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ABSTRACT

To determine factors influencing the attitudes of school board members toward occupational education, a 3-part survey questionnaire designed to measure the relationship between understanding, attitudes, and social variables was returned by 1,684 of the 4,830 mailed to school board members of 770 school districts in New York State. Analysis revealed that more positive attitudes were held by members of urban districts and Boards of Cooperative Educational Services than those in suburban or rural districts, probably because they have had more experience with occupational programs. Older board members and those with a number of years of service tend to have a more positive attitude. Some recommendations were: (1) Other populations which contribute toward decision-making for occupational education should be surveyed, and (2) Some modifications should be made in the instrument before it is used again. The survey questionnaire is appended. (SB)

Research Coordinating Unit

FINAL REPORT

THE ATTITUDES OF SCHOOL BOARD MEMBERS TOWARD OCCUPATIONAL EDUCATION

Western New York School Development Council
27 California Drive
Williamsville, New York 14221

in cooperation with

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Occupational Education Research
October 1969

Final Report

ATTITUDES OF SCHOOL BOARD MEMBERS TOWARD OCCUPATIONAL EDUCATION

by

James R. Spengler

Western New York School Development Council
27 California Drive
Williamsville, New York 14221

February 1970

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FOREWORD

In the United States of America education is a function of the individual states. New York State has delegated much of its responsibility to local school districts governed by elected or appointed school boards. Each school board establishes the educational programs for its district, and in turn delegates authority and instructions for the implementation of these programs.

The attitudes of the board members toward particular phases of the total educational program are crucial in the determination of overall policy, particularly in the determination of the degree of support each program is to receive.

This publication reports on a study undertaken to discover the attitudes of school board members toward occupational education.

The findings presented may be of interest not only to the school board members whose attitudes were studied, but to all involved in the formation of educational policies.

James Vetro, Director of
Research Services
New York State School Boards Association

Carl E. Wedekind, Director
Division of Research
New York State Education
Department

ACKNOWLEDGEMENT

The Development Council is grateful to all who made this study possible and contributed to its success. The support of the New York State School Boards Association, particularly of Mr. James Vetro, is hereby acknowledged. The members of the Advisory Committee and Consultants contributed a great deal to the success of the study as did the staff of the Development Council.

The success of this study depended on the 1,700 school board members who took time from a busy schedule in the spring, when load is most heavy, to respond to a lengthy questionnaire. To these school board members a grateful Thank You.

Appreciation is expressed for the encouragement and support rendered by the New York State Education Department. Mrs. Ruth Leslie, Consultant, and Mr. John Marcille, Education Research Aide, of the Bureau of Occupational Education Research are thanked for their assistance. Miss G. Geraldine Dickson, Associate in Education Research directed the coordination of this document for publication.

P R E F A C E

The Western New York School Development Council is an independent regional educational research development agency supported by public school districts in the eight county western New York area; the Department of Educational Administration, Faculty of Educational Studies, State University of New York at Buffalo; and Federal grants.

In April 1969, a contract was given by the Bureau of Occupational Education Research of the New York State Education Department to the Western New York School Development Council to conduct a study of the Attitudes of School Board Members Toward Occupational Education. The Development Council agreed to carry out the study in cooperation with the New York State School Boards Association.

Dr. Robert W. Heller, Executive Secretary of the Western New York School Development Council and Associate Professor at SUNY, Buffalo, served as Director of the study and formed an Advisory Committee to guide the development of the study. James R. Spengler, Research Associate, was appointed Principal Investigator. The New York State School Boards Association was represented on the Advisory Committee by Mr. James Vetro, Assistant Director of Research Services.

ADVISORY COMMITTEE

and

CONSULTANTS

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

SECTION I

INTRODUCTION

The preparation of persons for occupations has developed from the transfer of skills from father to son, in earliest times, through family trades and guilds, in the Middle Ages, to become an integral part of public education today. The need for occupational education continues as technology advances and existing jobs are modified and new occupations emerge.

The concern for occupational education on the Federal level has been evident for many years. The Morrill Acts[1] that established land grant colleges and universities were the beginnings of federal support. The Smith-Hughes Act[2] and the Vocational Education Act of 1963,[3] with the 1968 amendments,[4] continued this federal support for occupational education. However, the federal role in occupational education has become more supportive rather than more directive. Federal monies are provided to aid occupational education in the states, but the programs are controlled and supervised by the states.[5]

Education for citizens has long been a concern of the various states of the Union. In providing for education, New York has established

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[1]U.S. Congress, First Morrill Act, adopted July 2, 1862, Chapter 130, 37th Congress, 2nd Session. Second Morrill Act, adopted 1890, Chapter 481, 51st Congress, 1st Session.

[2]U.S. Congress, Smith-Hughes Act (National Vocational Education Act, 1917, signed February 23, 1917). Public Law 347.

[3]U.S. Congress, Public Law 88-210.

[4]U.S. Congress, Public Law 90-576.

[5]U.S. Constitution, 10th Amendment.

a local operation,[6] which by its very nature emphasizes exercise of local initiative in decision making for education.

New York State establishes minimum standards for programs through regulations of the Commissioner of Education.[7] Beyond such minimums, the local school board has full responsibility for its school program. Local school boards, acting in their capacity as public state representatives, are responsible for local initiative and provide it through the policies they establish for their school districts.[8]

The professional staff, assisted by the supportive personnel of a school system, plans, organizes, and carries out the functions of the school as they affect the day to day learning of the children. This constitutes the formal educational program. The staff performs its function based on policies established by the school board. Consequently, the school board is a decision making body which implements, on a local level, the minimum standards established by the State and also establishes those programs deemed necessary for the education of persons in the district.

As a decision making body, a school board should "state clear objectives, carefully evaluate alternatives--all aimed at taking action."[9] The emphasis must be based on careful evaluation, since attitude is defined

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[6]New York, New York State Education Law, McKinney's Consolidation Laws of New York, Book 16, Sub-section 1401, p.182.

[7]Ibid., Sub-section 101, p. 16, and Sub-section 301, p. 208.

[8]Ibid., Sub-sections 1604, 1709, 1805, 1903, pp. 237, 276, 363, 374.

[9]Charles H. Kepner and Benjamin B. Tregoe, The Rational Manager, New York: McGraw-Hill Book Company, 1965, p. 50.

in terms of evaluation. Krech and others have defined attitudes as follows:

> "An enduring system of positive and negative evaluations, emotional feelings, and pro and con action tendencies with respect to a social object."[10]

When a school board, then, is favorably disposed to a particular area of an educational program, that school system is likely to have a strong program in that area. If the board is not favorably disposed to that area, such a program may be weak or nonexistent.

The study under discussion here was undertaken to investigate the attitudes of school board members toward occupational education and to determine what factors influence such attitudes.

FRAMEWORK OF THE STUDY

It is generally held that attitudes are the end product of the socialization process and significantly influence man's response to cultural products or processes, to other persons, and to groups of persons.[11] An existing attitude often lies dormant until, when the object of the attitude is perceived, it is expressed in speech or other overt behavior. Attitudes are usually classified into three general components: (1) cognitive (beliefs), (2) emotional (feelings), and (3) action-taking (behavior).[12] Shaw and Wright combine the first two compoenents into one cognitive component influencing the third action-taking component, which they call the effective component. Shaw and Wright define attitude as follows:

> "A relatively enduring system of evaluative, affective reactions based upon the reflecting of the evaluative concepts or beliefs

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[10] D. Krech, R.S. Cruchfield, and E.L. Bellachey, Individual in Society, New York: McGraw-Hill Book Company, 1962, p. 177.

[11] Ibid., p. 3.

[12] A.N. Oppenheim, Questionnaire Design and Attitude Measurement, New York: Basic Books, Inc., 1966, pp. 105-6.

which have been learned about the characteristics of a social object or class of social objects."[13]

Attitudes are differentiated from other personality constructs in several ways. They can be considered a mediating variable, and as such, must be measured independently.[14]

To accomplish the objectives of this study, the first two components of attitudes, the cognitive component and the emotional or affective component, will be investigated. Shaw and Wright (1967) deal with the affective attitude and the cognitive component provides the basis for an evaluation.[15] The expected contribution of the cognitive component is usually less than the affective component. However, when the situation requires a fuller cognition of the object, the number of cognitive elements and their degree of integration becomes more pronounced and therefore more important.[16] The affective component that is contained in attitude toward a given object as process derives from the cognitive structure relevant to that object or process.[17]

In the present study, a measurement of the respondents' understanding of the term occupational education is part of the cognitive component which is important in explaining the results of the attitude measures used. The assumption made in this case is that the more complete the understanding, the more positive the total attitude.

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[13]Marvin E. Shaw and Jack M. Wright, Scales for the Measurement of Attitudes, New York: McGraw-Hill Book Company, 1967, p. 31.

[14]Shaw and Wright, Scales, p. 4.

[15]Shaw and Wright, Scales, p. 11.

[16]Ralph C. Wenrich and Robert J. Crowley, Vocational Education As Perceived by Different Segments of the Populations, Ann Arbor: The University of Michigan, 1964, Cooperative Research Project No. 1577, p. 8.

[17]Shaw and Wright, Scales, p. 13.

Major Hypotheses

Three major hypotheses were formulated and tested in this study. They were:

H_1 There is a difference in the attitudes of school board members toward occupational education and other curricula.

H_2 School board members from city, central schools, and other types of school districts differ in their attitudes toward occupational education.

H_3 There is a relationship between school board members' understanding of the term occupational education and school board members' attitude toward occupational education.

In reviewing the literature, Shaw and Wright (1967) identified the following dimensions of attitudes:

1. Attitudes are based on evaluative concepts regarding characteristics of the referent object and give rise to motivated behavior.

2. Attitudes are construed as varying in quality and intensity on a continuum from positive through neutral to negative.

3. Attitudes are learned, rather than being innate as a result of constitutional development and maturation.

4. Attitudes have specific social referents, or specified classes thereof.

5. Attitudes possess varying degrees of interrelatedness to one another.

6. Attitudes are relatively stable and enduring.[18]

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[18] Shaw and Wright, Scales, pp. 6-10.

In order to examine the attitudes of school board members toward occupational education, other than depth of understanding of the term, an examination of social dimension of attitudes is necessary. Social variables, including sex, educational level, occupation, type of school district, length of service on a school board, attendance or non-attendance in an occupational education program, length of residence in a school district, and age were examined in relation to attitude. Comparing these variables with attitudes may shed some light on the formation of such attitudes on the part of the school board members.

Sub-hypotheses

These sub-hypotheses were tested in this study:

$H_{1.1}$ There is a relationship between the sex of the school board member and his attitudes toward occupational education.

$H_{1.2}$ There is a relationship between the education of the school board member and his attitudes toward occupational education.

$H_{1.3}$ There is a relationship between the occupation of the school board member and his attitudes toward occupational education.

$H_{1.4}$ There is a relationship between the length of service on the school board of the school board member and his attitudes toward occupational education.

$H_{1.5}$ There is a relationship between the experience or non-experience in an occupational education program of the school board member and his attitudes toward occupational education.

$H_{1.6}$ There is a relationship between the length of time a school board member has resided in the school district and his attitudes toward occupational education.

$H_{1.7}$ There is a relationship between the age of the school board member and his attitudes toward occupational education.

The hypotheses and sub-hypotheses were developed by consultation with the advisory committee, whose function was overall guidance of the project. Consultants were used to give guidance in certain procedures and processes within their areas of expertise.

SECTION II

METHODOLOGY

Instruments

The Cognitive Component

The definition of occupational education is taken from the Vocational Education Amendments of 1968.

> "The term 'Vocational Education /occupational education/' means vocational or technical training or retraining which is given in schools or classes (including field or laboratory work and remedial or related academic and technical instruction incident thereto) under public supervision and control or under contract with a State board or local educational agency and is conducted as part of a program designed to prepare individuals for gainful employment as semi-skilled or skilled workers or technicians or subprofessionals in recognized occupations and in new and emerging occupations or to prepare individuals for enrollment in advanced technical education programs, but excluding any program to prepare individuals for employment in occupations which the Commissioner determines, and specifies by regulation, to be generally considered professional or which requires a baccalaureate or higher degree; and such term includes vocational guidance and counseling (individually or through group instruction) in connection with such training or for the purpose of facilitating occupational choices; instruction related to the occupation or occupations for which the students are in training or instruction necessary for students to benefit from such training including job placement."
>
> It includes programs now in existence as well as new courses or programs, "so that persons of all ages in all communities of the State--those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, those with special educational handicaps, and those in post-secondary schools--will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training."[19]

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[19] U.S., The Vocational Education Amendments of 1968, Public Law 90-576.

Since many different educational programs are conducted in a school district, school board members must be constantly informed concerning changing practices and policies on the state and federal level. Their depth of understanding of a particular program depends on their individual interests, as well as the completeness of the briefing that they receive on these programs. When the board members make policy decisions on programs, the decisions are based on attitudes, which are based on cognition.

In this study, measurement of the understanding of the term occupational education is adapted from the nonmetric method of scaling developed by Guttman.[20] The items were based on the concept that a definition can be developed in segments which can be ordered and force the individual to respond to the highest and the lowest rank on a particular item. Items arranged in this manner are considered scaleable.

Two questions and one statement were developed in this form and were administered to thirty-seven graduate students in a class in School-Community Relations at the State University of New York at Buffalo. This group of advanced students was selected because they are in an age group relatively representative of school board members, and they are also knowledgeable of the educative process. The responses of this group were used to calculate a coefficient of reproducibility for this portion of the survey instrument. With N items requiring only agreement or disagreement, there are 2^N response patterns that might occur. If the items are scaleable,

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[20] L. A. Guttman, "A Basis for Scaling Qualitative Data," American Sociological Review, 1944, 9, 139-150; and L.A. Guttman, "The Cornell Technique for Scale and Intensity Analysis," Educational Psychological Measurement, 1947, 7, 247-280.

only N + 1 of these patterns will be obtained. The relative nonoccurrence of deviant patterns allows the computation of a coefficient of reproducibility:

$$R_{ep} = 1 - \frac{\text{Total number of errors}}{\text{Total number of responses}}$$

where an error is any deviation from an ideal pattern.[21] The coefficient of reproducibility for the three items in Part A of the survey instrument[22] is calculated as follows:

$$R_{ep} = 1 - \frac{13}{37}$$

$$R_{ep} = 1 - .35$$

$$R_{ep} = .65$$

The Affective Component

The second component of attitude that requires measurement is the affective component. Attitude, as an affective reaction, is a covert or implicit response which can only be measured indirectly. Attitude scales measure only one dimension of the affective reactions: positivity-negativity.[23]

Various methods may be used to measure attitudes such as scalogram analysis, summated ratings, scale discrimination technique, unfolding techniques, latent structure analysis, and others.[24] For this study a modification of the Image of Vocational Education Scale (IVE),[25] developed at the

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[21] Shaw and Wright, Scales, p. 25.

[22] Survey Instrument, Appendix - page 3.

[23] Shaw and Wright, Scales, pp. 10, 11.

[24] Shaw and Wright, Scales, pp. 24-29.

[25] Wenrich and Crowley, Vocational Education, pp. 12-28.

University of Michigan, was used.

The IVE was used with the modification that the term "occupational" was substituted for the term "vocational" in all cases, and the experimental version of the IVE scale was used with the elimination of items #5 and #27, from the original list of thirty items.

The Spearman-Brown Prophecy Method of determining reliability was used. This process uses a correlation of the total odd scores against the total even scores on each instrument. Correlation is arrived at by using a linear regression method. The result is a correlation of the odd and even scores. This correlation score then is inserted in the following formula:

$$\text{Spearman-Brown Reliability} = \frac{2 \times (\text{actual correlation of odd to even scores})}{1 + (\text{actual correlation of odd and even scores})}$$

Insertion of the value of the linear correlation for the actual correlation of odd and even scores results in this formula:

$$\text{Spearman-Brown Reliability} = \frac{2 \times (.709)}{1 + (.709)}$$

The Spearman-Brown Reliability for the IVE as used in this study was .83.

The IVE was originally developed using populations which, it was felt, were similar to the population of school board members in New York State.

Social Variables

An eight-question check list was included in the instrument to elicit the demographic data necessary to establish the social variables that may help to explain board members' attitudes. The data requested included sex, age, educational level, type of school district, occupation, and whether or not the respondent had enrolled in a program of occupational education.

Sample

The sample consisted of all school board members in New York State in March, 1969 who were members of the New York State School Boards Association. Each school board member was sent a questionnaire by first class mail and requested to return the instrument after completion. The board members of 770 school boards in the state were contacted. After four weeks, the school board presidents were again contacted by mail and asked to urge their board members to complete the forms that they had been sent. An additional questionnaire was included in the follow-up mailing. The initial mailing consisted of 4,830 questionnaires. The follow-up mailing consisted of 770 questionnaires. The number of useable returns received was 1,684.

METHOD OF SCORING

The Guttman-type scale, used to measure understanding, was scored on a cumulative basis. Each question or statement had several parts, each weighted by position (i.e., part a was first and counted 1; part b was second, and counted 2; and so on). The values of the items selected by the respondent were combined for a single, cumulative score. The highest possible score was 35, and the lowest possible score was 1.

The Likert-type scale, used to measure attitude, was scored on a 4 and 1 basis of weighting. If the statement was positive (supportive of occupational education) the score assigned for agreement with the statement was 4. Disagreement with the statement carried a value of 1. If the statement was negative (not supportive of occupational education) a score of 4 was assigned to disagreement, while 1 was assigned to agreement. In all statements, the "uncertain" choice carried a weight of 2.5. In the few cases where choices were not made, a score of 2.5 was assigned. The

weighted scores for all items were then totaled.

Normal population should produce a total attitude mean of 70 for all 28 items on the scale.

HYPOTHESIS TESTING

Hypothesis 1

The first test hypothesis, that there is a difference between attitudes of school board members toward occupational education and other curricula, was tested by a "t" ratio of responses to the statements supportive of occupational education and those supportive of other curricula. The instrument was made up of sixteen statements supportive of occupational education and twelve statements supportive of other curricula. To equalize the statements, the sixteen occupational education statements were assigned members at random from the telephone directory; and with the use of a random number table, four statements were eliminated. Each of the twelve statements supportive of occupational education was matched with a statement not supportive of occupational education baded on the judgement of the principal investigator with advice from members of the advisory committee.

The use of the "t" test assumes the existence of a normal population.[26] Since the total population of school board members in New York State was included in the sample, it was assumed that this population is "normal." Responses of 1,600 or more from a population of 4,830 are large enough to use the "t" test.

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[26] William L. Hays, Statistics for Psychologists, New York: Holt, Rinehart and Winston, 1963, p. 308.

Hypothesis 2

The second hypothesis states that there is a difference in the attitudes of school board members towards occupational education, regardless of the kind of school district they serve. To test this hypothesis, a simple ANOVA was used, since there was only one independent variable, attitude, with the dependent variable, type of school district. The simple one-way fixed design with the attitude as the row, and the nine types of school districts as the columns is depicted below:

TYPE OF SCHOOL DISTRICT

Mean Attitude	City	Union Free	Independent Union Free	Central	City Central	Inde-pendent Central	Central High	Common	BOCES*

Hypothesis 3

For Hypothesis 3, that there is a relationship between school board members' understanding of occupational education and their attitude toward it, some correlation was expected between attitudes and understanding of

*Although Boards of Cooperative Educational Services are technically not school boards, for convenience they are considered here as school boards since their functions are quite similar.

occupational education. To assess the relationship between these two variables, a simple correlation of attitudes to understanding was attempted by use of a scatter diagram. This method can be used for measures using different units and intervals[27] and indicates whether a relationship exists.

SUB-HYPOTHESIS TESTING

An investigation of the influence of social variables on attitude was one objective of this study. A series of seven variables was measured in the instrument. Two of these variables, sex and attendance or non-attendance in an occupational education program, can be classified as dichotomous variables. This condition leads to a method to compute the correlation between attitude and the dichotomous variable by means of a point biserial correlation.[28] Sub-hypothesis 1 and sub-hypothesis 7 were tested by this method.

The effect of the other social variables was examined using a Pearson product moment correlation coefficient, since a dichotomous relationship was not as strongly indicated. The divisions of the population for variables such as educational level, length of service on a school board, length of residence in a school district, age, and occupation are more arbitrary. The correlation between the divisions of these variables and attitudes served as a basis of explanation of the attitudes.

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[27] Quinn, McNemar, Psychological Statistics, New York: John Wiley and Sons, 1949, p. 92.

[28] Henry E. Garrett, and R. S. Woodworth, Statistics in Psychology and Education, New York: David McKay Company, Inc., 1958, pp. 375-380.

LIMITATIONS OF THE STUDY

The variables of understanding of the term occupational education and the social variables of the school board population are not the only variables that affect the attitude of school board members. Such variables as community economy, religious affiliation, community needs as seen by the school board member, and the type of community served by the board of education will all affect the attitude of board members toward occupational education.

It is impossible to examine the entire spectrum of influences on a person that affects his or her attitude so that the variables selected were felt to be measurable and within the scope of the time limit for this study. One would expect that if the findings of this study are significant, then steps will be taken to examine other variables that may have a bearing on the attitude of school board members.

SECTION III

RESULTS OF THE STUDY

Sample Characteristics

The State of New York is divided into 877[29] school districts. These school districts are of nine different types: City, Union Free, Independent Union Free (Village), Central, City Central, Independent Central, Central High School, Common, and Boards of Cooperative Educational Services. There is one Vocational Education Extension Board (VEEB), but for the purpose of this study, the VEEB will be considered as a Board of Cooperative Educational Services.

Officially there are 104 common school districts in the state, but the bulk of them are non-operating in the sense that they do not operate instructional programs. These common school district boards contract with other boards of education or other educational institutions for the instruction of the children in their district.

There are 771 active boards of education in the State of New York. All but one are active members of the New York State School Boards Association. There are 4,859 members of these active school boards, but some of these board members serve on more than one board, representing their local school board on a Board of Cooperative Educational Services. Whenever possible, only one questionnaire was sent to each person. Therefore, 4,830 school board members, representing 770 active districts, were contacted in this study. Board presidents were contacted with the other board members in the initial mailing and a second time in the follow-up mailing.

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[29] New York State School Boards' Association, Mr. James Vetro, personal communications.

Responses

The total number of questionnaires returned in the study was 1,692 or 35.03 percent of the 4,830 board members sampled. Sixty of the 1,692 responses were received as a result of the follow-up mailing. The 1,692 responses represent at least one response from 698 separate school districts or 91 percent of the school boards contacted. Eight questionnaires or .05% were discarded because they were unuseable because of missing data. The total number of usable responses was 1,684.

Table 1 shows the number and percent of school districts in the state and the number and percentage of the responses received from each kind of school district.

TABLE 1

The Distribution of District Type and Survey Response by Number and Percent

Type of School District*	Number in New York State*	Percentage of 877 Districts*	Number of Responses Per Type of District	Percent of Responses N = 1,684
City	62	7.0	163	9.7
Union Free	92	10.5	301	17.9
Independent Union Free (Village)	75	8.6	14	0.8
Central	360	41.0	979	58.2
Independent Central	125	14.3	44	2.6
City Central	**		19	1.1
Central High School	4	0.4	105	6.2
Common***	104	11.9	15	0.9
Board of Cooperative Educational Services	54	6.2	35	2.1
Vocational Educational Extension Board	1	0.1	#	
No Response			9	.5
TOTALS	877	100.0	1,684	100.0

*Data supplied by New York School Boards' Association.
**Included in other Central School Districts.
***Most are non-operating.
#Included in BOCES figures.

TABLE 1A

The Distribution of School Districts in New York State, Response, and Percent by District Type

Type of School District[1]	Total Number in State[2]	Number of Boards Contacted[3]	Number of Boards Responding	Percent of Districts Contacted
City	55	55	51	92.7
Union Free	82	82	71	86.6
Independent Union Free (Village)	75	75	62	82.7
Central	361	361	341	94.5
Independent Central	123	123	117	95.1
City Central	7	7	6	85.7
Central High School	4	3	3	100.0
Common[4]	11	13	7	53.8
Board of Cooperative Educational Services	51	50	39	78.0
Vocational Educational Extension Board	1	1	1	100.0
TOTAL	770	770	698	90.6

[1]Classification of Districts from Code Manual for Public School Districts, New York State, 1966-67, Albany, The University of the State of New York, The State Education Department, Bureau of Statistical Services, 1966.

[2]Compiled from data provided by Mr. James Vetro, the New York State School Boards Association, May 1969.

[3]Mailing list supplied by the New York State School Boards Association, drawn to eliminate duplications since a school board member may belong to more than one type of school board.

[4]Of the 104 common school districts only 11 are represented by school boards. The remaining 93 are represented by a single trustee each.

TABLE 1B

The Distribution of School Board Members, Response, and Percent by School District Type

Type of School District[1]	Number of School Board Members[2]	Number of School Board Members Contacted[3]	School Board Members Responding[5]	Percent of School Board Members Contacted
City	405	405	163	40.2
Union Free	482	480	301	62.7
Independent Union Free (Village)	467	456	14	3.1
Central	2,312	2,312	979	42.3
Independent Central	981	823	44	5.3
City Central	57	46	19	41.3
Central High School	31	18	105[5]	-
Common[4]	33	45	15	33.3
Board of Cooperative Educational Services	358	239	32	13.4
Vocational Education Extension Board	7	6	3[6]	50.0
TOTAL	5,133	4,830	1,675[7]	34.9

[1]Classification of Districts from Code Manual for Public School Districts, New York State, 1966-67, Albany, The University of the State of New York, The State Education Department, Bureau of Statistical Services, 1966.

[2]Compiled from data provided by Mr. James Vetro, The New York State School Boards Association, May 1969.

[3]Mailing list supplied by the New York State School Boards Association, drawn to eliminate duplications since a school board member may belong to more than one type of school board.

[4]Of the 104 common school districts only 11 are represented by school boards. The remaining 93 are represented by a single trustee each. The number of school board members contacted included 12 trustees.

[5]The classification of responses by school board members was made according to the type of school district as identified by the respondent.

[6]Response of the VEEB were included with the BOCES responses for analysis.

[7]Nine (9) respondents did not identify the type of school board.

The largest number of districts, 41.0 percent of the total, are Central districts. Central districts provided 979 responses or 58.2 percent of all the responses. The Independent Central districts (including City Central districts) represent 14.3 percent of the total districts but only 63 responses or 3.7 percent of the 1,684 responses. Union Free districts represent 10.5 percent of total districts and account for 301 or 17.9 percent of the school board members' responses. The remaining responses are accounted for by City, Independent Union Free, Central High School, Common, and BOCES boards.

Social Variables

The questionnaire requested other kinds of data that enabled the investigators to establish some social variables of the school board population tested. The types of data supplied by the respondents were: sex, age, educational level, length of service on the school board, length of residence in the school district, occupation, and whether or not the respondent had ever enrolled in an occupational educational program. Table 2 and 3 illustrate the results in terms of numbers and percents of the respondents according to age group and educational level.

TABLE 2

Distribution of Responses by Age

Age Group	Number	Percent
Under 30	16	1.0
31 - 40	310	18.4
41 - 50	766	45.4
51 - 60	460	27.3
61 and Over	131	7.8
No Response	1	.1
TOTAL	1,684	100.0

TABLE 3

Distribution of Responses by Educational Level

Educational Level	Number	Percent
Less than 6th grade	3	0.2
Less than High School	56	3.3
High School Graduate	299	17.7
Some College	360	21.4
College Graduate	965	57.3
No Response	1	.1
TOTAL	1,684	100.0

Forty-five point five (45.5) percent of the respondents were in the age group, 41-50 years of age. Only 19.4 percent of school board members responding were under age 41.

Most of the board members who responded were high school graduates or more. Sixteen hundred and twenty-four (1,624) of the respondents fall in this category. Of these 963 or 57.2 percent of the total 1,684 persons, were college graduates; and 1,325 or 78.7 percent had some college.

Table 4 and Table 5 list the number and percent of respondents as to length of service on a school board and length of residence in the school district.

Fifty-six and four tenths (56.4) percent of the responding board members had 1 to 5 years of service on the school board while 424, or 25.2 percent, had up to 10 years service. Only 16, or one percent, had more than twenty-five years service.

The trend in length of residence in the district was somewhat reversed from the trend in service on the school board. Six hundred thirty-eight

(638) board members or 37.9 percent have lived in the district more than 25 years. Only 3.8 percent, or 64 board members, have lived in the district from 1 - 5 years. If the next two groups are combined, then 579 board members, or 34.4 percent, have lived in the district from eleven to twenty years.

TABLE 4

Distribution of Responses by Length of Service

Length of Service on School Board	Number	Percent
1 - 5 years	951	56.4
6 - 10 years	424	25.2
11 - 15 years	204	12.1
16 - 20 years	59	3.5
21 - 25 years	29	1.7
More than 25 years	16	1.0
No Response	1	.1
TOTAL	1,684	100.0

TABLE 5

Distribution of Responses by Residence in District

Length of Residence in School District	Number	Percent
1 - 5 years	64	3.8
6 - 10 years	208	12.4
11 - 15 years	310	18.4
16 - 20 years	269	16.0
21 - 25 years	191	11.3
More than 25 years	638	37.9
No Response	4	.2
TOTAL	1,684	100.0

Table 6 and Table 7 illustrate the distribution of school board members responding on two dichotomous items, sex and experience in occupational educational programs.

TABLE 6

Distribution of Responses by Sex

Sex	Number	Percent
Male	1,434	85.3
Female	247	14.7
TOTAL	1,684	100.0

TABLE 7

Distribution of Responses by Experience in Occupational Education Programs

Experience	Number	Percent
Enrolled	534	31.7
Non-Enrolled	1,150	68.3
TOTAL	1,684	100.0

Males predominate as members of school boards according to the returns. A total of 1,434, or 85.3 percent of the respondents were male, while 247, or 14.7 percent of the respondents were female. This gave a ratio of about 6 to 1, male to female.

Board members non-enrolled in occupational programs predominate by more than 2 to 1. A total of 1,150 indicated they had not enrolled in an occupational educational program. This was 68.3 percent of the total. The remaining 31.7 percent or 534 respondents had been enrolled in an occupational program.

The responses of board members were separated according to the occupation of the board members. The result of this classification is tabulated in Table 8.

TABLE 8

Distribution of Responses by Occupation

Occupation	Number	Percent
Professional	948	56.2
Farming	157	9.3
Self-employed (other than Farming)	193	11.5
Craftsman of Skilled Worker	112	6.7
Service Worker	37	2.2
Clerical or Sales	92	5.5
Laborer	7	0.4
Retired	54	3.1
Housewife	82	4.9
No Response	2	.1
TOTAL	1,684	100.0

The professional group was by far the largest with 948 school board members or 56.2 percent of the total. Farming and self-employed were the occupations respectively of 157 and 193 of the school board members. These two categories make up 20.8 percent of the total. Housewives accounted for 82 more of the board members or 4.9 percent of the total.

HYPOTHESIS I

"There is a difference in the attitudes of school board members toward occupational education and other curricula."

The testing of the first hypothesis was carried out by pairing statements supporting occupational education and those non-supportive of occupational education in the attitude instrument. The assumption was made that agreement with a statement that was non-supportive of occupational education indicated support for other curricula. The scores of the paired statements were collected and compared by means of a "t" test. The results of the twelve pairs of statements are contained in Table 9. This table reports the mean scores for each statement for all of the population and the standard deviation of each statement mean score. For each pair the mean difference and "t" value is reported. The pairs of statements are also included in the table.

TABLE 9

Results of Paired Statement "t" Test

Number	Text of Statement	Statement Mean Attitude Value	Statement Standard Deviation
1.	I believe good occupational education programs in public schools attract new industries to a community.	3.05	1.19
9.	In my opinion a high school occupational education program is generally suited only for unskilled work.	3.63	0.92

1 vs. 9	Difference between means	Standard Deviation of Difference	Calculated t
	-.578	0.034	-16.79

2.	A high school graduate of an occupational education program impresses me a great deal.	2.91	1.18
14.	Occupational education in high school does not make enough students useful members of society to justify its cost.	3.58	0.88

2 vs. 14	Difference between means	Standard Deviation of Difference	Calculated t
	-.665	0.031	-21.30

TABLE 9 (cont.)

Number	Text of Statement	Statement Mean Attitude Value	Statement Standard Deviation
3.	In my opinion there are not enough students in occupational education at the high school level.	3.24	1.16
18.	Occupational education programs cannot possibly prepare high school students for a range of job opportunities potentially available to them.	3.17	1.24
3 vs. 18	Difference between means .074	Standard Deviation of Difference 0.038	Calculated t 1.94
7.	I would favor expanding occupational education programs even if available funds remain the same.	2.98	1.27
21.	I do not think occupational education in high school is as necessary for most students as are other worthwhile programs.	3.22	1.22
7 vs. 21	Difference between means -.241	Standard Deviation of Difference 0.037	Calculated t -6.55

TABLE 9 (cont.)

Number	Text of Statement	Statement Mean Attitude Value	Statement Standard Deviation
8.	In my community many people oppose an increase in occupational education programs as they are currently administered.	2.08	1.23
10.	Most occupational education programs offered nowadays in high school are hopelessly out-of-date.	3.23	1.16

8 vs. 10	Difference between means	Standard Deviation of Difference	Calculated t
	-1.15	0.044	-25.77

13.	For many students in high school there should be greater emphasis on earning a living through an occupational education program.	3.35	1.01
25.	It is more important to provide many students with a sound basic education than to use the time for occupational education.	2.91	1.33

13 vs. 25	Difference between means	Standard Deviation of Difference	Calculated t
	.627	0.036	17.21

TABLE 9 (cont.)

Number	Text of Statement	Statement Mean Attitude Value	Statement Standard Deviation
15.	I believe that the function of a high school is to develop occupational skills in all its students.	1.96	1.33
17.	In my opinion taking occupational education hinders students from further education after high school.	3.47	1.06
15 vs. 17	Difference between means: -1.51	Standard Deviation of Difference: 0.040	Calculated t: -37.64
16.	My community alone or in conjunction with other communities should provide a wide variety of occupational programs to fit the abilities of most students not going to college.	3.744	.78
28.	Most occupational education courses in my opinion lead nowhere.	3.743	.73
16 vs. 28	Difference between means: .001	Standard Deviation of Difference: 0.025	Calculated t: .04

TABLE 9 (cont.)

Number	Text of Statement	Statement Mean Attitude Value	Statement Standard Deviation
20.	I am thoroughly sold on offering occupational education in high school.	3.69	.82
27.	The occupational education program in high school should be intended mainly for youth of limited academic talent.	2.93	1.37

20 vs. 27	Difference between means	Standard Deviation of Difference	Calculated t
	.767	0.036	21.16

22.	Free occupational education after high school should be available to students currently enrolled in high school occupational programs.	2.62	1.35
5.	Most students who take occupational education in high school in my opinion lack too many other scholastic skills.	3.00	1.28

22 vs. 5	Difference between means	Standard Deviation of Difference	Calculated t
	-.38	0.033	-8.30

TABLE 9 (cont.)

Number	Text of Statement	Statement Mean Attitude Value	Statement Standard Deviation
23.	There should be more money set aside in the school budget for occupational education.	2.93	1.24
6.	In my opinion occupational education in the high school is highly overrated.	3.53	.99
23 vs. 6	Difference between means: -.596	Standard Deviation of Difference: 0.033	Calculated t: -17.80
26.	I should like to see occupational education encouraged more among high school students.	3.28	1.07
4.	Students should begin occupational programs after they graduate from high school, not before.	3.76	.77
26 vs. 4	Difference between means: -.387	Standard Deviation of Difference: 0.027	Calculated t: -14.46
	Total Positive Statements	36.12	34.30
	Total Negative Statements	40.16	38.25
T.P. vs. T.N.	$\frac{M_{tp} - M_{tn}}{-4.04}$	Standard Deviation of Difference: 0.029	Calculated t: -11.85

The table "t" value for the size of the sample that was used in this report was 3.090 at the .001 level. The overall total "t" value was significant and indicated a difference in attitude between occupational education programs and academic programs.

On the basis of examination of pairs of statements, the "t" values for all pairs were significant except for pairs 3 vs. 18 and 16 vs. 28 which were less than the tabled "t" value of 3.090.

Hypothesis I, "There is a difference in the attitudes of school board members toward occupational education and other curricula," was supported by the statistical results. However, due to the generally high positive mean values and the limitations of the pairing of the statements, it appeared that measurement was a difference of degree of positive attitude rather than a difference in attitude toward occupational education and attitude toward other programs.

HYPOTHESIS II

"School board members from city, central schools, and other types of school districts, differ in their attitudes toward occupational education."

This hypothesis was tested using a simple one-way analysis of variance (ANOVA) and produced a calculated "F" value of 3.605 which is significant with a probability value less than .001 with 8 and 1634 degrees of freedom. The hypothesis was supported, and to locate the differences between districts, a series of two-way factorial analyses of variance were attempted.

The design was established with the nine types of school districts establishing columns and the various other social variables established as the rows. The various cell means were calculated and the significance of the difference between districts and difference among levels of the social variables, on the basis of cell means, was examined. The effect of interaction was also examined in a few cases.

Two analyses of a two by nine design were carried out: (1) Sex against school district, and (2) Experience in occupational education against school district.

Sex

Table 10 represents the cell mean attitude values obtained by sex in each of the different types of school districts.

TABLE 10

Cell Mean Attitude in School Districts by Sex

Sex	Type of School District								
	City	Union Free	Independent Union Free	Central	City Central	Independent Central	Central High	Common	B.O.C.E.S.
Male	89.8	87.1	86.0	86.4	93.8	87.9	88.8	95.2	96.1
Female	89.4	83.8	89.0	87.6	90.1	84.1	87.4	92.5	97.0

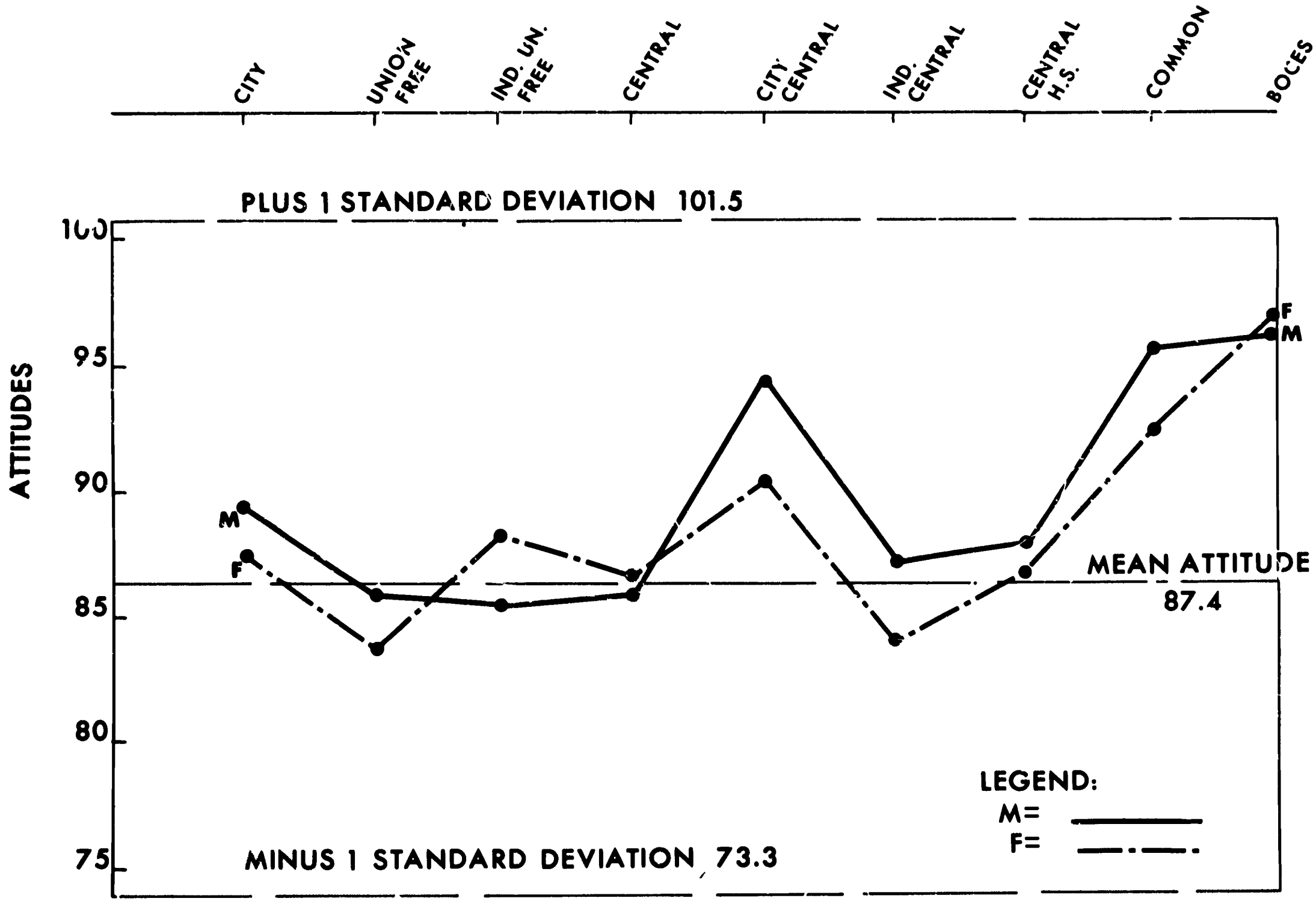
The two-way factorial ANOVA was carried out and "F" values obtained for the effect of the difference in districts, difference in sex, and the interaction effects. The effect of the difference in districts provided a calculated "F" value of 3.73 with a probability of less than .0003. The "F" value between sex was .0703 and of no significance. The interaction between sex and type of school district gave an "F" value of .4788 and was also of no significance.

The cell mean attitude values were plotted for each type of school district by sex and are presented in Figure 1.

Examination of Figure 1 showed that the mean attitude of males is above the mean sample population value of 87.4 in City, City Central, Independent Central, Central High School, Common and BOCES school districts and below the sample population mean in Union Free, Independent Union Free and Central districts. Females, on the other hand, have mean attitudes above the sample population mean in City, Independent Union Free, Central, City Central, Central High School and BOCES boards. In each case, the

FIGURE 1

MALE - FEMALE ATTITUDES



Experience in Occupational Education Programs

A second two by nine factorial analysis was carried out with experience or non-experience in occupational education programs being tested against the nine types of school districts. As in the first two by nine classification, 18 cell means were obtained. These cell means are recorded on Table 11.

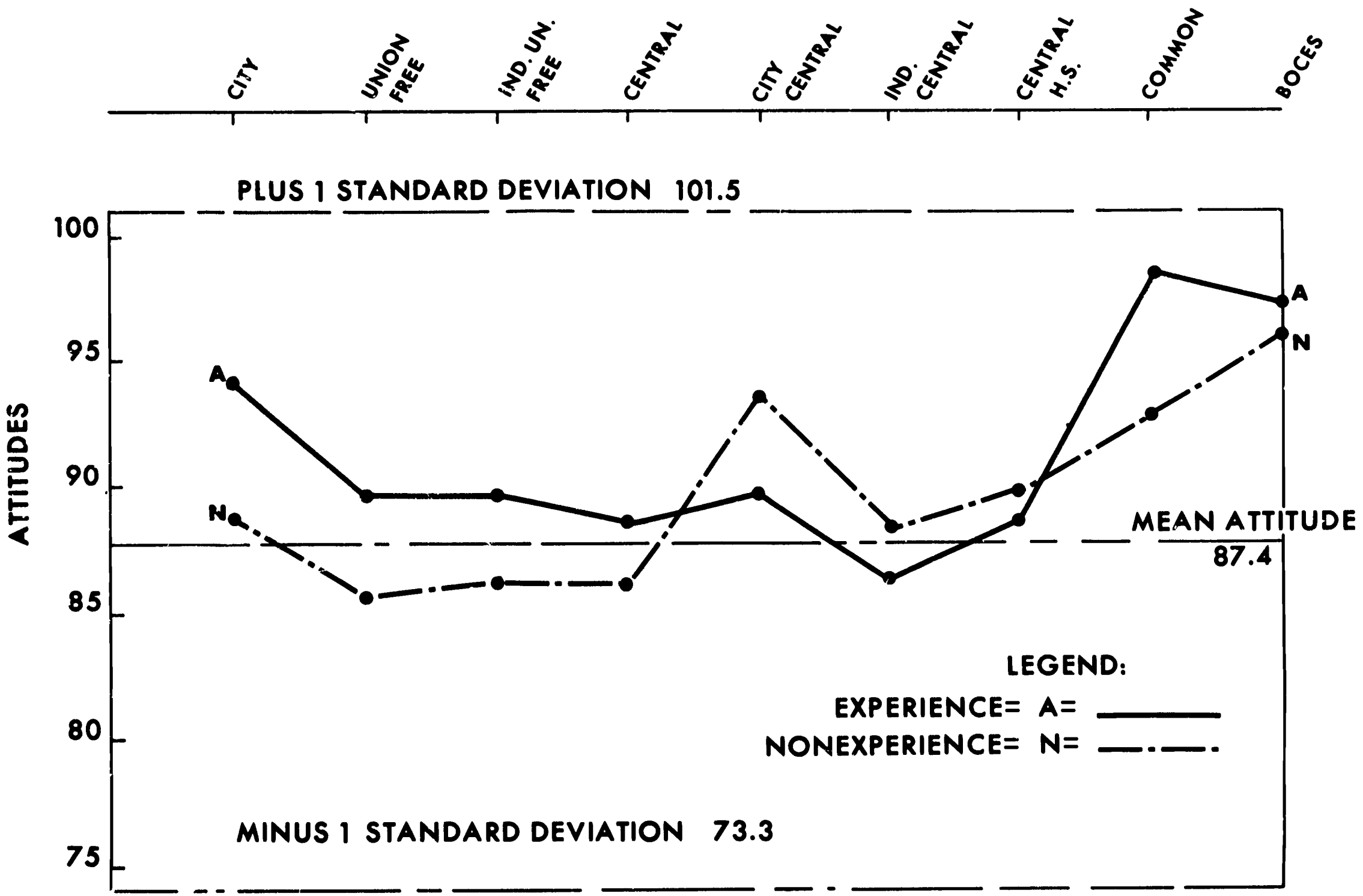
TABLE 11

Cell Mean Attitude in School Districts by Experience and Non-Experience in Occupational Programs

	Type of School District								
	City	Union Free	Independent Union Free	Central	City Central	Independent Central	Central High	Common	B.O.C.E.S.
Experience	93.7	89.5	89.5	88.0	89.5	85.6	97.9	97.9	97.5
Non-Experience	88.3	85.1	86.1	85.9	93.0	87.8	92.5	92.5	95.4

The cell mean values were plotted in Figure 2 and the balance of the ANOVA was completed. The analysis of variance between districts yielded a calculated "F" of 3.76 with a probability value of .0003. The variance between experience and non-experience yielded an "F" value of 12.24 with a "p" value of .0005. The interaction factor yielded an "F" of .6805 and was not significant. There was a definite difference due to experience and non-experience in occupational education programs.

FIGURE 2
ATTITUDES BY EXPERIENCE OR NON-EXPERIENCE IN OCCUPATIONAL PROGRAM



An examination of the plotted cell means in Figure 2 showed that those school board members who had experience in an occupational education program had cell mean attitude values above the sample population means in all districts except in Independent Central school districts. Those school board members who did not have experience in occupational education programs had cell mean attitude values above the sample population mean in City, City Central, Independent Central, Central High School, Common and BOCES districts. As with sex, the variation was within one standard deviation of the sample population mean attitude.

Other Social Variables

The other social variables were treated similarly in a two-way factorial, ANOVA design. In all cases the columns were established by using the nine types of school districts and the rows were established by the several categories for each variable.

Age, for example, had five established categories and a five by nine factorial design was drawn for age consisting of 45 cells. Table 12 contained the cell mean attitudes for each category against the type of school district. It was noted that 7 of the 45 cells were empty indicating no responses in these categories. The presence of empty cells complicated further analysis by computer in the time remaining before the report was prepared.

Plotting the cell mean attitudes in Figure 3 gave an indication of the distribution and allowed an analysis by visual methods based on a sample population mean attitude of 87.4 and a standard deviation of sample population mean of 14.

TABLE 12

Cell Mean Attitude Values in Districts by Age Groups

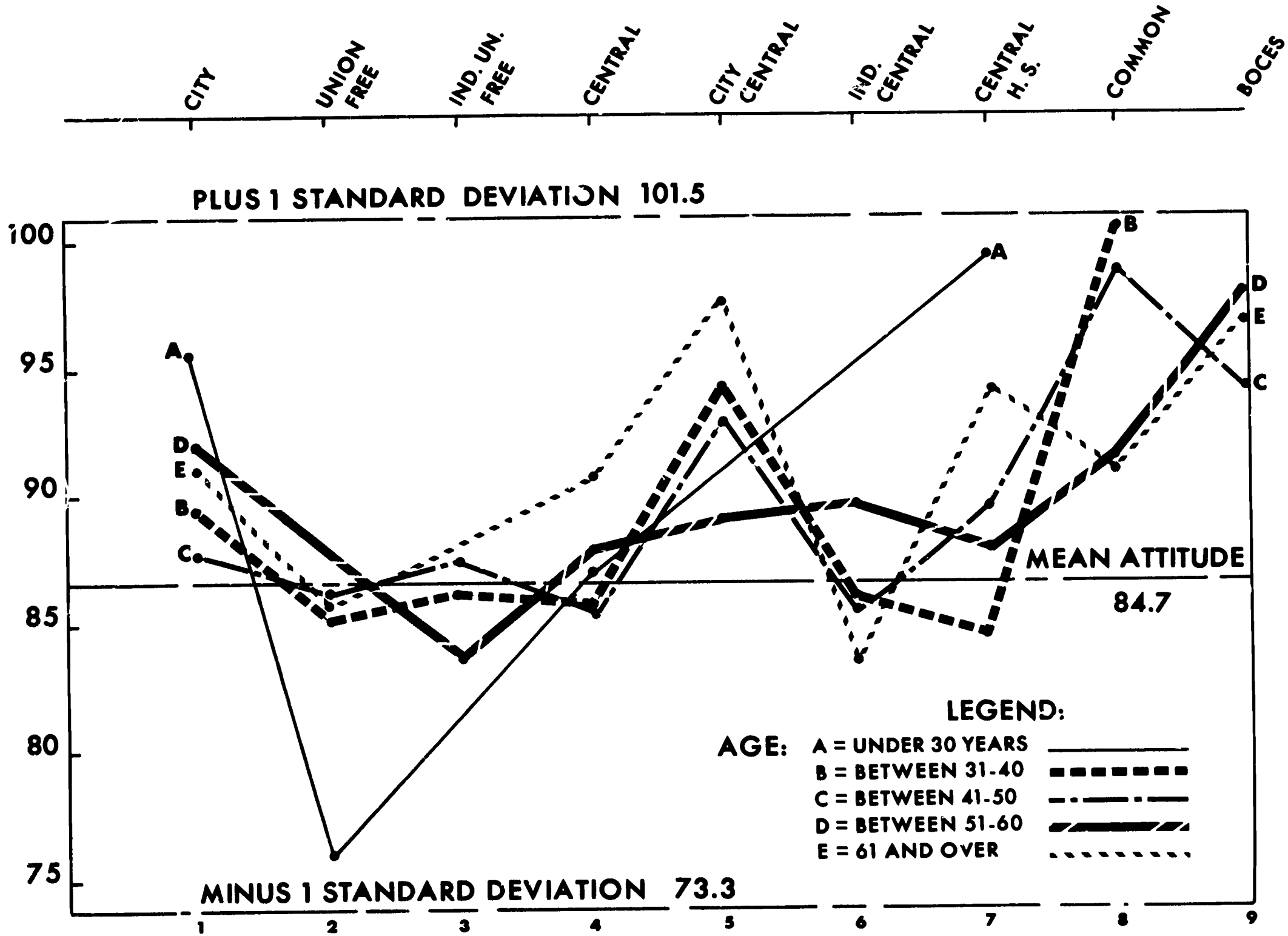
Age Group	Type of School District								
	City	Union Free	Independent Union Free	Central	City Central	Independent Central	Central High	Common	B.O.C.E.S.
Under 30	95.5	76.0	E	87.5	E	E	98.5	E	E
31 - 40	89.7	85.3	74.5	85.8	94.8	87.3	84.4	100.4	E
41 - 50	88.4	86.7	86.9	85.3	93.4	86.9	89.9	98.5	94.6
51 - 60	91.4	87.6	88.3	88.2	89.1	89.5	88.1	91.0	96.9
61 & Over	91.0	86.4	E	91.0	97.8	84.0	94.1	91.0	96.5

E = Empty Cells

In four types of school districts (City, City Central, Common and BOCES), the mean attitudes of school board members of all age groups were above the sample population mean. In all the other districts the cell mean attitude values of the different age groups clustered close to the sample population mean attitude of 87.4. The exception to this statement was the Under 30 age group which appeared in only four districts and except for the Central school districts tended to be the extreme high or extreme low value. This was a relative judgement, however, because the values in Figure 3 on page 39 were all within plus or minus one standard deviation.

Educational Level also utilized a five by nine scheme for the two-way, factorial analysis of variance. The expected 54 cells were presented but again the presence of 12 empty cells prevented the completion of the

FIGURE 3
ATTITUDES BY AGE



analysis of variance. Table 13, however, presents the cell mean attitudes of the five different educational levels in the nine kinds of school districts.

TABLE 13

Cell Mean Attitude in School Districts by Educational Level

Educational Level	Type of School District								
	City	Union Free	Independent Union Free	Central	City Central	Independent Central	Central High	Common	B.O.C.E.S.
Less than 6th Grade	E	E	E	84.5	E	E	E	E	E
Less than High School	94.0	93.9	E	91.3	E	95.5	91.3	101.5	107.5
High School Graduate	91.9	88.5	E	88.4	E	90.1	87.0	88.0	91.0
Some College	93.4	87.4	82.0	87.5	94.3	89.5	87.9	91.5	94.9
College Graduate	88.3	85.6	87.0	85.1	91.8	85.6	89.7	95.5	96.7

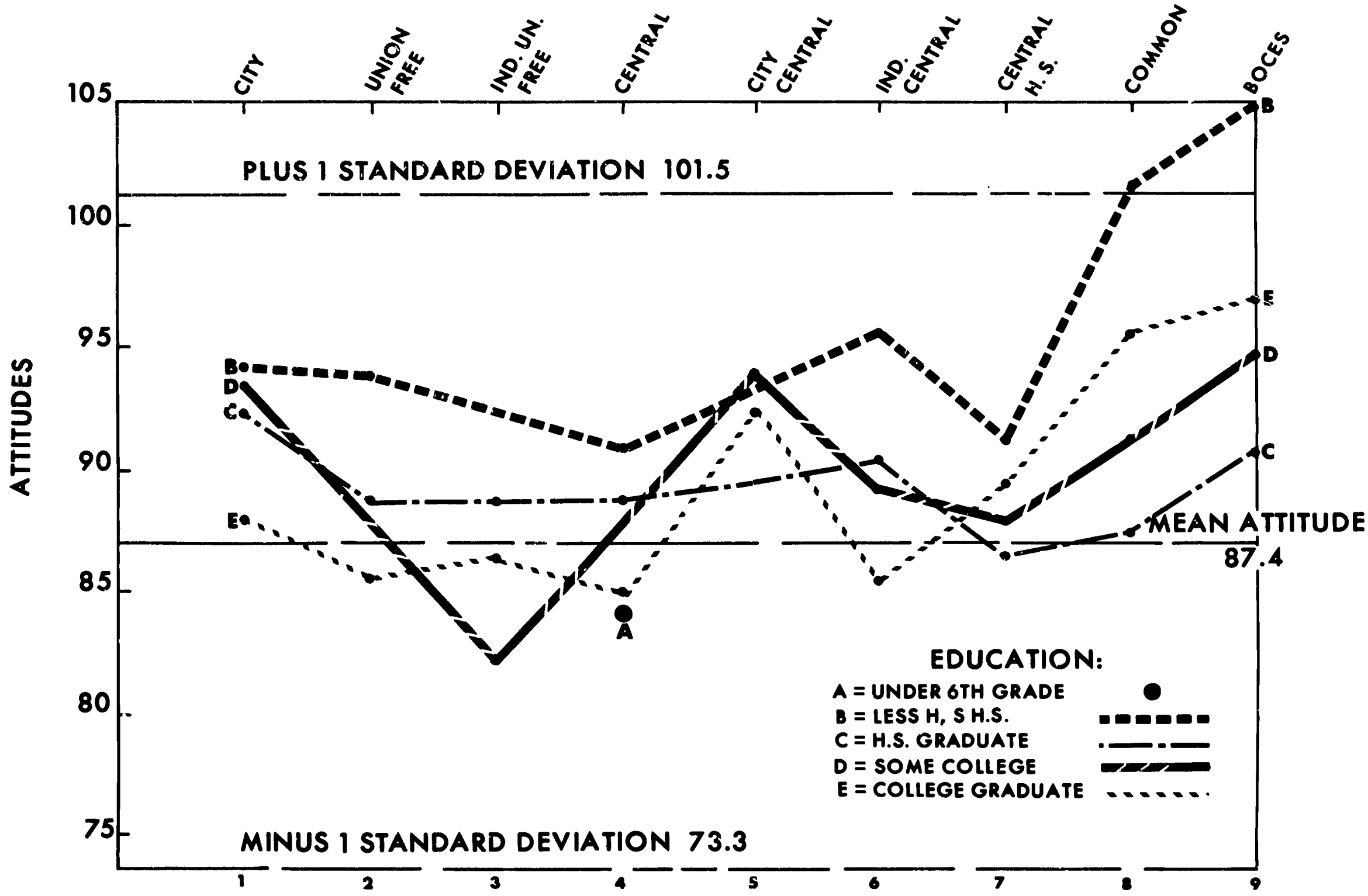
E = Empty cells

Only the Central school districts indicated a school board member who had less than a sixth grade educational level. Only Independent Union Free and City Central districts had school board members all of whom had graduated from high school and had some college education.

A plot of the cell mean attitudes of educational levels in the several districts was made as shown in Figure 4 on page 41 .

Examination of the plotted values showed that the mean attitudes

FIGURE 4
ATTITUDES BY EDUCATION LEVEL



of all educational levels were above the sample population mean attitude in City, City Central, Common and BOCES school districts. The mean attitude of board members with educational levels of some college and college graduate were below the sample population mean in Independent Union Free districts. The cell mean atttitude of college graduates was below the sample population mean in Union Free, Independent Union Free, Central and Independent Central districts.

The cell mean attitudes ranged within plus or minus one standard deviation in all cases except in the Less than High School category in Common and BOCES districts. In the Common districts the cell mean attitude was one standard deviation above the mean and in the BOCES districts, the cell mean attitude was above a plus one standard deviation.

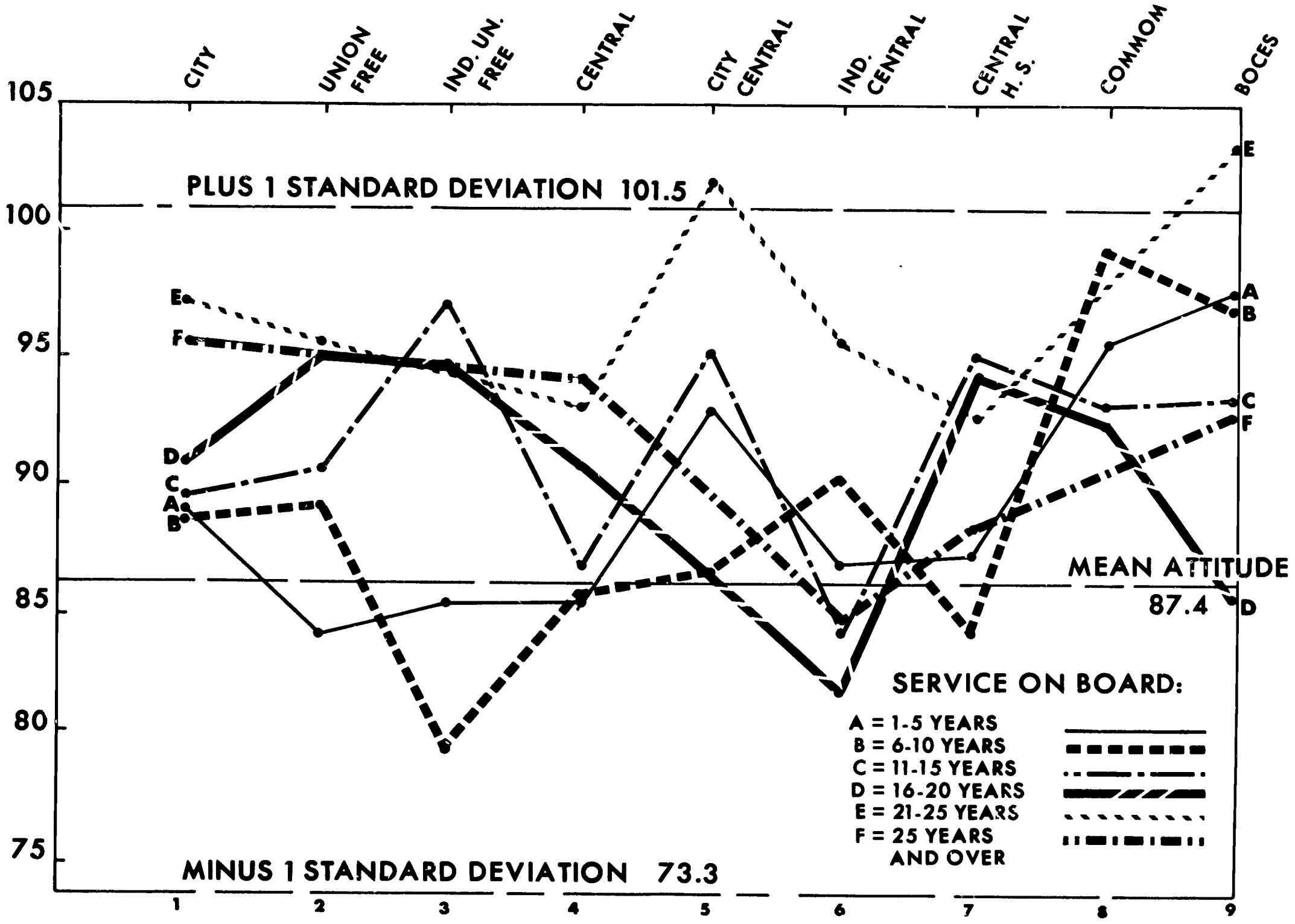
Years Service on the Board

The years of service of school board members served as another social variable to measure attitudes. Table 14 presented the sample population cell mean by type of school district against the five categories of service on the school board.

The presence of seven empty cells in the two-way, factorial design of the analysis of variance again forced the use of a figure on which was plotted the cell mean attitudes. Figure 5 on page 43 showed the relationship of school board members in the various districts by years of service.

The cell mean attitudes of school board members with 1-5 years experience fell above the sample population mean in all but three types of districts. These three types of districts were Union Free, Independent Union Free, and Central districts. The cell mean attitude for school board members with 6-10 years service fell above the mean in all district

FIGURE 5
ATTITUDES BY YEARS OF SERVICE ON BOARD OF EDUCATION



types except Independent Union Free, Central, Central High school, and City Central districts. The cell mean attitudes fell above the mean for all remaining groups except the Independent Central and BOCES districts. In the Independent Central districts, the cell mean attitudes were below the sample population mean attitude for the Board members with 11-15 years, 16-20 years, and 25 years and over categories. In the BOCES districts, the cell mean attitude fell below the sample population mean attitude for the board members in the 16-20 years service group.

TABLE 14

Cell Mean Attitude in School Districts
by Years Service on School Board

Years of Service	Type of School District								
	City	Union Free	Independent Union Free	Central	City Central	Independent Central	Central High	Common	B.O.C.E.S.
1 - 5 years	89.3	84.3	85.9	85.7	92.4	87.7	88.4	95.3	97.0
5 - 10 years	89.2	89.2	79.5	87.0	87.3	90.3	84.8	99.3	96.8
11 - 15 years	89.6	90.5	97.0	87.5	95.1	81.6	95.1	93.0	93.3
16 - 20 years	91.0	95.1	94.8	90.7	103.0	78.3	94.4	92.5	86.5
21 - 25 years	97.4	95.5	E	93.3	E	95.5	92.0	E	103.3
25 & Over	95.5	E	E	94.2	E	84.3	88.0	E	92.5

E = Empty cells

All of the cell mean attitudes fell within one standard deviation above and below the mean except for the 21 - 25 year category in City Central and BOCES districts. In both cases, this category recorded a cell mean attitude greater than one standard deviation above the sample population mean attitude.

Residence in the School District

The model respons to the length of residence in the school district were in the more than 25 years category. Of 1,680 responses, 638 or 38 percent were in this category. The cell mean attitude of this group and the cell mean attitude of the five other categories were recorded on Table 15. The cell mean attitudes were differentiated by Type of School District.

TABLE 15

Cell Mean Attitude in School Districts by Years of Residence in the School District

Years of Residence	Type of School District								
	City	Union Free	Independent Union Free	Central	City Central	Independent Central	Central High	Common	B.O.C.E.S.
1 - 5 years	E	87.3	74.5	85.2	E	75.6	81.7	83.5	101.5
6 - 10 years	89.8	84.8	E	86.1	97.0	87.2	89.8	103.8	91.0
11 - 15 years	87.4	86.7	87.5	85.1	82.0	90.1	87.8	95.8	94.0
16 - 20 years	91.4	86.1	84.0	86.2	97.0	93.1	92.3	E	93.7
21 - 25 years	92.2	87.8	85.0	86.9	E	88.9	84.5	92.5	96.1
Over 25 years	89.4	88.2	95.5	87.7	91.9	84.3	89.5	94.0	97.6

E = Empty cells

The plot of the cell mean attitudes from Table 12 resulted in Figure 6. The cell mean attitudes were plotted by school district type in each of the six categories of length of residence in the district.

The modal group, Residence in the District for more than 25 years, produced cell mean attitudes consistantly above the mean in all districts except the Independent Central district. In the five of the six types of districts where residents of 1 - 5 years were recorded as board members, the mean cell attitudes of this category of school board members were consistantly below the sample population mean attitude. In the BOCES districts, however, the cell mean attitude of this category was well above the sample population mean attitude.

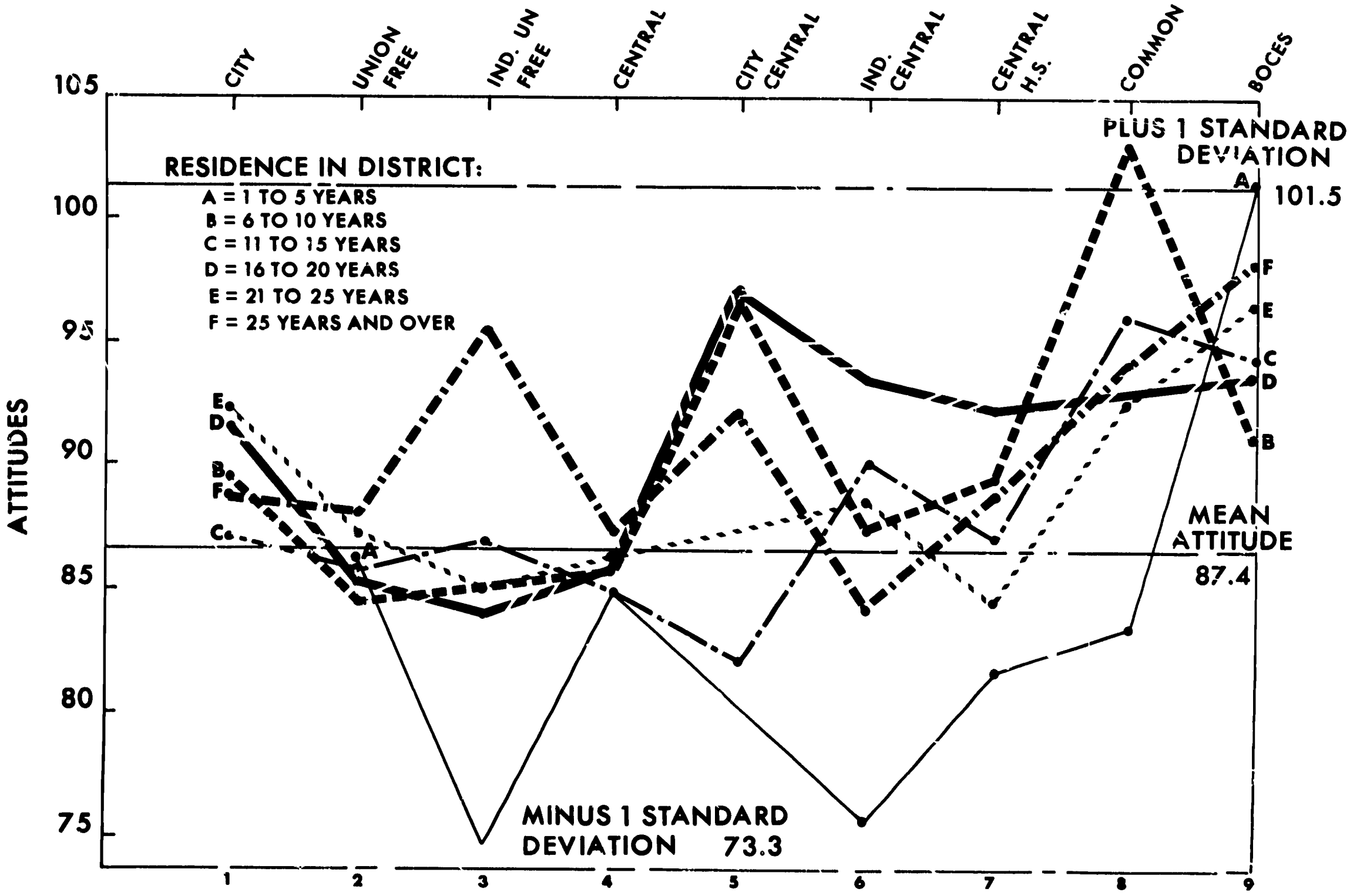
In City, Common and BOCES districts, all of the cell mean attitudes were recorded above the sample population mean attitude. In the Union Free, and Central districts the cell mean attitudes were grouped close to the sample population mean. In the other districts the distribution was more widespread.

The distribution of cell mean attitudes for all categories in all district types fell within one standard deviation above and below the sample population mean attitude except for the 6 - 10 year residence group in the Common school districts which was recorded as greater than one standard deviation above the sample population mean attitude.

Occupation

The last social variable that was investigated in this study was the occupations of the school board members. Nine classes of occupations were provided for the respondents to choose from. The response of board members on the attitude scale were stacked from this classification for

FIGURE 6
ATTITUDES BY YEARS RESIDENCE IN SCHOOL DISTRICT ATTITUDES BY OCCUPATIONS



the two by two, factorial, ANOVA design. The cell mean attitudes that resulted were tabulated on Table 13.

TABLE 16

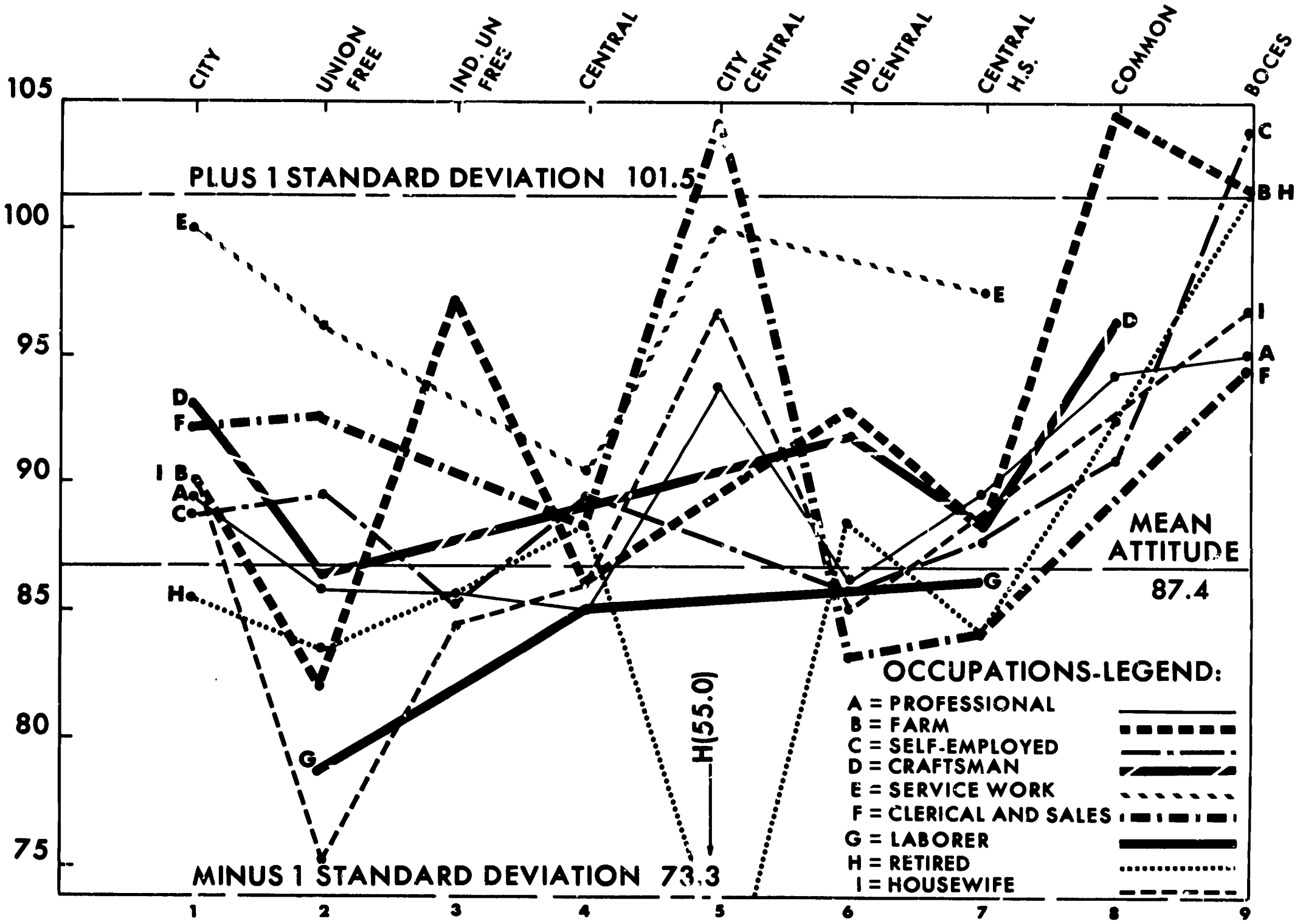
Cell Mean Attitudes in School Districts
by Occupation

Occupation	Type of School District								
	City	Union Free	Independent Union Free	Central	City Central	Independent Central	Central High	Common	B.O.C.E.S.
Professional	89.5	86.5	86.2	85.0	93.3	87.4	89.4	94.5	94.9
Farmer	90.3	82.2	97.0	86.4	E	92.5	89.2	106.0	101.5
Self-Employed (excl. Farmer)	89.1	89.8	85.8	89.4	E	86.5	89.3	91.0	104.0
Craftsman	92.0	86.8	E	90.0	E	91.8	88.8	97.0	E
Service Worker	100.0	96.1	E	89.9	100.0	E	97.8	E	E
Clerical and Sales	92.1	92.6	E	89.0	104.5	82.8	84.1	E	94.9
Laborer	E	79.0	E	85.0	E	E	86.6	E	E
Retired	85.6	82.9	E	89.7	55.0	88.8	84.3	E	101.5
Housewife	90.0	73.5	84.3	86.4	97.0	85.0	88.4	E	97.0

E = Empty cells

The absence of data in 20 of the 81 cells of the nine by nine grid prevented further computer analysis. The cell mean attitude values for the different occupations were plotted against the different types of school district. The resultant chart was labeled Figure 7.

FIGURE 7
ATTITUDES BY OCCUPATIONS



The modal group of school board members was the professional group. Professionals made up 56.4 percent of the school board members who responded to the instrument. The cell mean attitude of this group was above the sample population mean in City, City Central, Central High School, Common and BOCES districts. It was on the sample population mean attitude in the Independent Central Districts. This cell mean attitude was below the sample population mean in Union Free, Independent Union Free and Central districts.

An extremely low cell mean attitude of 55.0 was recorded by school board members in the occupational, retired, category in city central districts. A cell mean attitude value greater than one standard deviation above the sample population mean attitude was recorded for clerical and sales people in City Central Districts, farmers in Common school districts, and self-employed school board members in BOCES districts. Cell mean attitude values above the sample population mean attitude were recorded in common and BOCES districts regardless of the occupation and in City districts with the exception of the retired from employment category.

The cell mean attitude values were within one standard deviation above and below the sample population mean attitude in all districts and occupations with the exception of the three cases noted above.

HYPOTHESIS III

"There is a relationship between school board members' understanding of the term occupational education and school board members' attitude toward occupational education."

A scattergram was prepared with the attitude raw scores forming the X-axis and the understandings raw scores the Y-axis. No significant pattern was observed except that the bulk of the scatter points fell fairly evenly about a line representing the sample population mean attitude regardless of the understanding level. The bulk of these points fell within one standard deviation above and below the sample population mean attitude.

A Pearson Product-Moment correlation was calculated using the individual's attitude raw score as the X component and the same individual's understanding raw score as the Y component for all 1684 respondents.

The Pearson Product-Moment correlation obtained was 0.20. This value indicated a very slight relationship between understanding of the term occupational education and the attitude towards occupational education. The hypothesis was not supported.

SUB-HYPOTHESIS TESTING

$H_{1.1}$ There is a relationship between the sex of the school board member and his attitudes toward occupational education.

$H_{1.2}$ There is a relationship between the education of the school board member and his attitudes toward occupational education.

$H_{1.3}$ There is a relationship between the occupation of the school board member and his attitudes toward occupational education.

$H_{1.4}$ There is a relationship between the length of service on the school board of the school board members and his attitudes toward occupational education.

$H_{1.5}$ There is a relationship between the experience or non-experience in an occupational education program by the school board member and his attitudes toward occupational education.

$H_{1.6}$ There is a relationship between the length of time a school board member has resided in the school district and his attitudes toward occupational education.

$H_{1.7}$ There is a relationship between the age of the school board member and his attitudes toward occupational education.

Each of a series of seven sub-hypotheses was stated in the general form, that a relationship existed between such variables as sex, educational

level, occupational, length of service on the board of education, length of residence in the school district, experience or non-experience in an occupational education program, or age of the school board member and his attitude toward occupational education.

Sex and experience or non-experience as influence on attitudes were tested using a point-biserial correlation and the values obtained were tabulated in Table 17 along with the Pearson product-moment correlations of the other variables.

TABLE 17

Correlations Between Social Variables and Attitude Toward Occupational Education

Variable	Point Biserial Correlation	Pearson Product Correlation
Sex	0.006	-
Experience in Occupational Education	0.090	-
Age	-	0.80
Educational Level	-	-0.01
Years of Service on Board of Education	-	0.33
Years of Residence in School District	-	0.27

Hypothesis 1.7, which relates age to attitude, was supported with a Pearson product-moment correlation of .80. Hypotheses 1.5 and 1.6, dealing with the relationship of service on a school board and residence in a school district relating to attitude, were supported to some extent by Pearson product-moments of .33 and .27. The other hypotheses were not

supported since the correlations were extremely small.

The calculation of the Pearson product-moment of occupation and attitude of school board members was not carried out. It was felt by the investigators that the cell means generated by the ANOVA, two-way, factorial, treatment were of more use in investigating differences in attitude than the Pearson product-moment correlation of the effect of all occupations on attitude.

SECTION IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study was undertaken to investigate the attitude of school board members toward occupational education and to determine what factors influence such attitudes. The measures used to investigate attitude in this study were not of a definitive nature; rather they yielded gross data which indicate the directions future research should follow.

The first hypothesis stated that there was a difference in attitudes of school board members toward occupational education and other curricula. This hypothesis was supported on the basis of examination of paired supportive or nonsupportive statements of vocational education. The cell means were calculated and the significance of the difference between districts and difference among levels of the social variables was examined. The "t" values for 10 of the 12 pairs were significant.

The second hypothesis stated that school board members from City, Central School, and other types of school districts do differ in their attitudes toward occupational education. The treatment of the data substantiated this hypothesis by using a one-way analysis of variance.

The third hypothesis stated that there was a relationship between the school board members' understanding of the term occupational education and school board members' attitude toward occupational education. Such a relationship, although slight, was apparent from the data collected. Measurement of the understanding of the term occupational education was adapted from the non-metric method of scaling developed by Guttman and applied to a modified version of the Image of Vocational Education Scale developed at the University of Michigan.

A series of seven variables: sex, age, educational level, years of services on the board, years of residence in the district, experience in occupational education programs, and occupation of school board members were examined to find relationships to school board member's attitudes toward occupational education. No relationship was found between sex of the school board member and attitude toward occupational education.

No relationship was found between the attitude of school board members who had experience in occupational education programs, and those who had no experience.

The age of school board members was related to attitude toward occupational education. Older school board members were more positive in their attitudes toward occupational education.

A larger number of years of service on the school board and residence in the district did show a small relationship to attitudes toward occupational education.

The level of education of school board members had no relationship to the attitude of school board members toward occupational education. There were differences in different types of districts, but no pattern emerged.

The kind of occupation of school board members had no relationship to the attitude of school board members. The attitude of school board members of the same occupational class differed from one type of district to another.

Conclusions

Attitudes of school board members were positive toward occupational education. More positive attitudes were held by school board members of urban districts. The fact that urban school board members have had more experience with occupational education than have suburban or rural district board members is probably the contributing factor. Members of Boards of Cooperative Educational Services were much more positive toward occupational education than their fellow school board members in their home and suburban or rural districts because a large part of the BOCES program and a large share of the BOCES board expenditures in the last few years have been allocated for occupational education. However, since BOCES board members primarily represent rural and suburban districts, one can only conclude that the more positive attitude of BOCES members is based on involvement in decision-making regarding occupational education as a regular process. Conversely, many suburban and rural school board members make few decisions regarding occupational education.

Older school board members, as well as those with long service, tend to have a more positive attitude toward occupational education. Longevity and experience seem to contribute to this positive attitude. It is difficult to say whether the more positive attitude of long-serving school board members and long-time residents in a district is due to these factors or to age.

The difference in attitude found between the paired statements was significant. However, the difference seems to be in degree of positive attitude toward occupational education, rather than a difference in attitude between occupational education and academic education.

The relationship between occupations and attitudes of school board members was so complex that it was impossible to identify any trends or make any general statements.

Recommendations

1. Although the data collected in this study provides base line data for school board members, other populations which contribute toward decision-making for occupational education should be surveyed. Specifically, the following groups should be measured: chief school officers, district occupational education administrators, occupational education teachers, guidance counselors, industrial personnel, labor personnel, and State Education Department personnel concerned with occupational education. From baseline data thus established, the effects of treatment could be predicted.

2. The instrument used to measure attitudes was a discriminatory instrument in terms of measuring differences in attitude toward occupational education, but it was not as readily adapted to measuring differences between occupational education and attitudes toward academic education.

The Guttman type scale, used to measure understandings of the term occupational education, possesses certain inadequacies. Some modifications would be in order if the instrument were to be used again. Specifically, in question #1, the choice of BOCES should be included as item "b" with High School moved to item "a". In addition, a statement of the purpose of this section of the research instrument should be included. This statement should read, "This part of the questionnaire is designed for you to define the term 'occupational education' as you personally understand it. The options presented are included to help you do this."

Part C of the instrument did not contain "BOCES" as a choice in the type of district although this was written in by many respondents. Since BOCES board members were included in the sample, this choice should have

been included. The term "Central High School" district should have been made more clear since 105 responses were received in this category representing only four official Central High School districts in the State. It was clear that some respondents confused this type of district with other types of central districts. The category Housewife should be included in the occupation list to eliminate the necessity for writing in this response.

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3. U.S. Congress, Smith Hughes Act, Public Law 347.

4. U.S. Congress, The Vocational Education Act of 1963, Public Law 88-210.

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A P P E N D I X

THE WESTERN NEW YORK SCHOOL STUDY COUNCIL
STATE UNIVERSITY OF NEW YORK AT BUFFALO
27 California Drive
Williamsville, New York 14221

June 2, 1969

Dear School Board President:

On behalf of the State Education Department, Division of Occupational Education Research, The New York State School Boards Association and The Western New York School Study Council, may we thank those of you who have responded to the "Attitude Toward Occupational Education" questionnaire that was sent to you a few weeks ago.

Although many school board members have responded, some have not. Will you help us make this a more successful survey by urging your fellow board members to mail their response by June 15th? An extra questionnaire is enclosed in the event a board member has misplaced the original form.

May we thank you again for your cooperation.

Sincerely,

James R. Spengler

James R. Spengler
Principal Investigator
WNYSSC

JRS:tz

Enclosure

Survey Questionnaire No. 00000

Western New York School Study Council

State University of New York at Buffalo

PART A.

UNDERSTANDING OF OCCUPATIONAL EDUCATION

Directions: Please answer the questions on this page and then proceed to the next page. Please answer all questions.

N.B. The number on this form is to help the Study Council identify the school district and its geographic location and will not be used to identify individuals.

Begin here:

1. Where is occupational education taught?
(CHECK ALL RESPONSES THAT ARE APPROPRIATE)

____a. Community College
____b. High School
____c. Junior High School
____d. Elementary School

2. What is the purpose of occupational education?
(CHECK ALL RESPONSES THAT ARE APPROPRIATE)

____a. To prepare students for entry into occupations in trade, industry and agriculture.
____b. To prepare students for office work, sales positions, practical nursing, homemaking occupations and service occupations.
____c. To prepare students for technical positions (such as: electronics, data processing, food management, metallurgy and drafting design).
____d. To prepare students for all occupations not requiring a four-year college education.
____e. To prepare students by a series of interrelated studies on elementary, secondary, post high school levels to make a career choice and to prepare for that career.

3. Occupational education is designed for:
(CHECK ALL RESPONSES THAT ARE APPROPRIATE)

____a. Those students who are not college bound.
____b. Out of school youth and drop-outs.
____c. Adults in need of training or retraining and other persons with special needs for occupational preparation.
____d. All students whether college bound or not.

Please go on to the next part of the questionnaire.

PART B.

ATTITUDE TOWARD OCCUPATIONAL EDUCATION

Directions: You are to mark the response which corresponds most closely to your feelings about each item on this page and the next.

Example: Occupational education is a snap program for too many students. SA A U X SD

SA = Strongly Agree U = Uncertain or Don't know D = Disagree
A = Agree SD = Strongly Disagree

This person disagrees with the item to some extent and has indicated this by a mark (X) through D (Disagree).

Do not spend too much time on any particular item. There are no right or wrong answers. Merely mark the abbreviation which most nearly indicates your feeling. When your feelings falls between two choices, select one only. Please answer every item.

Begin here: Cross out one

1. I believe good occupational-education programs in public schools attract new industries to a community. SA A U D SD

2. A high-school graduate of an occupational-education program impresses me a great deal. SA A U D SD

3. In my opinion there are not enough students in occupational education at the high-school level. SA A U D SD

4. Students should begin occupational programs after they graduate from high school, not before. SA A U D SD

5. Most students who take occupational education in high school in my opinion lack too many other scholastic skills. SA A U D SD

6. In my opinion occupational education in the high school is highly overrated. SA A U D SD

7. I would favor expanding occupational-education programs even if available funds remain the same. SA A U D SD

8. In my community many people oppose an increase in occupational-education programs as they are currently administered. SA A U D SD

9. In my opinion a graduate of a high-school occupational-education program is generally suited only for unskilled work. SA A U D SD

10. Most occupational-education programs offered nowadays in high school are hopelessly out-of-date. SA A U D SD

11. A larger portion of the high-school curriculum than at present should be devoted to occupational education. SA A U D SD

12. High schools should encourage bright students to enter an occupational-education program. SA A U D SD

Cross out one

13. For many students in high school there should be greater emphasis on earning a living through an occupational-education program. SA A U D SD

14. Occupational education in high school does not make enough students useful members of society to justify its cost. SA A U D SD

15. I believe that the function of a high school is to develop occupational skills in all its students. SA A U D SD

16. My community alone or in conjunction with other communities should provide a wide variety of occupational programs to fit the abilities of most students not going to college. SA A U D SD

17. In my opinion taking occupational education hinders students from further education after high school. SA A U D SD

18. Occupational-education programs cannot possibly prepare high-school students for a range of job opportunities potentially available to them. SA A U D SD

19. In my opinion most public schools do not provide occupational-education programs early enough. SA A U D SD

20. I am thoroughly sold on offering occupational education in high school. SA A U D SD

21. I do not think occupational education in high school is as necessary for most students as are other worthwhile programs. SA A U D SD

22. Free occupational education after high school should be available to students currently enrolled in high-school occupational programs. SA A U D SD

23. There should be more money set aside in the school budget for occupational education. SA A U D SD

24. I should like to see the values of occupational education made known to more parents than is now the case. SA A U D SD

25. It is more important to provide many students with a sound basic education than to use the time for occupational education. SA A U D SD

26. I should like to see occupational education encouraged more among high-school students. SA A U D SD

27. The occupational-education program in high school should be intended mainly for youth of limited academic talent. SA A U D SD

28. Most occupational-education courses in my opinion lead nowhere. SA A U D SD

This part is finished. Please go on to the last part on the next page. Thank you.

PART C.

Note: The content portion of the questionnaire is ended. Now there are some general descriptive questions to help us classify the responses. They are for developing general catagories and are not for the purposes of identification.

Directions: Check the appropriate response. Please answer all questions.

A. What is your sex?

____ male
____ female

B. What type of school district do you serve?

____ city
____ union free
____ independent union free
____ central
____ city central
____ independent central
____ central high school
____ common

C. What is your approximate age?

____ under 30
____ 31 - 40
____ 41 - 50
____ 51 - 60
____ 61 and over

D. What educational level have you completed?

____ less than sixth grade
____ less than high school
____ high school graduate
____ some college
____ college graduate or more

E. I have been a member of this Board of Education

____ 1 - 5 years
____ 6 - 10 years
____ 11 - 15 years
____ 16 - 20 years
____ 21 - 25 years
____ more than 25 years

F. I have lived in this school district

____ 1 - 5 years
____ 6 - 10 years
____ 11 - 15 years
____ 16 - 20 years
____ 21 - 25 years
____ more than 25 years

G. My occupation is classified as

____ Professional
____ Farming
____ Self employed (other than farming)
____ Craftsman or skilled worker
____ Service worker
____ Clerical or Sales
____ Laborer
____ Retired

H. Have you ever been enrolled in any occupational education program?

____ yes
____ no

If yes, at what level?

____ Adult education
____ High School
____ Technical School
____ Armed Services Specialty School
____ Other (please specify)

_____ _____

This questionnaire is finished. If you wish to write additional comments please feel free to write on the back of this page. Thank you for your time and help.

THE WESTERN NEW YORK SCHOOL STUDY COUNCIL
STATE UNIVERSITY OF NEW YORK AT BUFFALO
27 California Drive
Williamsville, New York 14221

May 9, 1969

Dear School Board Member:

The Western New York School Study Council has been requested by the State Education Department, Division of Occupational Education Research, to study the attitudes of school board members toward occupational education. The Study Council, with the active support and help of the New York State School Boards Association, needs your assistance.

You can help by taking out 15 minutes of your time to fill out the questionnaire attached to this letter and returning it to the Study Council in the enclosed stamped envelope. We would like the questionnaires returned by May 30. Would you please complete the questionnaire now and drop it in the mail?

Thank you for your time and prompt cooperation.

Sincerely,

James R. Spengler

James R. Spengler
Principal Investigator
Western New York School
Study Council

JRS/lcg
Enc.