pictures.....	1	2	3	4	0
41. Printing is no way to teach writing.....	1	2	3	4	0
42. All children should be made to accept responsibilities in school today.....	1	2	3	4	0
43. I don't think workbooks help the children.....	1	2	3	4	0
44. Some of the classes are too large for the teachers to teach the children properly.....	1	2	3	4	0
45. They spend too much time showing pictures to the children in school today.....	1	2	3	4	0
46. They should lower the retirement age for teachers.....	1	2	3	4	0
47. The time of day they have for certain subjects could be changed for the better.....	1	2	3	4	0
48. They could use more large maps in school.....	1	2	3	4	0

Merely place a circle around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>No Opinion</u>
49. All elementary schools should be one story buildings.....	1	2	3	4	0
50. They don't have enough fire drills in the old school buildings.....	1	2	3	4	0
51. The heating and ventilating systems could be much improved in the school buildings.....	1	2	3	4	0
52. The playground at school should be covered with a blacktop surface.....	1	2	3	4	0
53. The school building is not very safe.....	1	2	3	4	0
54. We should have a library in our school.....	1	2	3	4	0
55. All basement toilets should have doors.....	1	2	3	4	0
56. The school building is in good condition considering its age.....	1	2	3	4	0
57. We need larger places for the children to hang their coats.....	1	2	3	4	0
58. We need an assembly room at school.....	1	2	3	4	0
59. I would be willing to pay more taxes for new and better schools.....	1	2	3	4	0
60. The lighting in the classrooms is very poor....	1	2	3	4	0
61. We should have a gymnasium in our school.....	1	2	3	4	0
62. They should have a lunch room at school.....	1	2	3	4	0
63. All classrooms should be equipped with sinks and running water.....	1	2	3	4	0
64. The desks and chairs in our school are very uncomfortable.....	1	2	3	4	0
65. Instead of repairing all the old schools, they should build new ones.....	1	2	3	4	0
66. We need a lot more space in our school.....	1	2	3	4	0
67. The children should have a basketball court on the playground.....	1	2	3	4	0
68. We can't afford new schools. Taxes are too high now.....	1	2	3	4	0
69. They should have a special room at school for showing films.....	1	2	3	4	0
70. The children could use a lot more playground equipment.....	1	2	3	4	0
71. The children should have hot water available in school.....	1	2	3	4	0
72. They should have a special room in school for music instruction.....	1	2	3	4	0

IV.

Merely place a circle ○ around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
73. The teachers do a good job in our school.....	1	2	3	4	0
74. We need more police protection for our children..	1	2	3	4	0
75. The special supervisors could be a lot more helpful to the children and teachers.....	1	2	3	4	0
76. They should close the schools on all stormy days.	1	2	3	4	0
77. The superintendent of buildings is doing the best job he can.....	1	2	3	4	0
78. The principal is a very helpful person.....	1	2	3	4	0
79. The children should not have to help the janitor.	1	2	3	4	0
80. The schools should keep the parents and public better informed on what's going on.....	1	2	3	4	0
81. Parent cooperation is very necessary if the child is to get the most out of his schooling.....	1	2	3	4	0
82. We should have more young teachers in Fall River.	1	2	3	4	0
83. The way to get and keep good teachers is to pay them more money.....	1	2	3	4	0
84. The members of the school committee are doing the best job they can.....	1	2	3	4	0
85. The janitor is a good person to have around the children.....	1	2	3	4	0
86. The superintendent of schools is too strict.....	1	2	3	4	0
87. More parents should take an interest in the school that their child attends.....	1	2	3	4	0
88. The student monitors in our school are helpful...	1	2	3	4	0
89. The teachers could do a lot more to keep up with the latest methods.....	1	2	3	4	0
90. Teaching school is a difficult job.....	1	2	3	4	0
91. The teachers are much too strict.....	1	2	3	4	0
92. All teachers should be required to take courses for improvement.....	1	2	3	4	0
93. The superintendent of schools is prevented from doing many good things by the school committee...	1	2	3	4	0
94. The supervisors and special teachers do not seem interested in the children.....	1	2	3	4	0
95. The school committee, the teachers and the parents should get together more on their ideas..	1	2	3	4	0
96. I think we have a very good group of teachers....	1	2	3	4	0

PLEASE TURN THE PAGE

Is there anything else you would like to tell us?

If you feel like it, you may write anything you wish in the space below.

Thank you very much for your help. Please place this form in the envelope provided, seal securely, and mail.

Philip O. Coakley
34 Sumner Street
North Attleboro
Massachusetts

Exp. Form #
All Rights Reserved
April 1955

EDUCATOR INQUIRY FORM

DIRECTIONS

1. This will take about fifteen minutes of your time. It is not a test. It is a checklist seeking your opinion. Every answer is a right answer. It is your opinion.
2. All you have to do is read the statement. What do you think about it? That's just what we want to know..... your first impression is the answer you should give. Don't try to study the statements, because it is your first thought that is your best thought in this inquiry.
3. You have certain ideas about things. Everyone 'leans' one way or another in their feelings toward certain things. In this instance, you will 'lean' toward either agreement or disagreement with the statements mentioned. But, we want you to try to show us just how forcefully you 'lean' toward one way or another. It is important that you try to show just how you feel.

NOW, here is how to go about it

<u>SAMPLE STATEMENTS</u>	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
(1) They should close the schools on all stormy days.....	1	②	3	4	0
What do you think about this statement? If you 'lean' toward <u>agreement</u> and you feel reasonably sure that it would be a good plan to close the schools on stormy days, then you might put a circle around the ② BUT, if you feel quite sure that it is very wrong to make the children walk back and forth to school four times during a stormy day, then you would put a circle around the 1, under the Yes.					
(2) We need a new school building.....	1	2	3	④	0
What do you think about this statement? If you 'lean' toward <u>disagree-</u> <u>ment</u> and you feel reasonably sure that they do not need a new school, then you might put a circle around the 3; BUT, if you feel quite sure that it would be very wrong to build a new school when the present building is all right, then you would put a circle around the ④ under the No.					

4. Now, you are ready to begin. Use either pen or pencil, whichever you wish. It is important that you answer every statement.
5. When you have finished, there is a space where you may write about anything you wish.... if you feel like it. Then, you merely place the inquiry form, unsigned, into the envelope provided, seal securely, and return to your principal's office.

PLEASE TURN TO PAGE ONE

PLEASE DO NOT WRITE IN THIS SPACE

I.

--	--	--	--	--

Merely place a circle around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
1. I would like to see a single session so the children would get home earlier each day.....	1	2	3	4	0
2. The schools are doing a lot better job today than they used to do.....	1	2	3	4	0
3. More time should be spent on spelling.....	1	2	3	4	0
4. There should be a physical education program in all the elementary schools.....	1	2	3	4	0
5. Children should not go to school until they are six years old.....	1	2	3	4	0
6. I think they should have a course in wood-working for boys.....	1	2	3	4	0
7. The stories in the reading program don't seem to be very interesting to the children.....	1	2	3	4	0
8. They should spend more time on the "sounding out" of words in school today.....	1	2	3	4	0
9. The arithmetic program at school could be much improved.....	1	2	3	4	0
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18. Some of the classes are too large for good teaching to take place.....	1	2	3	4	0
19. There should be a hot lunch program at school..	1	2	3	4	0
20. The idea of just so many minutes for each subject is not a good one. Sometimes children need more time for certain things.....	1	2	3	4	0
21. The supervisors could be a lot more helpful....	1	2	3	4	0
22. They could be more "up to date" in Fall River..	1	2	3	4	0
23. Religion should be taught in the public school.	1	2	3	4	0
24. Geography and history should be taught as separate subjects.....	1	2	3	4	0

Merely place a circle around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
25. More project work in school would make the lessons more interesting.....	1	2	3	4	0
26. Some teachers use children to teach other children. I like this idea.....	1	2	3	4	0
27. There is too much stress on audio-visual materials in the schools today.....	1	2	3	4	0
28. The children have too much written work and not enough explanation.....	1	2	3	4	0
29. The old methods of teaching were better than the new ways they use today.....	1	2	3	4	0
30. They should have group work in the fourth, fifth and sixth grades in all schools.....	1	2	3	4	0
31. They should not use old fashioned pens in writing lessons.....	1	2	3	4	0
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47. The time of day they have for certain subjects could be changed for the better.....	1	2	3	4	0
48. They could use more large maps in school.....	1	2	3	4	0

Merely place a circle around the number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>No Opinion</u>
49. All elementary schools should be one story buildings.....	1	2	3	4	0
50. They don't have enough fire drills in the old school buildings.....	1	2	3	4	0
51. The heating and ventilating systems could be much improved in the school buildings.....	1	2	3	4	0
52. The playground at school should be covered with a blacktop surface.....	1	2	3	4	0
53. The school building is not very safe.....	1	2	3	4	0
54. We should have a library in our school.....	1	2	3	4	0
55. All basement toilets should have doors.....	1	2	3	4	0
56. The school building is in good condition considering its age.....	1	2	3	4	0
57. We need larger places for the children to hang their coats.....	1	2	3	4	0
58. We need an assembly room at school.....	1	2	3	4	0
59. I would be willing to pay more taxes for new and better schools.....	1	2	3	4	0
60. The lighting in the classrooms is very poor....	1	2	3	4	0
61. We should have a gymnasium in our school.....	1	2	3	4	0
62. They should have a lunch room at school.....	1	2	3	4	0
63. All classrooms should be equipped with sinks and running water.....	1	2	3	4	0
64. The desks and chairs in our school are very uncomfortable.....	1	2	3	4	0
65. Instead of repairing all the old schools, they should build new ones.....	1	2	3	4	0
66. We need a lot more space in our school.....	1	2	3	4	0
67. The children should have a basketball court on the playground.....	1	2	3	4	0
68. We can't afford new schools. Taxes are too high now.....	1	2	3	4	0
69. They should have a special room at school for showing films.....	1	2	3	4	0
70. The children could use a lot more playground equipment.....	1	2	3	4	0
71. The children should have hot water available in school.....	1	2	3	4	0
72. They should have a special room in school for music instruction.....	1	2	3	4	0

number that tells how you feel about the following.

	<u>Yes</u>	<u>Agree</u>	<u>Disagree</u>	<u>No</u>	<u>Opinion</u>
73. The teachers do a good job in our school.....	1	2	3	4	0
74. We need more police protection for our children..	1	2	3	4	0
75. The special supervisors could be a lot more helpful to the children and teachers.....	1	2	3	4	0
76. They should close the schools on all stormy days.	1	2	3	4	0
77. The superintendent of buildings is doing the best job he can.....	1	2	3	4	0
78. The principal is a very helpful person.....	1	2	3	4	0
79. The children should not have to help the janitor.	1	2	3	4	0
80. The schools should keep the parents and public better informed on what's going on.....	1	2	3	4	0
81. Parent cooperation is very necessary if the child is to get the most out of his schooling.....	1	2	3	4	0
82. We should have more young teachers in Fall River.	1	2	3	4	0
83. The way to get and keep good teachers is to pay them more money.....	1	2	3	4	0
84. The members of the school committee are doing the best job they can.....	1	2	3	4	0
85. The janitor is a good person to have around the children.....	1	2	3	4	0
86. The superintendent of schools is too strict.....	1	2	3	4	0
87. More parents should take an interest in the school that their child attends.....	1	2	3	4	0
88. The student monitors in our school are helpful...	1	2	3	4	0
89. The teachers could do a lot more to keep up with the latest methods.....	1	2	3	4	0
90. Teaching school is a difficult job.....	1	2	3	4	0
91. The teachers are much too strict.....	1	2	3	4	0
92. All teachers should be required to take courses for improvement.....	1	2	3	4	0
93. The superintendent of schools is prevented from doing many good things by the school committee...	1	2	3	4	0
94. The supervisors and special teachers do not seem interested in the children.....	1	2	3	4	0
95. The school committee, the teachers and the parents should get together more on their ideas..	1	2	3	4	0
96. I think we have a very good group of teachers....	1	2	3	4	0

PLEASE TURN THE PAGE

Is there anything else you would like to tell us?

If you feel like it, you may write anything you wish in the space below.

Thank you very much for your help. Please place this form in the envelope provided, seal securely, and mail.

Philip O. Coakley
34 Sumner Street
North Attleboro
Massachusetts

FALL RIVER PUBLIC SCHOOLS

WILLIAM S. LYNCH
SUPERINTENDENT

ADMINISTRATION OFFICES

252

CATHERINE T. HARRINGTON
SECRETARY

FALL RIVER, MASSACHUSETTS

April, 1955

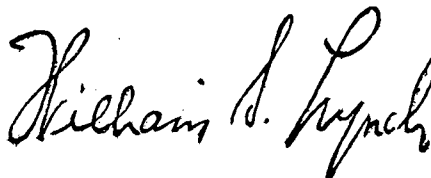
Dear Parents:

We need your help.

In an attempt to alert ourselves to the ever-increasing number of educational problems that we might better meet the needs of the children and the public who are served by the Fall River Public School system, I have authorized this survey by Mr. Philip O. Coakley.

This study, I am sure, will be of great value to us in our educational endeavor and I would solicit your cooperation in this attempt to better the Fall River schools.

For this help in this evaluative study, I thank you.

A handwritten signature in cursive script that reads "William S. Lynch". The signature is written in dark ink and is positioned to the right of the typed name.

Superintendent of Schools.

BOSTON UNIVERSITY
SCHOOL OF EDUCATION
332 BAY STATE ROAD
BOSTON 15, MASSACHUSETTS

253

Boston, Massachusetts
April 1955

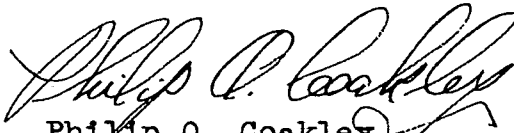
Dear Parents:

The purpose of this checklist is to try to improve your schools. In order to do this, we feel it is necessary to ask the ones who use the schools just how they feel about them. The public schools are run for the benefit of you and your children. Please help us to help you.

You have been selected as one of three hundred from the total population of parents to participate in this evaluative study. We need the cooperation of every one of those selected. We would prefer to have both parents work together on this checklist. Where this is not possible, the mother or father or guardian will be satisfactory. We ask that you kindly try to do this today. The earlier you mail this back, the more helpful it will be.

There will be no attempt made to identify you. We want to know how you feel about the statements mentioned. But, this is an anonymous inquiry. Please do not sign your name.

I thank you for helping us to help you and your children.


Philip O. Coakley

Enc:

34 Summer Street
North Attleboro,
Massachusetts
April, 1955

Dear Fellow Educator:

The purpose of this inquiry is to try to improve your elementary schools. You are one who is closest to the scene, one of the most important single contributors to the success of the elementary education program, and we need your help.

You have been selected as one of two hundred and seventy-five from the total population of educators to participate in this evaluative study. We need the cooperation of every person selected. We ask that you kindly fill out the enclosed form today, seal securely in the envelope provided, and return to your principal's office.

There will be no attempt made to identify you. We want to know how you feel about the statements mentioned, BUT, this is an anonymous inquiry. Please do not sign your name.

I thank you for your cooperation.

Philip O. Coakley

BIBLIOGRAPHY

1. Allport, F. H., and D. A. Hartman, "The Measurement of Atypical Opinion in a Certain Group," American Political Science (1925) 19:735-760.
2. Allport, Gordon W., "Attitudes," A Handbook of Social Psychology, (Edited by Carl A. Murchison) Clark University Press, Worcester, Massachusetts, 1935, 798-844.
3. Blankenship, Albert B., How To Conduct Consumer and Opinion Research. Harper and Brothers Publishers, New York, 1946.
4. Cantril, Hadley, Gauging Public Opinion. Princeton University Press, Princeton, New Jersey, 1944.
5. Capra, James, A Study of the Attitudes of Parents Toward Educational Practices in the Elementary School, and Some Influencing Factors. Unpublished Doctorate Thesis, Boston University, Boston, Mass., 1955.
6. Carr, William C. "How to Criticize Your Schools," The National Elementary Principal, (1954) Number 2, 34:8-11.
7. Churchman, C. W., and R. L. Ackoff, "Definitional Models for Belief, Opinion and Attitude," International Journal of Opinion and Attitude Research (1948) 2:151-167.
8. Cochran, W. G., Fred Mosteller and J. W. Tukey, "Principles of Sampling," Journal of the American Statistical Association (1954) 49:13-35.
9. Conrad, Herbert S., "Some Principles of Attitude Measurement: A Reply to 'Opinion-Attitude Methodology,'" Psychological Bulletin (1946) 43:570-589.
10. Crespi, Leo P., "Opinion-Attitude Methodology and the Polls" - A Rejoinder, Psychological Bulletin (1946) 43:562-569.
11. Dolio, Ardwin J., Similarities and Differences in the Educational Attitudes of Parents, Teachers and Pupils of a Selected Secondary School. Unpublished Doctorate Thesis, University of Illinois, Urbana, Illinois, 1948.

12. Doob, Leonard W., Public Opinion and Propaganda. Henry Holt and Company, New York, 1949.
13. Droba, D. D., "Methods for Measuring Attitudes," Psychological Bulletin (1932) 29:309-323.
14. Dudycha, George J., "A Critical Examination of the Measurement of Attitude Toward War," Journal of Social Psychology (1943) 18:383-392.
15. Farnsworth, Paul R., "Shifts in the Values of Opinion Items," Journal of Psychology (1943) 16:125-128.
16. Ferguson, Leonard W., "A Study of the Likert Technique of Attitude Scale Construction," Journal of Social Psychology (1941) 13:51-57.
17. Gallup, George, and S. E. Rae, The Pulse of Democracy. Simon and Schuster, New York, 1940.
18. Guttman, Louis, "A Basis for Scaling Qualitative Data," American Sociological Review (1944) 9:139-150.
19. Hand, Harold C., What People Think About Their Schools. World Book Company, New York, 1948.
20. Hand, Harold C., "Comments on a Scholar's Reply," The Bulletin of the National Association of Secondary-School Principals, (1953) Number 198, 37:169-180.
21. Hand, Harold C., and C. W. Sanford, "A Scholar's Documents," The Bulletin of the National Association of Secondary-School Principals, (1953) Number 194, 37:460-504.
22. Hansen, Morris H., and W. N. Hurwitz, "The Problem of Non-Response in Sample Surveys," Journal of the American Statistical Association (1946) 41:517-529.
23. Hoyt, Cyril J., "Test Reliability Obtained by Analysis of Variance," Psychometrika (1941) 6:153-160.
24. Johnson, Palmer O., and R. W. B. Jackson, Introduction to Statistical Methods. Prentice-Hall, Inc., New York, 1953.
25. Johnson, Palmer O., Statistical Methods in Research. Prentice-Hall, Inc., New York, 1950.

26. Kirkpatrick, Clifford and Sarah Stone, "Attitude Measurement and the Comparison of Generations," Journal of Applied Psychology, (1935) 19:564-582.
27. Likert, Rensis, "A Technique for the Measurement of Attitudes," Archives of Psychology (1932) 22:1-55.
28. McNemar, Quinn, "General Review and Summary of Opinion-Attitude Methodology," Psychological Bulletin (1946) 43:289-374.
29. Merton, Robert K., "Fact and Fictitiousness in Ethnic Opinionnaires," American Sociological Review (1940) 5:13-28.
30. Murfin, Mark, A Study of the Expressed Attitudes of Children from Two Socio-Economic Levels and the Relationship to Intelligence and Reading Achievement. Unpublished Doctorate Dissertation, Indiana University, Bloomington, Indiana, 1952.
31. Murphy, Gardner and Rensis Likert, Public Opinion and the Individual. Harper and Brothers Publishers, New York, 1938.
32. Murphy, Gardner and Lois B. Murphy, Experimental Social Psychology. Harper and Brothers Publishers, New York, 1931.
33. New York State Citizens' Committee of One Hundred for Children and Youth, A Report, The Four Million, Albany, New York, 1951.
34. Pace, C. R., "A Situation Test to Measure Social-Political-Economic Attitudes," Journal of Social Psychology (1939) 10:331-344.
35. Patterson, R. E., "The Use of Adjusting Factors in the Analysis of Data with Disproportionate Subclass Numbers," Journal of the American Statistical Association (1946) 41:334-346.
36. Phillips, Arthur Sherman, The Phillips History of Fall River, Fascicle I, Dover Press, Fall River, Massachusetts, 1944.
37. Phillips, Arthur Sherman, The Phillips History of Fall River, Fascicle II, Dover Press, Fall River, Massachusetts, 1945.

38. Phillips, Arthur Sherman, The Phillips History of Fall River, Fascicle III, Dover Press, Fall River, Massachusetts, 1946.
39. Remmers, Herman Henry, Introduction to Opinion and Attitude Measurement. Harper and Brothers Publishers, New York, 1954.
40. Remmers, Herman H. and E. E. Silance, "Generalized Attitude Scales," Journal of Social Psychology (1934) 5:298-312.
41. Remmers, Herman H., and Naomi Weltman, "Attitude Inter-relationships of Youth, their Parents and Their Teachers," Journal of Social Psychology (1947) 22:61-66.
42. Riker, Britten, "A Comparison of Methods Used in Attitude Research," Journal of Abnormal and Social Psychology (1944) 39:24-42.
43. Riker, Britten, "A Comparison of Methods Used in Attitude Research, A Correction," Journal of Abnormal and Social Psychology (1945) 40:102-103.
44. Rope, Frederick T., Opinion Conflict and School Support. Bureau of Publications, Teachers College, Columbia University, New York, 1941.
45. Rosander, Arlyn C., "An Attitude Scale Based Upon Behavior Situations," Journal of Social Psychology (1937) 8:3-15.
46. Russell, William F., How To Judge A School. Harper and Brothers Publishers, New York, 1954.
47. Scott, C. Winfield, and C. M. Hill, Public Education Under Criticism. Prentice-Hall, Inc., New York, 1954.
48. The Kiplinger Magazine, "The Truth About Our Public Schools," Changing Times (1954) Number 6, 8:7-12.
49. Thurstone, Louis L. and E. J. Chave, The Measurement of Attitude. University of Chicago Press, Chicago, Illinois, 1929.
50. Valenti, J. J., "Measuring Educational Leadership Attitudes," Journal of Applied Psychology (1952) 36:36-43.

51. Wang, C. K., "Suggested Criteria for Writing Attitude Statements," Journal of Social Psychology (1932) 3:367-373.
52. Wert, James E., C. O. Neidt and J. S. Ahmann, Statistical Methods in Educational and Psychological Research. Appleton-Century Crofts, Inc., New York, 1954.
53. Whitney, Frederick L., Elements of Research, Prentice-Hall, New York, 1950.
54. Zubin, J. and M. Gristle, "An Empirical Scale for Measuring Militarism-Pacifism," Psychological Record (1937) 1:27-32.