THE TEMPERAMENT OF JUNIOR AND SENIOR HIGH SCHOOL INDUSTRIAL ARTS TEACHERS

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The purpose of this study was to determine the differences, if any, between junior high school and senior high school industrial arts teachers in the seven areas of temperament measured by the Thurstone Temperament Schedule. Answers to the following questions were also sought: (1) Will there be a difference in mean scores of the two groups? (2) Should teachers at either level have specific courses in college that they are not now getting? If so, what courses? (3) Can the conclusion be drawn, as shown by this study, that certain temperament traits are more necessary for one level of teaching than for the other?

Data for this study were obtained from Thurstone Temperament Schedules and questionnaires sent to industrial arts teachers on the junior high school and senior high school levels. Participants were teaching in the Dallas and Fort Worth school systems. Each teacher had taught for at least five years.

Chapter I of the study includes an introduction, statement of the problem, purpose of and need for the study, hypotheses, delimitations, definition of terms, discription of instrument, procedure for collecting the data, and related studies.

Chapter II presents the method of the study, which includes the final sample of the study, as well as information concerning scoring of the Thurstone Temperament Schedule and the questionnaire.

The data obtained from both the Thurstone Temperament Schedule and the questionnaire are presented and evaluated in Chapter III.

Chapter IV presents the summary, findings, and conclusions of the study.

The following constitute the findings of the study. There was no difference in the temperaments of the junior high school and senior high school industrial arts teachers. A majority (88.25 per cent) of the participants believed that they were best suited for the level at which they are now teaching. Thirty-seven (56 per cent) are teaching at the level which they prefer. The majority of the participants believed that there should be no difference in the preparation of junior high school and senior high school teachers.

It was concluded that teachers in both junior high school and senior high school in the sample were relatively happy with their assignments. Also, there is no need for courses on the college level to prepare industrial arts teachers for a specific level so far as temperament traits are concerned. Thirdly, it was concluded that certain temperament traits are not more common at one level than they are at another. The final conclusion was that after a

five-year period, teachers will probably find employment on the level of teaching for which they are best suited.

It was recommended that further study should be conducted in areas other than industrial arts. Also, it was recommended that prospective teachers not worry about one particular level of teaching. They will probably obtain a teaching position at the level where they will be best satisfied.

THE TEMPERAMENT OF JUNIOR AND SENIOR HIGH SCHOOL INDUSTRIAL ARTS TEACHERS

THESIS

Presented to the Graduate Council of the North Texas State University in Partial Fulfillment of the Requirements

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By

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CHAPTER I

INTRODUCTION

A student's failure to complete his high school work has long been attributed to lack of background, lack of interest, social status, or inability to learn. The average educator will agree that these social aspects are important, but are they the only ones involved in the life of the high school dropout today?

According to Stanley and others:

> The culture of the school is a curious mixture of the work of young artisians making culture for themselves, and old artisians making culture for the young; it is also mingled with such bits of the greater culture as children have been able to appropriate.
>
> Tradition governs the very existence of schools and the nature and the life in schools. It determines that the old shall teach the young and not that the young shall ever teach the old, which would be at least equally justifiable in a world that changes so rapidly that an education twenty years ago is out of date. Tradition governs what is taught, and it holds a firm control upon the manner in which it is taught. Tradition also determines who shall teach (6, p. 75).

The school, a social system within itself, is organized according to some principle. This principle may be that of authority, and frequently the younger students believe that they are "bossed" by so many other people that they become discouraged at an early age.

The school, as a social system, has its own folkways, mores, and traditions. Often, therefore, each

member--teacher, as well as student--is affected in one way or another by the system, depending upon the role he plays. All too often, a teacher comes into a new situation not really knowing or caring about the student, so long as he makes himself look good to the administration and the community.

What causes this apathy among teachers in junior and senior high schools? Have they not been properly taught to fulfill their roles? As an industrial arts teacher or school administrator observes teachers in both the high school and junior high school, he is aware that some teachers are apparently suited for one level of teaching but not for the other. Are they, themselves, so different in temperament that they may or may not fit their given situation? Should special courses be developed for the preparation of teachers at each level? These are some of the questions which directed attention to and promoted an interest in this study.

Statement of the Problem

The problem was to ascertain if there are any differences in temperament between junior and senior high school industrial arts teachers, and if so, what these differences are. This study was also concerned with characteristics or personality traits of teachers to see if some are more typical of teachers on one level of teaching than another.

Purpose of and Need for the Study

The purpose of this study was to examine, through the use of the Thurstone Temperament Schedule (Appendix D), the

temperaments of industrial arts teachers who had taught for at least five years in junior high school and an equal number who had taught at least five years in senior high school. Answers to the following questions were sought:

1. Will there be a significant difference between the means of the scores made by the two groups on the Thurstone Temperament Schedule relating to the following:

a. Is the junior high school teacher more active than the senior high school teacher?

b. Is the junior high school teacher more vigorous than the senior high school teacher?

c. Is the junior high school teacher more impulsive than the senior high school teacher?

d. Is the junior high school teacher more dominant than the senior high school teacher?

e. Is the junior high school teacher more stable than the senior high school teacher?

f. Is the junior high school teacher more reflective than the senior high school teacher?

2. Should teachers at either level have specific college courses that they obviously are not getting? If so, what courses?

3. Can a conclusion be drawn that certain temperament traits are more necessary for one level than for the other? If so, which traits are necessary for each level of teaching?

According to the predictions made in Texas Employment Outlook to 1975 by Industry & Occupation,

> A rapidly changing industrial technology and composition requires a changing occupational structure. Texas' expanding technology continues to increase production output per worker and to cause a greater demand for more highly trained workers.
>
> During the 1960 to 1975 period, all occupations are expected to increase by 41 percent. The 1968 level should expand by 12 percent by 1975. The professional, technical, and kindred category will show the largest gain between 1960 and 1975, expanding by 88 percent.
>
> Over 577,000 workers employed in professional, technical, and kindred occupations in 1968 showed the largest groups among teachers (over 162,000). The second largest group was that of professional health workers (over 98,000), and the third largest was engineers (over 71,000).
>
> Employment of professional, technical, and kindred workers increased 55.6 percent between 1960 and 1968, rising from about 371,300 to 577,900. This increase was stimulated by population growth and rising business and personal incomes.....
>
> By 1974, the manpower requirements for professional, technical, and kindred workers is expected to rise 20.9 percent to 698,800. Manpower needs should increase in practically every professional field.
>
> In addition to manpower needs for occupational growth, many professional, technical, and kindred workers will be needed to replace those who transfer to other fields of work--or who die, retire, or otherwise withdraw from the labor force. For example, an estimated 19,000 workers in this occupational group will withdraw from the labor force as the result of retirement or death between 1968-1975 (7, pp. 20-21).

Based upon these predictions, it would appear that Texas needs more and better-trained high school graduates by 1975. The need is a present and pressing one; today's students should not be deprived of their right to technical, vocational, or academic training because of misplaced teachers who discourage their success.

Hypotheses

The following hypotheses were tested during the study:

1. There will be no significant difference between the scores made on the Thurstone Temperament Schedule by junior high school and senior high school teachers. The teachers on one level will be as active, vigorous, impulsive, dominant, stable, sociable, and reflective as the teachers on the other level.

2. The junior high school and senior high school teachers will be teaching on the level for which they are best suited and where they prefer to teach.

3. There should be no difference in the preparation of junior high school and senior high school teachers.

Delimitations of the Study

This study was limited to thirty-four teachers on the junior high school level and thirty-four teachers on the high school level who had at least five years of teaching experience at their particular level. Participants were chosen from the Dallas and Fort Worth school systems. The study was conducted during the fall and winter of 1971-1972.

Definitions of Terms

Active--A characteristic of one who works and moves rapidly, when his activities do not demand speed (8, p. 1).

Dominant--The quality of a person whose pace is easy and who has leadership abilities without being domineering (8, p. 1).

High School--Any public school that offers industrial arts courses to students in the tenth, eleventh, and twelfth grades.

Industrial arts--The part of general education that relates the student to the principles and concepts of all phases of industry in terms of its organization, operations, products, and occupations. It is exploratory in nature.

Junior High School--Any public school that offers industrial arts courses to students in the seventh, eighth, and ninth grades.

Middle School--Any public school that offers industrial arts courses to students in the sixth, seventh, and eighth grades.

Reflective--The dominant characteristic belonging to one who enjoys being quiet, working alone, and enjoys work that requires accuracy and fine detail (8, p. 2).

Sociable--Characteristic of one who maintains an even disposition and disregards distractions while studying (8, p. 2).

Temperament--Permanent personality characteristics (8, p. 2).

Thurstone Temperament Schedule--A schedule to identify types of disposition; a list of questions about likes and dislikes, preferences and habits in everyday life.

Vigorous--Characteristic of one who participates in physical sports and outdoor occupations requiring use of hands and tools (8, p. 2).

Description of Instrument

The Thurstone Temperament Schedule used in this study contains 140 "yes" "?" "no" questions which measure seven areas of personality: active, vigorous, impulsive, dominant, stable, sociable, and reflective. The instrument is designed to give a brief appraisal of the seven relatively permanent aspects of temperament in persons who are fairly well adjusted.

The instrument is self-administering. It may be given with or without supervision, in a group or individually. The test is not timed, but twenty minutes is usually adequate time in which to complete the test.

The seven traits measured in the instrument are derived from a factor analysis of scores in the thirteen personality areas measured by the Guilford-Martin Inventory of Factors GAMIN, the Guilford-Martin Personnel Inventory, and the Inventory of Factors STDCR (4).

The reliabilities of the seven individual factor scores are relatively low; they vary from .45 to .86, with a median of .64 for four different groups. Such results can be expected where there are only twenty items per score. The reliabilities were computed by the split-half method and by the test-retest method.

Procedure for Collecting the Data

One hundred Thurstone Temperament Schedules (Appendix D) and an equal number of questionnaires were sent to industrial arts teachers in the Dallas Independent School System.

Thirty-four of the teachers were teaching on the high school level, and sixty-six were teaching on the junior high school level. Thirty-four schedules and an equal number of questionnaires were also sent to industrial arts teachers in the Fort Worth system. Eighteen were middle school teachers. Sixteen were senior high school teachers. After several weeks, seventy follow-up letters (Appendix C) were sent to the Dallas teachers. Fifteen teachers returned the schedules and questionnaires because they didn't have five years of teaching experience at their present level. The final participants consisted of seventeen junior high school teachers and twenty senior high school teachers from Dallas and seventeen middle school teachers and fourteen high school teachers from Fort Worth, making a total of sixty-eight returns: thirty-four from teachers teaching on the junior high school level and thirty-four from teachers teaching at the high school level.

The Thurstone Temperament Schedules (Appendix D) returned by the sixty-eight teachers were scored and a mean calculated for each group: junior high school teachers and senior high school teachers. These means were then tested to see it there was a significant difference between scores made by the high school and junior high school teachers. Finally, a profile was made comparing the responses made by the teachers to the seven questions listed in the statement of the problem to see if there was any difference in scores in each of the seven areas tested.

Related Studies

Several studies were closely related to the subject of this study. After a search of the literature, however, none of them actually provided answers to the questions involved in solving the problems of the study. Many studies that were closely related provided help in the development of the study.

Ryans (4) studied Thurstone Temperament Schedule scores in relation to teacher performance. The subjects were 275 third-and fourth-grade teachers. The results of this study indicate that four scales of the Thurstone Temperament Schedule may help discriminate between teachers who are effective and those who fail in various classroom situations.

In areas other than teaching, the Thurstone Temperament Schedule was used in testing retail store sales employees (8). The subjects in this study were 1,274 retail store employees in 43 stores. Each department manager was asked to indicate the individual he thought was the best and the individual he thought was least successful in his job. The criteria used in selecting the good groups and the poor groups were

1. Sales ability,
2. Cooperation,
3. Satisfactory customer service, and
4. General effectiveness.

All of the individuals in both groups were given the Thurstone Temperament Schedule. The results of the study indicated that all temperament characteristics measured by

the Thurstone Temperament Schedule were significantly related to successful performance on these sales jobs.

Montross (3) completed a study in 1954 entitled "Temperament and Teaching Success." The study was concerned with certain aspects of temperament and their relationship to teaching success. Several instruments were used in this study, including the Thurstone Temperament Schedule. No significant relationships were found between the seven areas of temperament of the Thurstone Temperament Schedule and the criteria. The subjects of this investigation were thirty-five students who had graduated from the University of Wisconsin and who had secured teaching positions in secondary schools of Wisconsin in the fall of 1950. The findings of this study indicated that there may be certain temperament patterns which will distinguish between good and poor teachers, as measured by reatings of principals and others trained to evaluate teacher effectiveness. The findings also indicated that the Thurstone Temperament Schedule seemingly failed to identify aspects of temperament behavior which are related to success in teaching as measured in the investigation.

Michael, Barth, and Kaiser (2) conducted a study in 1961 to compare and contrast the demensions of temperament of three samples of experienced secondary school instrumental and choral music teachers. They believed that the existence of either comparable or dissimilar patterns of temperament factors seems to constitute helpful evidence in selection

and training of teachers in music education. Their findings indicated that the three groups of secondary school instrumental and choral music teachers did have comparable dimensions of temperament.

In his book Characteristics of Teachers, Ryans (5) described the Teacher Characteristics Study, 1948-1957. This study was one of the most extensive studies ever made. It was conducted with the idea that the school systems might use the results as an aid in selecting teachers who possess characteristics similar to those deemed important by the type of system involved. Also, it was thought that the teacher-education institutions might use the results to obtain a better understanding of teacher characteristics and associated conditions and to improve their professional courses and curricula to better prepare their students to be effective teachers.

Jones and Morris (1) hypothesized in their study in 1956 that the expressed value system of an individual is related to his temperament. The purpose of their study was to explore the nature of relationships between temperament traits and the selection of values, and to illustrate the availability of factor-analytic methods for the study of such relations between temperament and valuation domains. The results of this study strongly suggested substantial relationships between the domain of temperament and that of value.

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CHAPTER II

METHOD OF THE STUDY

In an attempt to obtain at least fifty responses from both junior high school and senior high school teachers, 134 Thurstone Temperament Schedules (Appendix D), questionnaires (Appendix B) were sent to teachers in the Dallas and Fort Worth school systems. Names of these participants and permission to use them in the study were obtained from both the Dallas Independent School System and the Fort Worth Independent School System.

After several weeks, fifty-one questionnaires and schedules were returned. Eighty-three follow-up letters (Appendix C) were then sent in an effort to obtain more responses. Fifteen schedules and questionnaires were returned because the teachers lacked the five years of teaching experience, and fifty-one failed to answer.

The final sample for the study was thirty-four high school teachers and thirty-four junior high school teachers, each of whom had taught a minmum of five years.

Thurstone Temperament Schedule

The seven traits measured by the Thurstone Temperament Schedule (Appendix D) were used as the criterion for measurement in this study. Mean scores and the standard error of

the differences of the means were computed and tested at the .05 per cent level of significance. The differences in the means were also sought, and the "t" test was used to check the significance of the differences of the means. The degrees of freedom were found to determine which of the scores were significant at the .05 per cent level.

The formula for the "t" test by which the significance of the differences was determined, follows:

$$\text{"t"} = \frac{AM_1 - AM_2}{SED} = \frac{D}{SED}$$

$$\text{"t"} = \frac{D}{SED}$$

WHERE

"t" = Value of "t"

AM_1 = Arithmetic Mean of Group 1

AM_2 = Arithmetic Mean of Group 2

D = Difference between the two Arithmetic Means

SED = Standard error of the Difference (1, p. 37).

Questionnaire

The questionnaires (Appendix A) sent to the subjects sought answers to the following questions:

1. On what level were they teaching?
2. Was this the level they thought they would like to teach while they were in college?
3. How long had they been teaching at this level?

4. Had they taught at any level other than their present level of teaching?

5. If the answer to question four was "yes," at which level had they taught?

6. Did they believe that they were best suited for the level at which they were teaching?

7. What qualities, if any, did they think set them apart as a teacher for the level they were teaching?

8. Did they believe that the preparation for a junior high school teacher should be different from the preparation for a high school teacher?

9. If the answer to question eight was "yes," they were then asked to explain in what way the preparation should differ.

10. At which level would they like most to teach?

11. How much industrial experience did they have?

As the questionnaires (Appendix A) were received, the answers were tabulated and totals were taken.

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CHAPTER III

PRESENTATION OF DATA

The main purposes of this study were to determine the differences, if any, between junior high school and senior high school teachers in the temperament areas of activity, vigorousness, impulsiveness, dominance, stability, sociability, and reflectiveness. The "t" test for the difference between the independent uncorrelated means was utilized in the analysis of the data.

Thurstone Temperament Schedule

The mean ($\bar{X}$) and standard deviation (SD) of the profile scores made by the high school teachers on the Thurstone Temperament Schedule (Appendix D) are shown in Table I.

TABLE I

RESULTS OF PROFILE SCORES MADE BY SENIOR HIGH SCHOOL TEACHERS ON THE THURSTONE TEMPERAMENT SCHEDULE

Trait	$\bar{X}$	SD
Stable	61.24	29.32
Reflective	57.44	30.32
Vigorous	52.12	27.35
Active	46.03	29.32
Dominant	38.24	24.44
Sociable	35.35	28.04
Impulsive	29.94	24.27

N = 34

The profile means and standard deviations from the means of these variables indicated a close grouping. The means ranged from 29.44 (impulsive) to 61.24 (stable). The standard deviations ranged from 24.27 (impulsive) to 30.32 (reflective). After these data were compiled, the standard error of the difference between the independent uncorrelated means was computed by the use of the "t" test. The results of this comparison will appear in a later table.

The means ($\overline{X}$) and standard deviations (SD) of the profile scores made by the junior high school teachers are shown in Table II.

TABLE II

RESULTS OF PROFILE SCORES MADE BY JUNIOR HIGH SCHOOL TEACHERS ON THE THURSTONE TEMPERAMENT SCHEDULE

Trait	$\overline{X}$	SD
Reflective	55.91	31.09
Stable	55.68	33.38
Vigorous	53.53	23.63
Active	40.74	27.64
Dominant	36.44	24.24
Sociable	33.38	27.86
Impulsive	30.21	25.33

N = 34

The profile means and standard deviations from the means of these variables also indicated a close grouping: from 30.21 (impulsive) to 55.91 (reflective) for the means and

from 23.63 (vigorous) to 33.38 (stable) for the standard deviations. After these data were compiled, the standard error of the difference between the independent uncorrelated means was computed by the use of the "t" test. The data are shown in Table III.

TABLE III

A COMPARISON OF THE RESULTS OF MEANS AND "t" TEST SCORES OF THIRTY-FOUR SENIOR HIGH SCHOOL TEACHERS AND THIRTY-FOUR JUNIOR HIGH SCHOOL TEACHERS

Trait	Differences in Means	"t"
Stable	5.56	.71
Active	5.29	.75
Sociable	1.97	.28
Dominant	1.79	.29
Reflective	1.53	.20
Vigorous	1.41	.22
Impulsive	.26	.04

The degrees of freedom were computed and the "t" table used to determine whether the temperaments were significally different in each of the areas at the .05 per cent level. The "t" test was not significant at the .05 per cent level for any of the seven catagories.

Questionnaire

A questionnaire (Appendix A) was used to collect the data in addition to the data collected by the Thurstone

Temperament Schedule (Appendix D). The same questionnaire was sent to both the junior high school and the senior high school teachers.

Senior High School

Thirty-four of the respondents were teaching at the senior high school level. As the questionnaires were received, the results were tabulated. Data received from these tabulations are shown in Table IV.

TABLE IV

RESULTS OF QUESTIONNAIRE RETURNED BY THIRTY-FOUR SENIOR HIGH SCHOOL INDUSTRIAL ARTS TEACHERS

Item	Number	%	Teaching Experience		
			5-10	11-15	over 15
Teaching at the level they thought they wanted to teach while in college	30	88.23	21	0	9
Taught at level other than present level of teaching	31	91.18	20	0	11
Believe that they are best suited for level they are now teaching	34	100	22	0	12
Believe that the preparation for a senior high school teacher should be different from the preparation of a junior high school teacher	15	44.12	10	0	15

Of the group that indicated they had taught at more than one level, thirty had taught in junior high school, one had taught in a senior college, one had taught in a junior college, and one had taught Army Reserve adult classes.

Seventeen participants did not respond to the question of What qualities, if any, do you believe set you apart as a teacher for the level you now teach? A frequent response from those participants who did answer was, I prefer to work with the more mature student. This response rated high with five of the respondents.

Twenty-three of the participants did not respond to the question of Will you please explain if you believe that the preparation of a senior high school teacher should be different from the preparation of a junior high school teacher? A frequent response from those participants who did answer was, The age of the senior high school student demands different techniques than the junior high school student. Also the senior high school student needs more detailed preparation than does the junior high school student. This response rated high with four of the respondents.

Two of the respondents stated that they would prefer to teach in junior high school; eighteen indicated a preference for senior high school; eleven for junior college; and five for senior college.

Four of the teachers had had no industrial experience; seven from one to two years; six from three to four years; five from five to six years; and twelve over six years.

The results of the questionnaire indicated that the teachers participating in the study were from various backgrounds with some differences in opinions concerning their work. The results also indicate that a majority of the teachers (thirty) had taught at the junior high school level; therefore, it would appear that they are teaching at the level they prefer.

Junior High School

Thirty-four of the respondents were also teaching at the junior high school level. As the questionnaires were received, the results were tabulated. The results appear in Table V.

TABLE V

RESULTS OF QUESTIONNAIRE RETURNED BY THIRTY-FOUR JUNIOR HIGH SCHOOL INDUSTRIAL ARTS TEACHERS

Item	Number	%	Teaching Experience		
			5-10	11-15	over 15
Teaching at the level they thought they wanted to teach while in college	21	61.76	14	2	5
Taught at level other than present level of teaching	17	50	8	3	6
Believe that they are best suited for level they are now teaching	26	76.47	19	1	6
Believe that the preparation for a senior high school teacher should be different from the preparation of a junior high school teacher	7	20.59	4	2	1

Of the group of teachers who had taught at a level other than their present one, eighteen had taught in senior high school; one in junior college; and one in senior college. One respondent had been an elementary school principal.

Nineteen of the participants did not respond to the question of What qualities, if any, set you apart as a teacher for the level you now teach? Of those who did answer, a frequent response was, I would rather work with the junior high school age group than with the high school age group. This response rated high with five of thirty-four respondents.

Twenty of the participants did not respond to the question of Will you please explain if you feel that the preparation for a high school teacher should be different from the preparation of a junior high school teacher? A frequent response from those participants who did answer was, The courses should be more basic for junior high school teachers than for senior high school teachers. This response was rated high by three of the respondents.

Nineteen respondents stated that they preferred junior high school teaching to all others; five preferred senior high school teaching; four preferred junior college teaching; and six preferred college teaching.

To the question, How much industrial experience have you had? five respondents answered none; five from one to two years; three from three to four years; eleven from five to six years; and ten over six years.

The results of the questionnaire indicate that a majority (twenty-six) of the junior high school teachers were happy with their level of teaching and believed that they were best suited for that level. A majority (twenty-seven) of the respondents also stated they did not believe that the preparation should be different for junior high school and senior high school teachers.

CHAPTER IV

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to determine the differences, if any, between junior high school and senior high school teachers in the temperament areas of activity, vigorousness, impulsiveness, dominance, stability, sociability, and reflectiveness. Answers to the following questions were also sought:

1. Will there be a difference in mean scores in the two groups?

2. Should teachers at either level have specific courses in college that they are not now getting? If so, what courses.

3. Can the conclusion be drawn, as shown by this study, that certain temperament traits are more necessary for one level of teaching than for the other? If so, which traits are necessary for which level of teaching?

The study was conducted in the fall and winter of 1971-1972. Copies of the Thurstone Temperament Schedule were sent to 134 teachers in the Fort Worth and Dallas school systems in an attempt to obtain at least fifty responses from both senior high school and junior high school teachers. Of this number, thirty-four in each category were returned completed.

Questions were asked each participant concerning his temperament in the areas of activity, vigorousness, impulsiveness, dominance, stability, sociability, and reflectiveness.

Chapter II presents the method of the study. The final sample came from the Dallas and Fort Worth school systems. The participants consisted of thirty-four junior high school teachers and an equal number of senior high school teachers. They were sent a copy of the Thurstone Temperament Schedule as well as a copy of the questionnaire. The schedules were scored, and results of the questionnaires were tabulated as each was received.

Chapter III contains the presentation of the data. The mean ($\bar{X}$) scores and standard deviation (SD) of both the senior high school and junior high school teachers were given. A comparison of the two groups was also given, showing the differences in the means and the results of the "t" test. The standard error of the differences of the means was computed at the .05 per cent level of significance. It was found that there was no significant difference between the two groups in any of the seven areas of temperament. Chapter III also presents data obtained through the use of the questionnaire returned from both the junior high and senior high school participants. The results of the questionnaire indicated that the majority of both groups were teaching at the level that they preferred to teach.

Findings

The data treated and analyzed in this study provided the following findings:

1. The standard error of the difference indicated that the "t" would be 2.00 for the differences in means in order to be significant at the .05 per cent level. Since the highest "t" test result in this study was .75, no difference was found between the temperaments of junior high school and senior high school teachers. Therefore, hypothesis number one, that there will be no significant difference between the scores made on the Thurstone Temperament Schedule by junior high school and senior high school teachers, was accepted.

2. A majority (88.25 per cent) of both junior high school and senior high school teachers believed that they were best suited for the level on which they are now teaching. Therefore, hypothesis number two, that the junior high school and senior high school teachers will be teaching on the level for which they are best suited and where they would prefer to teach, was accepted.

3. Thirty-seven, or 56 per cent, of the respondents were teaching at the level that they liked the best. Therefore, hypothesis number two, that the junior high school and senior high school teachers will be teaching on the level for which they are best suited and where they would prefer to teach, was accepted.

4. Forty-five of the participants believed that there should be no difference in the preparation of a senior high school teacher and a junior high school teacher. Twenty-three of the participants believed that there should be a difference. Therefore, hypothesis number three, that there should be no difference in the preparation of junior high school and senior high school teachers, was accepted.

Conclusions

The conclusions, based on the findings, are presented as follows:

1. Teachers in both junior high school and senior high school in the sample were relatively happy with their assignments.

2. The findings indicated no difference in temperament between senior high school and junior high school industrial arts teachers.

3. The temperament traits selected for this study were not more common at one level than they were at another.

4. Among these teachers, after a period of five years, most seem to find employment on the level of teaching for which they were best suited.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

1. A further study should be conducted in areas of teaching other than industrial arts.

2. Prospective industrial arts teachers should be assured that the instructional program is adequately preparing them to teach at either the junior high school or senior high school level.

3. A longitudinal study should be made after each year of college training to determine the extent of change in temperament of prospective junior and senior high school teachers.

4. Students while in college need not be too concerned with whether or not they can secure a teaching position at a particular level, junior high school or senior high school, as they will probably obtain after a period of five years, a teaching position at the level where they will be best satisfied.

5. Prospective teachers should not be overly concerned about teaching at a particular level, as their instruction will prepare them to teach at either level, junior high school or senior high school.

APPENDIX A

QUESTIONNAIRE SENT TO JUNIOR HIGH SCHOOL AND SENIOR HIGH SCHOOL INDUSTRIAL ARTS TEACHERS

Instructions: Place an X in the appropriate blank for each column of choices.

1. On what level are you teaching?
   ____junior high
   ____senior high

2. Is this the level you thought you would like to teach while you were in college?
   ____yes
   ____no

3. How long have you been teaching at this level?
   ____5-10 years
   ____11-15 years
   ____15 years or over

4. Have you ever taught at any level other than your present level of teaching?
   ____yes
   ____no

5. If the answer to question 4 is "yes", at which level did you teach?
   ____junior high ____junior college
   ____senior high ____senior college

6. Do you believe that you are best suited for the level that you are now teaching?
   ____yes
   ____no

7. What qualities, if any, do you believe set you apart as a teacher for the level you now teach?

8. Do you believe that the preparation for a high school teacher should be different from the preparation of a junior high teacher?
   ____yes
   ____no

9. If the answer to question 8 is "yes", will you please explain? (Use the back of this sheet if you need additional space.)

10. At which level would you most like to teach?
    ____junior high ____junior college
    ____senior high ____senior college

11. How much industrial experience do you have?
    ____None ____5-6 years
    ____1-2 years ____Over 6 years
    ____3-4 years

Please return this questionnaire with your test. Thank you.

APPENDIX B

LETTER SENT TO JUNIOR HIGH SCHOOL AND SENIOR HIGH SCHOOL INDUSTRIAL ARTS TEACHERS

February 10, 1972

Dear Fellow Industrial Arts Teacher:

I need your help if you have at least five years teaching experience at your present level, an ordinary number two pencil and approximately thirty minutes of your time to spare. If you are unable to help me please return the unanswered materials in the stamped, addressed envelope provided.

I am engaged in a Master"s Thesis at North Texas State University and am conducting a study to compare the temperament of junior high and high school Industrial Arts teachers. Hopefully, the results of this study will indicate whether or not there should be a difference in the preparation of junior high and high school Industrial Arts teachers.

If you are able to help me, your part in this study will involve answering two items--a short questionnaire and The Thurstone Temperament Schedule.

Will you please help me and return the answered forms at your earliest convenience?

Thank you for your time and cooperation.

Sincerely,

Ray Box
Industrial Arts Teacher

RB:s
Enclosures
Two studies to be answered
Stamped-addressed envelope

APPENDIX C

FOLLOW-UP LETTER SENT TO JUNIOR HIGH SCHOOL AND SENIOR HIGH SCHOOL INDUSTRIAL ARTS TEACHERS

March 10, 1972

Dear Fellow Teacher:

In order to complete my work at North Texas State University, I am in dire need of the test sent to you on February 10.

As some of the tests were returned unidentified, you may have already completed yours and returned it to me. If so, accept my thanks; if not, I would appreciate receiving it as soon as possible.

Of course, you will be sent the results of this study should you desire them.

Sincerely yours,

Ray Box

APPENDIX D

THURSTONE TEMPERAMENT SCHEDULE

THURSTONE TEMPERAMENT SCHEDULE

by Dr. L. L. Thurstone


Science Research Associates, Inc. 259 East Erie Street, Chicago, Illinois 60611
A Subsidiary of IBM

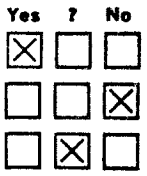
GENERAL DIRECTIONS

This schedule was developed to show types of temperament. It is a list of questions about likes and dislikes, preferences and habits, in everyday life.

There are no right or wrong answers to these questions; one answer can be just as good as some other answer. Be sure to follow the instructions below carefully. Only by doing so will you obtain results which are accurate and of value to you.

INSTRUCTIONS FOR MARKING ANSWERS

Each question is followed by three squares. For each question, mark an X in the square for the answer that fits you best.



If your answer is Yes, mark the box under the Yes:

If your answer is No, mark the box under the No:

If you cannot decide, mark the box under the question mark:

If you want to change an answer, draw a circle around your first answer ⊠ and mark the box for the answer you prefer. Do NOT erase any answer you have marked.

Be sure to answer all of the questions.

NOW GO AHEAD WITH THE QUESTIONS ON THE NEXT PAGE.

	Yes	?	No
1. Are you more restless and fidgety than most people?	☐	☐	☐
2. Do you ordinarily work quickly and energetically?	☐	☐	☐
3. In conversation, do you often gesture with hands and head?	☐	☐	☐
4. Do you drive a car rather fast?	☐	☐	☐
5. Do you enjoy spending leisure time on physical work?	☐	☐	☐
6. Do you have a low-pitched voice?	☐	☐	☐
7. Do you enjoy having a good physical work-out?	☐	☐	☐

	Yes	?	No
8. Do you enjoy working with tools?	☐	☐	☐
9. Do you let yourself go and have a gay time at a party?	☐	☐	☐
10. Do you often make people laugh?	☐	☐	☐
11. Do you like to be where there is something doing all the time?	☐	☐	☐
12. Do you usually notice the furniture or rugs in a strange house?	☐	☐	☐
13. Do you find it difficult to speak before an audience?	☐	☐	☐
14. Do you often take the initiative in planning for a party?	☐	☐	☐

	Yes	?	No
15. Do you often tell stories to entertain others?	☐	☐	☐
16. Do you like to be the chairman of a meeting?	☐	☐	☐
17. Is your mood easily influenced by people around you?	☐	☐	☐
18. Can you relax in a noisy room?	☐	☐	☐
19. Do you often see so many alternatives that a decision is difficult?	☐	☐	☐
20. Do you remain calm when a friend is in pain?	☐	☐	☐
21. Do you often praise and encourage your friends?	☐	☐	☐

	Yes	?	No
22. Do you like work requiring many conferences with new people?	☐	☐	☐
23. Do you spend many evenings with friends?	☐	☐	☐
24. Do you like work that requires much talking?	☐	☐	☐
25. Do you often contribute new ideas in your work?	☐	☐	☐
26. Are you considered to be absent-minded?	☐	☐	☐
27. Do you like work that must be very systematic and orderly?	☐	☐	☐
28. Are you often bored with people?	☐	☐	☐

29. Are you rather deliberate in telephone conversations? . . . . . ☐☐☐

30. Are you often in a hurry? . . . . . ☐☐☐

31. As a boy (or girl), did you prefer work in which you could move around? . . . . . ☐☐☐

32. Do people consider you to be rather quiet? . . . . . ☐☐☐

33. Do you like work that requires physical exertion? . . . . . ☐☐☐

34. Do you swear often? . . . . . ☐☐☐

35. Do you often participate in physical sports? . . . . . ☐☐☐

	Yes	?	No
36. Are you handy with tools?	☐	☐	☐
37. Do you like work that has a lot of excitement?	☐	☐	☐
38. Do you like work requiring patience and carefulness?	☐	☐	☐
39. Are you frequently considered to be "happy-go-lucky"?	☐	☐	☐
40. Do you make up your mind easily?	☐	☐	☐
41. Do you enjoy being the host at a party?	☐	☐	☐
42. Do you enjoy presenting a new project before a group?	☐	☐	☐

	Yes	?	No
43. Do you enjoy promoting a new project?	☐	☐	☐
44. Do you like to introduce the speaker at a meeting?	☐	☐	☐
45. Can you study with the radio on?	☐	☐	☐
46. Do you often alternate between happiness and sadness?	☐	☐	☐
47. Do you tend to become hungry quickly with a sudden pang?	☐	☐	☐
48. Are you usually cool and composed in a dangerous situation?	☐	☐	☐
49. Are there some foods that you strongly dislike?	☐	☐	☐

	Yes	?	No
50. Do you get acquainted with your neighbors?	☐	☐	☐
51. Are you sometimes considered to be cold and unsympathetic?	☐	☐	☐
52. Do you like work that puts you in contact with a lot of people?	☐	☐	☐
53. Do you like to work with theoretical ideas?	☐	☐	☐
54. As a child, were you inclined to take life seriously?	☐	☐	☐
55. Do you like working alone?	☐	☐	☐
56. When you have an important problem, do you prefer to think it through alone?	☐	☐	☐

GO ON TO THE NEXT PAGE

57. Do you talk more slowly than most people? . . . . . ☐☐☐

58. Do you usually work fast? . . . . . ☐☐☐

59. Do you usually speak louder than most people? . . . . . ☐☐☐

60. Do you eat rapidly even when there is plenty of time? . . . . . ☐☐☐

61. Have you ever done any hunting? . . . . . ☐☐☐

62. Do you like fishing? . . . . . ☐☐☐

63. Have you participated in wrestling? . . . . . ☐☐☐

Yes ? No

64. Have you played on a baseball team? . . . . . ☐☐☐

65. Do you like work involving competition? . . . . . ☐☐☐

66. Do you like work in which you must change often from one task to another? . . . ☐☐☐

67. In watching a game, do you yell along with the others? . . . . . ☐☐☐

68. Do you usually have a "ready answer"? . . . . . ☐☐☐

69. Do you enjoy introducing people? . . . . . ☐☐☐

70. Do people have to go more than halfway to get to know you? . . . . . ☐☐☐

Yes ? No

71. Do you frequently keep in the background on social occasions? . . . . . ☐☐☐

72. Do you assume responsibilities without much hesitation? . . . . . ☐☐☐

73. Can you work under distraction? . . . . . ☐☐☐

74. Do you often fret about the little daily chores? . . . . . ☐☐☐

75. Are you annoyed to leave a task unfinished? . . . . . ☐☐☐

76. When you are emotionally upset, do you tend to lose your appetite? . . . . . ☐☐☐

77. Do you usually agree with the group about how things should be done? . . . . . ☐☐☐

Yes ? No

78. Do you easily win the friendship of strangers? . . . . . ☐☐☐

79. Do you feel sentimental about anniversaries and birthdays? . . . . . ☐☐☐

80. Do people readily tell you about their personal troubles? . . . . . ☐☐☐

81. Do you like work that requires scientific precision? . . . . . ☐☐☐

82. Do you like work that requires much reading? . . . . . ☐☐☐

83. Do you often like to change devices and procedures? . . . . . ☐☐☐

84. Do you often prefer to spend an evening alone? . . . . . ☐☐☐

GO ON TO THE NEXT PAGE

Yes ? No

85. Do you prefer to linger over a meal and enjoy it? . . . . . ☐☐☐

86. Do you like work that is slow and deliberate? . . . . . ☐☐☐

87. Do you often let a problem work itself out by waiting? . . . . . ☐☐☐

88. Do you like to drive a car rather fast when there is no speed limit? . . . . . ☐☐☐

89. Do you like work in which there is vigorous activity? . . . . . ☐☐☐

90. Do you enjoy a race or game better when you bet on it? . . . . ☐☐☐

91. Have you ever been captain of a team? . . . . . ☐☐☐

Yes ? No

92. Are you resourceful in fixing mechanical things about the house? . . . . . ☐☐☐

93. Do you frequently feel "on top of the world"? . . . . . ☐☐☐

94. Do you remember the names of people you meet? . . . . . ☐☐☐

95. Do you like to take a chance just for the excitement? . . . . . ☐☐☐

96. In the morning, do you usually bound out of bed energetically? . . . . . ☐☐☐

97. Were you bashful when you were a child? . . . . . ☐☐☐

98. Are you likely to take charge in case of an accident? . . . . . ☐☐☐

Yes ? No

99. Would you enjoy being the toastmaster at a banquet? . . . . . ☐☐☐

100. Do you like work in which you must influence others? . . . . . ☐☐☐

101. Does it irritate you to be interrupted when you are concentrating? . . . . . ☐☐☐

102. Can you return to work easily? . . . . . ☐☐☐

103. Does it bother you to have to finish a job by a dead-line? . . . . . ☐☐☐

104. Do you often feel impatient? . . . . . ☐☐☐

105. Do you tend to join many organizations? . . . . . ☐☐☐

Yes ? No

106. Are you relatively free from self-consciousness? . . . . . ☐☐☐

107. Do you like working as a member of a group? . . . . . ☐☐☐

108. Can you put strangers at ease? . . . . . ☐☐☐

109. Do you tend to take on more things than you can finish well? . . . . . ☐☐☐

110. Did you often play alone as a child? . . . . . ☐☐☐

111. Do you like to invent new procedures and devices? . . . . . ☐☐☐

112. Are you more interested in planning a project than in carrying it out? . . . . . ☐☐☐

GO ON TO THE NEXT PAGE

		Yes	?	No
113.	Is your handwriting rather fast?	☐	☐	☐
114.	Do you often work slowly and leisurely?	☐	☐	☐
115.	Do you often try to persuade others to your points of view?	☐	☐	☐
116.	Do you generally walk faster than most people?	☐	☐	☐
117.	Have you ever done any racing?	☐	☐	☐
118.	Have you done horseback riding as a sport?	☐	☐	☐
119.	Have you participated in boxing?	☐	☐	☐

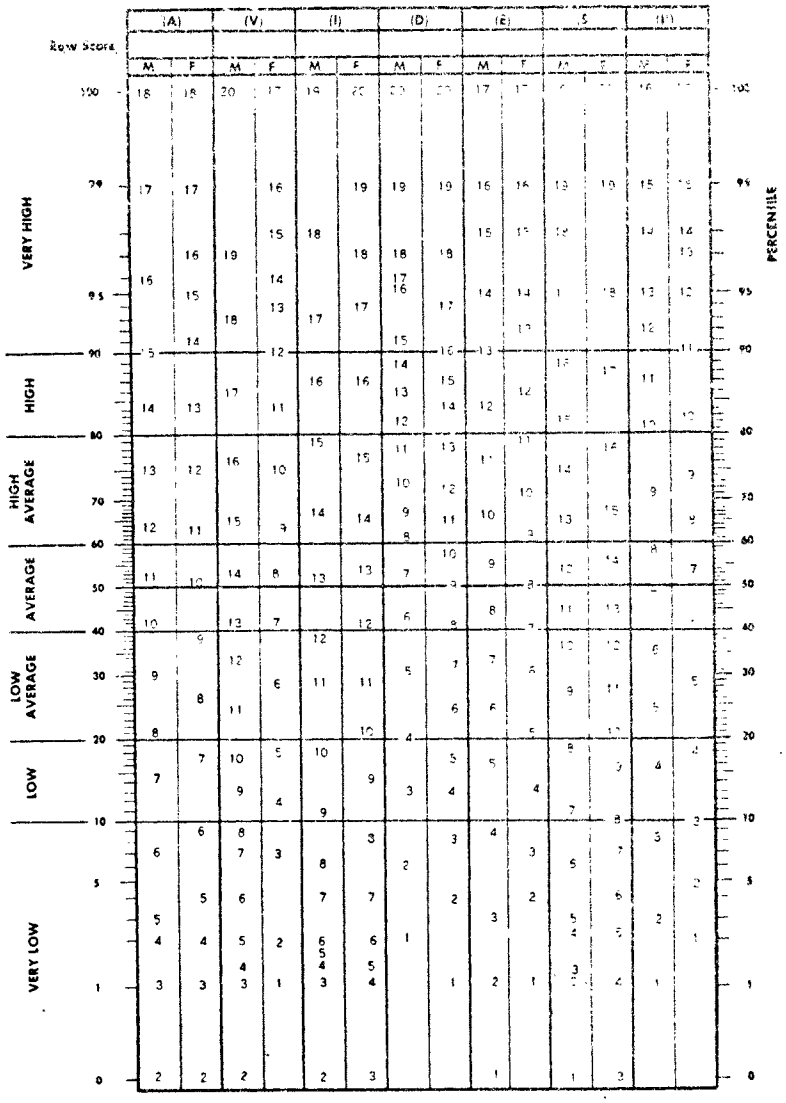
		Yes	?	No
120.	Have you played on a football team?	☐	☐	☐
121.	Do you spend much of your leisure time out-of-doors?	☐	☐	☐
122.	Do you usually make up your mind quickly?	☐	☐	☐
123.	As a youngster, were you occasionally the leader in a reckless stunt?	☐	☐	☐
124.	Do you frequently forget things?	☐	☐	☐
125.	Do you find it easy to give instructions to servants?	☐	☐	☐
126.	Do you often wait and let others take the initiative?	☐	☐	☐

		Yes	?	No
127.	Do you avoid public speaking?	☐	☐	☐
128.	At a party, do you often find yourself talking to a group of people?	☐	☐	☐
129.	Does it take a long time in the morning before you are fully awake?	☐	☐	☐
130.	Are you generally regarded as optimistic?	☐	☐	☐
131.	Are you often annoyed to have to leave your work?	☐	☐	☐
132.	Are your hands and feet often cold?	☐	☐	☐
133.	Is it easy for you to express yourself in conversation?	☐	☐	☐

		Yes	?	No
134.	Does it usually take a long time to get acquainted with you?	☐	☐	☐
135.	Do you have a large and sprawling handwriting?	☐	☐	☐
136.	Are you at ease in a large group of people?	☐	☐	☐
137.	Do you often get behind in your work?	☐	☐	☐
138.	Do you like work where you have peace and quiet?	☐	☐	☐
139.	Do you like work that requires accuracy in fine detail?	☐	☐	☐
140.	Do you often find books more interesting than people?	☐	☐	☐

END. Be sure you have filled in the information on the back cover.

BOY AND GIRL PROFILE



DIRECTIONS FOR SCORING AND PROFILING

1. Count the X's in the boxes in area A. Do not count X's that are circled. Enter the number in the box labeled A.

2. Count the X's in the boxes in areas V, I, D, E, S, R (omit circled X's) and enter the number counted for each area in its appropriate box.

3. If the examinee is a high school student, use the Boy and Girl profile on this page. If the examinee is not in high school, use the adult profile.

4. Write each raw score in the proper space at the top of the appropriate profile chart.

5. Under A find the number which is the same as the score at the top. Use the numbers under M if the examinee is a man or boy and the numbers under F if a woman or girl.

6. Draw a line through this number in the column.

7. Do the same thing for each of the other scores.

8. The result is the temperament profile.

HERE IS WHAT THE TTS SCORES MEAN:

(A) Active. A high score in this area suggests the person likes to be "on the go." He probably speaks, walks, writes, drives, works, and eats fast even if he does not have to.

(V) Vigorous. A high score here indicates the person enjoys active sports, work requiring use of the hands or tools, and outdoor occupations. He usually enjoys physical activity requiring a lot of energy.

(I) Impulsive. If the person scores high in this area he is usually happy-go-lucky. He probably likes to take chances, and can make decisions quickly.

(D) Dominant. A high score shows capacity for taking the initiative and assuming responsibility. The person probably enjoys organizing social activities, promoting new projects, and persuading others.

(E) Stable. If the person has a high stable score he probably remains calm in a crisis, can disregard distractions while studying or working, and is not irritated if interrupted when concentrating.

(S) Sociable. If the person is sociable, he usually enjoys the company of others, makes friends easily, and is sympathetic, cooperative, and agreeable in his relations with others.

(R) Reflective. A high score in this area indicates the person likes meditative thinking and enjoys dealing with theoretical rather than practical problems. He usually prefers to work alone with material requiring accuracy and fine detail.

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