THE INTERRELATIONSHIP OF SECONDARY STUDENT
TEACHER'S SOCIABILITY, TEACHING FIELD,
AND METHOD OF INSTRUCTION

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THE INTERRELATIONSHIP OF SECONDARY STUDENT TEACHER'S SOCIABILITY, TEACHING FIELD, AND METHOD OF INSTRUCTION

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By

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For many years educators have discussed the quality of teachers and teaching. One question which frequently arises in such discussions is the relationship between the teacher's personality and his ability to select and use those teaching methods and techniques which produce the best learning situation. Psychology and related research have shown that personality possesses many constantly interacting traits and characteristics. One of the most often discussed traits is sociability. Simply defined, it is a person's ability to get along with others in the social situation in which he finds himself. Is a person "shy" or "outgoing?" It is sometimes assumed that the extrovert, or highly social individual, sees people differently than the introvert, or less socially minded person. The question then arises as to whether this introversion - extroversion factor will influence a teacher's choice of teaching methods and techniques. Will the extrovert seek teaching situations which require much social interaction between student and teacher? Will the introvert...
teach by the lecture method and maintain a minimum of social interaction because of fear or a lack of skill in social situations? These are questions which this study has investigated.

In educational literature some writers imply that people having certain personality characteristics seek out certain subject areas in which to concentrate their study. Does the more socially inclined individual tend to pursue a subject area which offers him a chance to indulge in social activity? Does the less socially inclined individual seek a subject area in which little social interaction is required? What of the larger ambivalent group of the so-called normally socially adjusted individuals? Do they have within their patterns of subject choice a relationship to their social development?

If teachers are to be educated to use a variety of teaching methods, it is important that those who direct the teachers' education know something of the pattern of instructional preference of both the individual and the group with which they work.

Statement of the Problem

This problem involves an effort to determine the interrelationship of groups of secondary student teachers'
sociabilities, first teaching field choice and preference of lecture or group method of instruction.

The major aspects of the study are:

1. The classification of all subjects as social introverts, ambiverts, or extroverts on the basis of sociability test scores.

2. The grouping of all subjects into classifications which are commensurate with their choice of a first teaching field and background of educational experience.

3. The determination of the student's preferences for lecture or group instruction.

4. The determination of differences in instructional preferences among the groups classed as introverts, ambiverts, or extroverts.

5. The determination of differences in instructional preferences among the introvert, ambivert and extrovert groups within each classification according to first teaching field.

6. The determination of differences in instructional preference among the total populations of each teaching field classification.

7. The determination of differences in sociability among the total populations of each teaching field classification.
Hypotheses

The following hypotheses have been formulated and were investigated by statistical analysis of the data collected:

1. There will be three sociability groups (introverts, ambiverts, extroverts) found within the total population studied.

2. There will be three sociability groups (introverts, ambiverts, extroverts) found within the groups as classified by first teaching field.

3. There will be a significant positive relationship between extrovert sociability and preference for group instructional practices.

4. There will be a significant positive relationship between the ambivert sociability and preference for a variety of instructional practices.

5. There will be a significant positive relationship between introvert sociability and preference for lecture instructional practices.

6. There will be a significant difference in the instructional preferences of the total population of introverts, ambiverts and extroverts.
7. There will be a significant difference in instructional preferences of introverts, ambiverts and extroverts within each group as classified by first teaching field.

8. There will be significant differences shown in instructional preference by students in each identifiable group (by first teaching field) from students in other identifiable groups.

9. There will be significant differences shown in sociability by students in each identifiable group (by first teaching field) from students in other identifiable groups.

Significance of the Study

An important unresolved problem concerning teaching is the extent to which teaching is a matter of methods, techniques and procedures which are learned during professional preparation and the extent to which it is a matter of the expression of basic personality patterns. If teaching is a matter of both personality and the learning of methods during professional preparation, it then requires those who educate teachers to have an understanding of the relation existing between personality and the prospective teacher's preference for the use of certain
instructional practices. Therefore, the relationship of personality to the style and manner of teaching is crucial in deciding the way in which good teaching can be achieved.

The trained eye of the professional educator has, perhaps, the ability to determine the extent of social adjustment of the potential teacher. Sociability may be little more than the observable social adjustment of an individual. After a period of observation the teacher of professional education courses may wish to make a classification of his pupils in regard to social adjustment. If he knows that a significant preference for certain methods of teaching is associated with certain levels of social adjustment, he may then provide better learning experiences for each individual within his class.

If a further relationship exists between the potential teacher's first teaching field and his preferences for instructional practices, this knowledge could also be used to improve the learning situation for these individuals.

If there is no one successful way to teach and if the teaching preference of an individual can be determined early in his program of teacher education, these preferences could be used as criteria for grouping. This study,
therefore, better facilitates concentrated efforts toward producing a truly effective teacher.

Research in this area may also serve as a guide to more efficient use of secondary teaching personnel within a school system. Job satisfaction should be more easily attainable for the teacher who is placed in a working situation in keeping with both his social adjustment and instructional preference.

Related Literature

In recent years a number of studies relating to personality and teaching ability have been made. The research cited here provides the framework of theory for this study.

Eva Goodenough (14) states that although expert opinion has consistently emphasized the importance of teacher personality as a factor in teacher success, most studies which have measured changes in pupil behavior as a criterion for success have found little relationship between success and measures of teacher personality.

Several studies by Harold H. Anderson (1) also bear upon the question of teacher personality and the extent of its influence within the classroom. Anderson found
that there was a relation between dominative teacher personality and dominative pupil behavior and a corresponding positive relation between integrative teacher behavior and more of the working together atmosphere within the classroom.

Lewin, Lippit and White (20) also found similar behavior among pupils. Their studies concerned dominative, democratic and laissez-faire leadership practices. Under each type of teacher leadership it was found that the boys concerned showed direct behavior changes and differences due to personality projections from the leaders. These changes were all toward the behavior displayed by the leader.

P. M. Symonds (25) concludes that teaching is essentially an expression of personality and the methods courses taught in college have little influence upon the nature of educational experiences offered by the classroom teacher, nor do they greatly influence the attitude of the classroom teacher toward teaching.

After extensive investigation, Symonds (26) further concludes that although it is generally believed that teachers with serious personality and emotional problems will have a bad effect upon pupils, there is no conclusive
evidence to support this belief. However, he also states that most of the very ineffective teachers whom he studied were emotionally disturbed and projected hostility upon their pupils.

The field of total personality study shows little relation between personality and teaching ability. When passing from total personality study to the study of social adjustment and teaching ability some different results are found.

In separate studies, Tyler and Michaelis (28, 22) found that social adaptability of a student teacher was a measure of some value in predicting success of student teachers. One of the recommendations made by both men was that a study should be made concerning relations of subject major, level of teaching and personality adjustment. They feel that these studies could possibly lead to valid criteria for student teacher screening programs.

Research, in relation to sociability as a factor in college students' total adjustment, indicates that home and family background (rural or urban) produces some significant differences in college students' sociability scores as measured by the Heston Personal Adjustment
Inventory (16). Gingles (12) found that college girls who had affiliated with a sorority were significantly higher in sociability (at the .01 level of significance). She also found that college men from urban homes and those affiliating with fraternities had significantly higher sociability scores than did other college men.

Hall and Gaeddert (15) made use of a peer rating device to examine friendship patterns among students at the University of Nebraska. They point out that those rated as highly friendly by their peers have considerable ability in dealing with people. It was further found that when peer ratings were correlated with intelligence the resulting correlation was low. Grade averages were favorably predicted by the peer friendship ratings. It appears then that sociability is a better predictor of course grades than is intelligence. Success in student teaching was also studied. Student teaching success seems to relate to friendship scores with correlations as high as .40 between course grades and friendship ratings.

Research also points toward a social factor being used in the judgment of inferior or superior teachers. Tanner (27) indicates that his work shows superior teachers to have a broad interest pattern. They belong to many
societies and were generally at home in a group. The inferior teachers were characterized by nonacceptance by their own social group, had few friends and preferred work that avoided social contacts. They prefer to deal with things rather than people.

Studies concerning extroversion-introversion produce a field of conflicting research. In the past few years many psychologists have become increasingly convinced that extroversion-introversion is an important dimension of personality, yet there is little agreement as to its nature (5). Cattell (6) has presented evidence to indicate that extroversion-introversion is largely of environmental origin. Eysenck (8) is firmly convinced that heredity plays a major role in a person's social adjustment.

The relation between total personal adjustment and extroversion-introversion has been argued at length. Jung (19) maintained that extroversion-introversion is independent of total adjustment. Freud (10) expressed a different picture through the belief that introversion was a forerunner of neurosis.

Carrigan (5) concludes that while many gaps remain, there is reason to believe that extroversion-introversion
is a definite part of each individual's personal make-up and further research is recommended.

Educational attainment and the factors of extroversion-introversion were examined by Furneaux (11), Broadbent (4), and Lynn (21). These studies, carried out in England, indicate that a positive association between introversion and high educational attainment, at the university level, does exist. It was also found that introverts have good vocabularies in relation to their intelligence (17).

The relationship existing between academic achievement, teaching preference and sociability was recently investigated by Leslie R. Beach (2). Using college subjects, he divided one group into four groups which would be instructed in the following manners: (1) lecture - little social interaction, (2) discussion - much interaction, (3) autonomous small groups - set their own instructional procedure (much interaction), (4) independent study - seldom or never met together. The groups appeared, by objective measure, to be equal in sociability and achievement. The less social individual was found to achieve more than the more social individual in the lecture group. In the small group situations the more social individual was found to have higher achievement. It
appears to Beach that in situations similar to those described in this study a relationship exists between sociability and achievement.

In an unpublished doctoral dissertation at North Texas State University, Howard R. Patterson (24) found similar relationships between personality and instructional preference and recommended further study into the area of sociability and teaching preference.

Farwell and McConnell (9) recently investigated the relation between personality factors and college subject majors. They made use of a group of 662 men and 259 women. Those people were given several personality measures and a composite score was derived on each of five traits. The comparison of these scores showed no difference in personality in respect to college major except in the case of the male engineers. They stood out sharply from the others. They were less original, less complex perceptually, more authoritarian, rigid and power-oriented than any other group. Majors in biological sciences approached the engineer group but were not clearly distinct from the other groups.

Research concerning the relation existing between personality and preference for certain methods of instruction
has some findings of significance. Jacob (18) indicates that student responses to a given technique of instruction will often be reflective of his personality pattern or attitude developed prior to the time he was introduced to the method of instruction. He points out that many students feel frustrated and uneasy when faced with instructional procedures which require actions of them that are not consistent with their personality pattern.

Wilerman (30) has conducted studies which point toward the active or passive classroom participation of the student as a result of personality. He feels that personality patterns allow certain people to profit from group activity while others profit more from class procedures requiring less personal interaction with others.

Research into instructional methods employed at the college level presents a picture which implies the best approach would involve a wide range of learning activities.

Cook (7) believes the lecture-textbook method of teaching makes its greatest contribution in imparting information but that retention of such information beyond immediate recall is low.

Bloom (3) concludes that lecture is superior to discussion in developing information about a subject. On the
other hand, the discussion method is better from the standpoint of developing abilities and skills of a problem-solving nature.

In a study by Ward (29) it was concluded that lecture-demonstration teaching was better for recall of facts and principles. The group-study procedure was better for understandings and implications to be drawn from facts and principles. The less capable students profited more from lecture teaching than from group-study teaching. The capable student profited from both types of instruction but profited to a greater extent from the group-study method.

The literature reviewed here presents a confused picture of the possible relation of social adjustment, teaching field and instructional method preference. Therefore, after this review and some observation of teacher trainees, the possibility of significant relationships between teacher sociability, teaching method preferences, and chosen teaching field has generated the plan of this study.
Definition of Terms

1. **Sociability** - shall be taken to mean the general social adjustment of an individual as revealed by Heston Personal Adjustment Inventory (S) scores. Heston describes his (S) as measurement of the following:

   High degrees of this trait indicate extroversion in the social sense. A person with a high "S" score is more interested in people than in things, he makes friends easily, converses readily and freely, feels he is a "lively" individual, enjoys social mixing, and frequently takes the lead in social participation. The low person is self-conscious, shy, and socially timid, has only a limited number of friends, and seeks the background on social occasions. He is the "introvert" who is lacking in social skills and/or inclinations (16).

2. **Extrovert** - shall be taken to mean those people whose sociability score places them from one standard deviation above the population sociability mean to the highest score.

3. **Ambivert** - shall be taken to mean those people whose sociability score places them from one standard deviation below to one standard deviation above the population sociability mean (13).

4. **Introvert** - shall be taken to mean those people whose sociability score places them from the lowest score to one standard deviation below the population sociability mean.
5. **Instructional Preference** - shall be taken to mean group or lecture preference as defined in Patterson's *Student Instructional Preference Scale*. Patterson (24) defines lecture and group-oriented instructional methods as follows:

**Group-oriented instruction method:** Group-oriented instruction may include one or more of the following: panel discussions, committee and individual reports, student-centered method, and the question and answer technique. Group-oriented instruction methods allow for student participation, the class decided upon its own activities, students are encouraged to contribute personal experiences, the instructor accepts student contributions, goals are determined by the class, students evaluate each other with emphasis upon affective and attitudinal change, and there is a de-emphasis of tests and grades.

**Lecture-oriented instruction method:** In the lecture method there is mainly instructor participation, the instructor determines the activities, discussion is kept on course materials, there is regular use of tests and grades, student contribution is evaluated by the instructor, goals are determined by the instructor, and student participation is encouraged only for the purpose of seeking information from the instructor.

6. **Significant Differences** - shall be taken to mean a statistical result which is equal to or greater than that which is required to reach the .05 level of significance. (Fisher, t table and Fisher, F table) (23).

**Limitations of the Study**

The subjects of this study consisted of people who were engaged in student teaching in secondary education at
North Texas State University, Denton, Texas, during the fall term of the 1962-63 school year. This study was concerned with the overt social manifestation of personality as measured by the Heston Personal Adjustment Inventory.

Basic Assumptions

It is assumed that the total population of secondary student teachers at North Texas State University in the fall term of the 1962-63 school year represents a normal population of such individuals as may choose teaching as a profession. It is further assumed that the groups which were formed by first teaching field choice are a representative sample of students pursuing teaching careers in these areas.

It is also assumed that the instruments chosen for use in this study are valid for the purposes of the study.

Procedures for Collecting Data

The subjects included in this study consisted of individuals who were engaged in secondary student teaching during the fall term (1962) at North Texas State University, Denton, Texas. The total group studied numbered 211.

The homogeneity of the subjects was determined by University requirements for student teaching. To qualify
for student teaching all students are required to have a
minimum grade average of "C" in their teaching field,
over-all average, and professional education courses com-
pleted.

North Texas State University offers several plans
under which student teaching may be taken. In order to
ascertain sociability and instructional preferences under
circumstances of relatively equal educational background
and training for all subjects, the Heston Personal Adjust-
ment Inventory and Student Instructional Preference Scale
were administered as early in the term as class organiza-
tion permitted.

The Heston Personal Adjustment Inventory and Student
Instructional Preference Scale are discussed in detail in
Chapter II of this study.

These tests were administered by one individual using
both group and individual testing arrangements.

Testing sessions began on September 4, 1962 for those
people who began secondary student teaching with the open-
ing of the public schools. On September 21, 1962, another
larger group-testing session was held for those people who
began their secondary student teaching with the opening of
North Texas State University. The largest of the three
major testing sessions was held on September 26, 1962. This session gathered data from those people who were doing secondary student teaching under any other program. These three testing sessions produced the data used in this study.

In order to classify members of the total study group as extroverts, introverts, or ambiverts it was necessary to evolve an objective method of classification. The following procedure was followed. The mean and standard deviation of Weston's sociability raw scores for the total study group was computed. The mean and standard deviation of the group was then used to compute points of classification for social introverts and extroverts. The point of classification for extroverts was then placed at the mean plus one standard deviation. The point of classification for introverts was placed at the mean minus one standard deviation. All scores falling at or above the mean plus one standard deviation to the mean minus one standard deviation were classed as ambiverts and grouped for further study. All scores falling at or below the mean minus one standard deviation were classed as introverts and grouped for further study. The criterion of classification as established by this procedure was also
used for similar grouping within each first teaching field area.

The following categories were used to further classify the data. These categories are based on similarity of first teaching fields. The seven categories are:

1. Language Arts - includes English, foreign language, journalism, speech therapy, speech, speech-drama.


3. Social Studies - includes history and social studies.

4. Business Education.

5. Health and Physical Education - includes health, physical education (men), physical education (women), health - physical education - recreation.

6. Industrial Arts and Home Economics - includes industrial arts, library service, home economics.

7. Fine Arts - includes art, music, art education, music education.

The subjects' instructional preference scores were arranged within each group in accordance with the subjects' classification as extrovert, ambivert, or introvert.
Procedures for Treating Data

The tenability of the hypotheses of the study was determined by examining the data and treating it statistically in the following manner:

**Step I:** Hypothesis one was tested by a sorting of Heston's (S) scores according to the division points established by the process of moving one standard deviation above the population mean and one standard deviation below the population mean.

**Step II:** Hypothesis two was tested by placing all cases in the proper sub-group according to first teaching field categories. Three groups, extrovert, ambivert and introvert, were then sorted within each teaching field group. This was done by the use of the same division points that were used to establish original extrovert, ambivert or introvert classification (Step I).

**Step III:** Hypothesis three was tested by calculating the coefficient of correlation between instructional preference scores and sociability scores for the total group classed as extroverts.

**Step IV:** Hypothesis four was tested by calculating the coefficient of correlation between instructional
preference scores and sociability scores for the total group classed as ambiverts.

**Step V:** Hypothesis five was tested by calculating the coefficient of correlation between instructional preference scores and sociability scores for the total group classed as introverts.

**Step VI:** Hypothesis six was tested by the use of simple analysis of variance to determine the significance of the differences among the instructional preference means of the total extroverts, ambiverts and introverts. Where significant differences were found, the Fisher *t* test of separate group variances was used to determine the differences between the means of individual groups.

**Step VII:** Hypothesis seven was tested by the use of simple analysis of variance to determine the significance of the differences among the instructional preference means of the extroverts, ambiverts and introverts within each of the seven teaching field sub-groups. Where significant differences were found, the Fisher *t* test of separate group variances was used to determine the differences between the means of individual groups. This step required the calculation of seven separate simple analysis of variance procedures.
Step VIII: Hypothesis eight was tested by the use of simple analysis of variance to determine the significance of the differences among the instructional preference means from each teaching field group (Means computed for each group without regard for sociability grouping). Where significant differences were found the Fisher $t$ test of separate group variances was used to determine the differences between the means of individual groups.

Step IX: Hypothesis nine was tested by the use of simple analysis of variance to determine the significance of the differences among the sociability means from each teaching field group (this was without regard for extrovert, or other sociability classifications). Where significant differences were found, the Fisher $t$ test of separate group variances was used to determine the differences between the means of individual groups.
CHAPTER BIBLIOGRAPHY


Student Teachers Studied

The source of data used in this study consisted of two hundred eleven full-time secondary student teachers. This group represented the total enrollment of full-time secondary student teachers at North Texas State University, Denton, Texas for the fall term of the 1962-63 school year. The group was composed of what has previously been assumed, in Chapter I, to be an adequate cross section of such individuals as may choose secondary teaching as their profession.

Each of the individuals studied was required to be of senior standing, have completed at least eighteen semester hours in a proposed teaching field and have enough professional education course credit to meet Texas Certification requirements at the close of student teaching. Grade averages must have been at least a C average in education, the proposed teaching field and in all courses taken. An additional requirement was that a minimum of
six hours of professional education must have been taken at North Texas State University before student teaching.

Division of the total population into first-teaching-field-groups created seven populations. The number of individuals included in each of these populations is shown in Table I.

**TABLE I**

**STUDY POPULATION DIVIDED BY FIRST TEACHING FIELD CATEGORIES**

<table>
<thead>
<tr>
<th>First Teaching Field Category</th>
<th>Number of Student Teachers</th>
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<tbody>
<tr>
<td>Language Arts</td>
<td>57</td>
</tr>
<tr>
<td>Social Studies</td>
<td>37</td>
</tr>
<tr>
<td>Industrial Arts, Home Economics and Library</td>
<td>34</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>24</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>24</td>
</tr>
<tr>
<td>Business Education</td>
<td>19</td>
</tr>
<tr>
<td>Mathematics and Science</td>
<td>16</td>
</tr>
<tr>
<td>Total Population</td>
<td>211</td>
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</table>

The Language Arts group had the largest population of all seven classifications. This group contained fifty-seven individuals. The second largest group was Social Studies with thirty-seven members. Third in size was the Industrial Arts, Home Economics and Library group with thirty-four members. Both the Health and Physical Education
and Fine Arts groups had twenty-four individuals each. These groups shared the position 4.5 in size. The sixth group in size was the Business Education group with nineteen members. The Mathematics and Science group ranked seventh in size with sixteen members.

Instruments Employed

In order to objectively measure both sociability and teacher preference of methods it was necessary to select instruments to yield numerical scores for statistical evaluation.

The measure of sociability chosen was the "S" or sociability score from Heston Personal Adjustment Inventory. The test validity was checked by three methods of validation: (1) internal consistency, (2) comparison to independent criteria, and (3) psychological meaningfulness of the component items. Validity coefficients were all high enough for use as a group measure. In relation to "S" validity, very high correlations between Heston's (S) and other known "S" measurements were found (as high as .71) (4).

Reliability was determined by the split half method. All reliability coefficients were found to be large enough
for satisfactory use in group testing situations. The sociability coefficient, as corrected by the Spearman-Brown Prophecy Formula, was .910 (4).

Albert Ellis (3), writing in Buros, Fourth Mental Measurement Yearbook, states that Heston's test independently measures traits of personal adjustment. The test is as good as most of a similar nature and seems to have screening usefulness. In relation to sociability, he feels that this is more a measurement of the effect of a trait rather than a measuring of the trait itself.

E. Lowell Kelly (3) states that Heston's test is good for the purpose for which it was designed. He feels that it is very valid for preliminary assessment of students. He further feels that the sociability scores are relatively independent of the other scores.

For the purpose of this research it seemed necessary to use a sociability measure which could be successfully removed from the total personality measurement and not lose its validity or reliability. Heston's (S) score offered such a measure.

Anastasi states that the Heston Personal Adjustment Inventory employs a different set of items for arriving at each of its six scores. The practice of borrowing items
from previously constructed instruments also allows the use of research conducted with earlier tests (1).

The above cited research and opinion pointed toward the Nesle Personal Adjustment Inventory as being thoroughly adequate for the present investigation.

Measurement of teacher preference of methods was made by the use of Patterson's Student Instructional Preference Scale. This instrument is not a commercial test but is copyrighted by the author. The author has granted permission for the use of the instrument in this study.

The Student Instructional Preference Scale was developed by Howard Patterson as part of a doctoral study at North Texas State University in 1959. The scale was developed to "measure attitude toward classroom instructional methods" (5).

Reliability was established by the test-retest method. A test-retest reliability coefficient of .966 was found. A critical ratio of 7.29 established the significance of the difference at greater than the 1 per cent level of confidence (5).
Logical validity was assumed for the instrument. In a measure of attitudes, one must assume that subject responses can be used to define a concept (5).

In scoring the scale, two scores are derived, a "G" score and "L" score. These two scores are then added to produce the Student Instructional Preference Scale scores which were used in this study. A high total score shows a preference for group-oriented instruction. A low total score shows a preference for lecture-oriented instruction. The highest possible score is 275. The lowest possible score is fifty-five (5).

A recent investigation conducted at North Texas State University shows a rho of .31 between high (group preference) scores on Patterson's Student Instructional Preference Scale and high (democratic oriented) scores on the Minnesota Teacher Attitude Inventory (2).
CHAPTER BIBLIOGRAPHY


CHAPTER III

INTERPRETATION AND DISCUSSION OF THE DATA

Chapter III will be devoted to the presentation, interpretation and discussion of the test data as they relate to the stated hypotheses of this study.

Total Population Sociability Groups

In Chapter I the first hypothesis stated that the total population would contain three sociability groups which would be referred to as introverts, ambiverts and extroverts. The determination of these three groups followed the method outlined in Chapter I under Procedure for Collecting Data.

Heston's sociability raw scores were used to determine the limits of these three groups. As previously discussed, the limit for these classifications was determined by the mean plus or minus one standard deviation as computed for this population.

The mean of the 211 Heston sociability scores was 28.36. The standard deviation of the same group of scores was 7.99. Table II shows the score scale points which
were designated as points of classification and the number of scores falling in each sociability group.

TABLE II

DIVISION OF HESTON SOCIABILITY SCORES INTO EXTROVERT, AMBIVERT AND INTROVERT

<table>
<thead>
<tr>
<th>Sociability Group</th>
<th>Raw Score Range</th>
<th>Frequency</th>
<th>Per cent of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrovert</td>
<td>37-41</td>
<td>33</td>
<td>15.64</td>
</tr>
<tr>
<td>Ambivert</td>
<td>21-36</td>
<td>145</td>
<td>68.72</td>
</tr>
<tr>
<td>Introvert</td>
<td>4-20</td>
<td>33</td>
<td>15.64</td>
</tr>
</tbody>
</table>

The extrovert classification resulted from the mean, 28.36, plus one standard deviation, 7.99, which equaled 36.35. It was, therefore, concluded that all scores, including thirty-seven to the highest score, would be classed as extroverts.

The ambivert classification was formed by the mean, plus one standard deviation, which was equal to 36.35, and the mean, minus one standard deviation, which was equal to 20.37. Therefore, the ambivert group ranged from scores of twenty-one through thirty-six, inclusively.
The introvert classification was formed by the mean, minus one standard deviation which was equal to 20.37. Therefore, the introvert group ranged from scores of twenty to the lowest score inclusively.

The hypothesis that three sociability groups would be found was retained. It should also be noted that Table II reflects the relatively normal distribution of these scores around the mean. Both the extrovert and introvert groups contained thirty-three individuals or 15.64 per cent of the total population. The ambivert group contained 145 individuals or 68.72 per cent of the total population.

First Teaching Field Sociability Groups

The second hypothesis, stating that three sociability groups would be found to exist in each teaching field group, was tested by the sorting of all student teachers' sociability scores into the seven teaching field categories outlined in Chapter I, Procedure for Collecting Data.

This arrangement produced seven groups, all of which contained some individuals classed as extrovert, ambivert and introvert. The sociability classifications within each of these groups employed the same range of scores as used with the total population.
The largest of these seven groups was the Language Arts group with fifty-seven student teachers.

Table III extends the relation of the three sociability groups found within the Language Arts group. It may be seen that the ambivert group was by far the largest,

### TABLE III

**SOCIABILITY CHARACTERISTICS OF FIRST TEACHING FIELD GROUPS**

<table>
<thead>
<tr>
<th>First Teaching Field Group</th>
<th>Frequency</th>
<th>Total</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Extro-vert</td>
<td>Ambi-vert</td>
<td>Intro-vert</td>
<td></td>
</tr>
<tr>
<td>Language Arts</td>
<td>9</td>
<td>38</td>
<td>10</td>
<td>57</td>
</tr>
<tr>
<td>Social Studies</td>
<td>11</td>
<td>24</td>
<td>2</td>
<td>37</td>
</tr>
<tr>
<td>Industrial Arts, Home</td>
<td>2</td>
<td>29</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>Economics and Library</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health and Physical</td>
<td>6</td>
<td>13</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine Arts</td>
<td>3</td>
<td>17</td>
<td>4</td>
<td>24</td>
</tr>
<tr>
<td>Business Education</td>
<td>1</td>
<td>14</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Mathematics and Science</td>
<td>1</td>
<td>10</td>
<td>5</td>
<td>16</td>
</tr>
</tbody>
</table>
having thirty-eight members. The introvert group was second in size with ten members. The extrovert group was third in size having nine members. The mean sociability score of the Language Arts group was 29.30, which placed this group with the second highest sociability mean. This population had the fifth largest standard deviation with 7.74.

As shown in Table III, the Social Studies group ranked first in mean sociability score with 30.76. Within this group the ambiverts were again the largest group with twenty-four individuals. The introvert group was the smallest of any group with only two members. The extrovert group contained eleven members. A total of thirty-seven student teachers placed the Social Studies group second in size. This classification's standard deviation was the smallest of the seven groups, being only 6.50.

As may be seen from Table III, the Industrial Arts, Home Economics and Library group ranked third in total size, having thirty-four members. Within this population the ambivert group was largest with twenty-nine members. This was followed by the introverts with three members and the extroverts with only two members. A mean sociability
score of 28.09 placed this group fourth highest in mean sociability. A standard deviation of 6.68 was sixth lowest among the seven groups.

The Health and Physical Education group contained twenty-four members. The Fine Arts group also contained twenty-four members. Therefore, these two groups shared the position 4.5 in total size. The mean sociability score of the Health and Physical Education group was 28.54. This was the third largest sociability mean. Within the Health and Physical Education group the ambivert group was largest with thirteen members. The introvert classification was smallest with only five members. The extrovert group had six members. A standard deviation of 8.79 was second largest among the seven groups.

As previously mentioned, the Fine Arts group shared the position 4.5 with the Health and Physical Education group. The Fine Arts group had a total population of twenty-four members. The ambivert classification made up the largest portion of the group's population with seventeen members. The introverts were second in number with four members, and the extroverts made up the smallest group with three members. This population's sociability
standard deviation was found to be 8.58 which was third largest among the seven groups. A sociability mean of 27.88 ranked fifth lowest among all groups.

The Business Education group contained nineteen members which placed it sixth in total population. When divided into sociability classifications the ambivert group was largest with fourteen members. The introvert population was second in size with four members. Only one extrovert was found within this group. The largest standard deviation of the seven groups was found here. The sociability standard deviation was 8.85. A sociability mean of 25.79 ranked sixth lowest among all groups.

The smallest sub-group was the Mathematics and Science group. A population of sixteen people made up this group. Ten were ambiverts, five were introverts and one was an extrovert. A sociability mean of 23.56 placed this group's mean sociability score as the lowest of any group. A standard deviation of 8.22 ranked fourth largest among the seven reported standard deviations.

It was interesting to note the hypothesis that three sociability groups would be found in each teaching field category was supported by these data.
Examination of these data also points out that both the Business Education and Mathematics and Science groups contained only one extrovert each. The Language Arts and Social Studies groups contained larger numbers of extroverts. The Social Studies extrovert group was the largest with eleven.

It was also interesting to note the distribution of introverts. The Social Studies group contained the smallest number of introverts with only two. The Language Arts group contained the largest number of introverts with ten.

**Relationship Between Extrovert Sociability and Instructional Preference**

The third hypothesis stated that a significant, positive relationship between extrovert sociability and preference for group instructional practices would exist. In order to test the tenability of this hypothesis a product moment correlation was computed between the extroverts' sociability scores and the extroverts' instructional preference scores. This correlation was found to be .42. A test of significance established the significance of this correlation at greater than the .05 level. These findings support the retention of the hypothesis that extrovert
sociability and preference for group instructional practices are positively related. It would seem that within comparable groups a large number of teachers would prefer to teach by group methods as opposed to lecture methods.

Relationship Between Ambivert Sociability and Instructional Preference

The fourth hypothesis stated that a significant, positive relationship would be found between ambivert sociability scores and instructional preference scores of the same population.

The product moment correlational technique was used to determine the relationship existing between the ambiverts' sociability scores and instructional preference scores. This correlation was found to be .12, which, when tested for significance, was below the amount required to reach the .05 level.

This finding indicates the rejection of a significant positive relationship between these two measures. It is indicated by these data that student teachers who compose the ambivert population of this study choose instructional practices which are a mixture of both lecture and group techniques. This type of instructional preference corresponds favorably to the apparent mixture of
introversion and extroversion as revealed through their sociability scores.

Relationship Between Introvert Sociability and Instructional Preference

The fifth hypothesis stated that a significant, positive relationship between introvert sociability and a preference for lecture instructional practices would be found.

In order to test the tenability of this hypothesis a product moment correlation was computed between introvert sociability scores and instructional preference scores for the same group. This correlation was found to be .11, which, when tested for significance, fell below the .05 level.

These data indicate the rejection of the fifth hypothesis. Low sociability scores were not accompanied by low instructional preference scores in a significant amount. According to previously cited definitions of lecture preference being indicated by low instructional preference scores, this finding would indicate that, for the student teachers of this population, those classed as introverts have no significant relation between their social adjustment and preference for lecture methods of teaching.
Difference in Instructional Preference of Total
Extroverts, Ambiverts and Introverts

Table IV is designed to show the basic instructional preference data for the three sociability classifications of this population.

TABLE IV

Instructional Preference Characteristics of Total Population as Shown by Sociability Groups

<table>
<thead>
<tr>
<th>Sociability Group</th>
<th>Frequency</th>
<th>Raw Score Range</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrovert</td>
<td>33</td>
<td>256-129</td>
<td>188.88</td>
<td>24.57</td>
</tr>
<tr>
<td>Ambivert</td>
<td>145</td>
<td>236-124</td>
<td>180.16</td>
<td>23.33</td>
</tr>
<tr>
<td>Introvert</td>
<td>33</td>
<td>229-122</td>
<td>179.79</td>
<td>26.36</td>
</tr>
</tbody>
</table>

As may be seen from Table IV, the extrovert group with a mean instructional preference score of 188.88 had the largest of the three means. A standard deviation of 24.57 placed the extrovert group as second largest in this respect.

The ambivert group was second highest in instructional preference with a mean score of 180.16. The standard deviation of this group was the smallest of the three with 23.33.
The introvert population had the smallest mean instructional preference score with 179.79. A standard deviation of 26.36 placed this group with the highest standard deviation of the three groups.

These measures would indicate that the ambivert group was the most homogeneous of the three groups in instructional preferences. The introvert classification would appear to be the most heterogeneous of the three groups in instructional preference.

The sixth hypothesis dealt with these measures of instructional preference. It was hypothesized that a significant difference in instructional preference would exist among the total population of introverts, ambiverts and extroverts.

Simple analysis of variance was used to test the instructional preference data for significant differences among the three sociability populations. The summary of the findings from this test is presented in Table V, page 47.

An insignificant value of $F (F = 1.84)$ was disclosed. A significant value of $F$ for 2 and 208 degrees of freedom at the .05 level is 3.04. The hypothesis that significant
TABLE V

SUMMARY OF SIMPLE ANALYSIS OF VARIANCE OF DATA ON INSTRUCTIONAL PREFERENCE OF TOTAL EXTROERTS, AMBIVERTS AND INTROVERTS

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2153</td>
<td>2</td>
<td>1076.50</td>
<td>1.84</td>
</tr>
<tr>
<td>Within</td>
<td>121900</td>
<td>208</td>
<td>586.05</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>124053</td>
<td>210</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

differences in instructional preference among the three sociability groups would exist was, therefore, rejected.

It was concluded that instructional preferences among these sociability groups do not vary in a significant amount.

Differece in Instructional Preference of Extroverts, Ambiverts and Introverts within Each Teaching Field Group

The seventh hypothesis stated that significant differences in instructional preference would be found among the extroverts, ambiverts and introverts within each teaching field group. This hypothesis was tested by the use of simple analysis of variance to determine the significance of the differences among the instructional preference means
of each sociability group within each of the seven teaching field sub-groups. The results of these seven tests are reported in the same order in which they were originally reported in Table I, Chapter II.

The first application of simple analysis of variance was used to test the significance of differences within the Language Arts group. The summary of the test results is presented in Table VI.

TABLE VI

SUMMARY OF SIMPLE ANALYSIS OF VARIANCE OF DATA ON INSTRUCTIONAL PREFERENCE FOR THE LANGUAGE ARTS GROUP

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>1970</td>
<td>2</td>
<td>985.00</td>
<td>1.60</td>
</tr>
<tr>
<td>Within</td>
<td>33329</td>
<td>54</td>
<td>617.20</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35299</td>
<td>56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A value of $F = 1.60$ was obtained. The obtained value was not large enough to be significant at the .05 level. A significant value of $F$ for 2 and 54 degrees of freedom at the .05 level is 3.17.
The hypothesis that significant differences would exist among these measures was then rejected. It was concluded that no significant difference in instructional preference exists among the sociability populations of the Language Arts group.

The next application of the simple analysis of variance was for the Social Studies group. The summary of the test results is presented in Table VII.

**TABLE VII**

**SUMMARY OF SIMPLE ANALYSIS OF VARIANCE OF DATA ON INSTRUCTIONAL PREFERENCE FOR THE SOCIAL STUDIES GROUP**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>362</td>
<td>2</td>
<td>181.00</td>
<td>0.28</td>
</tr>
<tr>
<td>Within</td>
<td>21617</td>
<td>34</td>
<td>635.79</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21979</td>
<td>36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The value of $F = 0.28$, which was obtained, was much smaller than the value required for significance at the .05 level. A significant value of $F$ for 2 and 34 degrees of freedom at the .05 level is 3.28.
The hypothesis that significant differences in instructional preference exist among sociability groups within this population was rejected. The conclusion was then reached that no significant difference in instructional preference exists among the divisions of the Social Studies group.

The test for significant difference of mean change was then applied to the Industrial Arts, Home Economics and Library group. The summary of the test results is presented in Table VIII.

**TABLE VIII**

**SUMMARY OF SIMPLE ANALYSIS OF VARIANCE OF DATA ON INSTRUCTIONAL PREFERENCE FOR THE INDUSTRIAL ARTS, HOME ECONOMICS AND LIBRARY GROUP**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>150</td>
<td>2</td>
<td>75.00</td>
<td>0.12</td>
</tr>
<tr>
<td>Within</td>
<td>19215</td>
<td>31</td>
<td>619.84</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19365</td>
<td>33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A value of $F = 0.12$ was obtained. This value was much smaller than needed for significance. A significant
value of $F$ for 2 and 31 degrees of freedom at the .05 level is 3.31.

The hypothesis that significant differences in instructional preference would exist among the sociability groups of this sample was, therefore, rejected. The conclusion was then drawn that significant differences in instructional preference were nonexistent within the sociability groups of the Industrial Arts, Home Economics and Library group.

Simple analysis of variance was also used to analyze the data for the Health and Physical Education group. The analysis of these data, in summarized form, is presented in Table IX.

**TABLE IX**

**SUMMARY OF SIMPLE ANALYSIS OF VARIANCE OF DATA ON INSTRUCTIONAL PREFERENCE FOR THE HEALTH AND PHYSICAL EDUCATION GROUP**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>1476</td>
<td>2</td>
<td>738.00</td>
<td>1.80</td>
</tr>
<tr>
<td>Within</td>
<td>8604</td>
<td>21</td>
<td>409.71</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10080</td>
<td>23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An insignificant value of $F$ ($F = 1.80$) was disclosed. A significant value of $F$ for 2 and 21 degrees of freedom at the .05 level is 3.47. The hypothesis was rejected. The conclusion reached was that no significant difference in instructional preference existed among the sociability groups within the Health and Physical Education group.

The instructional preferences of the Fine Arts group were also tested by the use of simple analysis of variance. The summary of the test of these data is presented in Table X.

**TABLE X**

**SUMMARY OF SIMPLE ANALYSIS OF VARIANCE OF DATA ON INSTRUCTIONAL PREFERENCE FOR THE FINE ARTS GROUP**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>303</td>
<td>2</td>
<td>151.50</td>
<td>0.40</td>
</tr>
<tr>
<td>Within</td>
<td>8033</td>
<td>21</td>
<td>382.52</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8336</td>
<td>23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A value of $F = 0.40$ was obtained. This value of $F$ was much smaller than that which is required for the .05
level of significance. As may be seen from the discussion of Table IX, a significant value of $F$ for 2 and 21 degrees of freedom is 3.47. It was concluded that no significant difference existed among the instructional preferences of the sociability classifications within the Fine Arts group.

A test of the Business Education group was made using simple analysis of variance. A summary of this test result is shown in Table XI.

**TABLE XI**

**SUMMARY OF SIMPLE ANALYSIS OF VARIANCE OF DATA ON INSTRUCTIONAL PREFERENCE FOR THE BUSINESS EDUCATION GROUP**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2428</td>
<td>2</td>
<td>1214.00</td>
<td>1.26</td>
</tr>
<tr>
<td>Within</td>
<td>15411</td>
<td>16</td>
<td>963.19</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17839</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The test of these data for the Business Education group disclosed an insignificant $F$ ($F = 1.26$). A significant value of $F$ for 2 and 16 degrees of freedom at the .05
level is 3.63. The hypothesis that significant differences in instructional preference of the sociability classifications within the Business Education group was, therefore, rejected. The conclusion was then drawn that instructional preferences were not significantly different among the sociability groups of this sample.

The simple analysis test for significant difference of mean change in instructional preference was also applied to the Mathematics and Science group. The summary for the test of these data is presented in Table XII.

**TABLE XII**

**SUMMARY OF SIMPLE ANALYSIS OF VARIANCE OF DATA ON INSTRUCTIONAL PREFERENCE FOR THE MATHEMATICS AND SCIENCE GROUP**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>147</td>
<td>2</td>
<td>73.50</td>
<td>0.10</td>
</tr>
<tr>
<td>Within</td>
<td>9483</td>
<td>13</td>
<td>729.46</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9630</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A test of the Mathematics and Science group revealed a value of $F = 0.10$. This value was much smaller than
needed for significance. A significant value of $F$ for 2 and 13 degrees of freedom at the .05 level is 3.80. The hypothesis tested was, therefore, rejected. It was concluded that no significant difference in instructional preference existed among the sociability divisions within the Mathematics and Science group.

The seventh hypothesis was rejected upon the basis of the previously reported findings. All seven of the obtained $F$'s were insignificant.

The conclusion was, therefore, reached that within each of the seven teaching field groups no significant difference in instructional preference existed among the three sociability classifications of each teaching field.

### Difference in Instructional Preference of Teaching Field Groups

Simple analysis of variance was used to test the eighth hypothesis. It was hypothesized that a significant difference in instructional preference would exist among the seven groups as identified by first teaching field choices. The summary of the results of this test is shown in Table XIII.

A value of $F = 0.42$ was revealed. This value of $F$ does not approach the required value for significance at
the .05 level. In order to be significant at the .05 level for 6 and 204 degrees of freedom, the value must be 3.04. The hypothesis of significant differences in instructional preference was rejected. The conclusion reached was that no significant differences in instructional preference existed among the seven teaching fields.

**Difference in Sociability of Teaching Field Groups**

The ninth hypothesis was tested for mean differences by the use of simple analysis of variance. It was hypothesized that significant differences would exist among the sociability means of the seven teaching field groups. The summary of the results of the simple analysis test is reported in Table XIV.
The simple analysis test revealed a value of $F = 2.05$. This value was smaller than needed for significance at the .05 level. A significant value of $F$ for 6 and 204 degrees of freedom at the .05 level is 2.14. It was, therefore, concluded that even though the value of $F = 2.05$ closely approaches the .05 level of significance, this value was short of the significance level required to warrant a conclusion in favor of a consistent significant difference.
Summary

The purpose of this investigation was to determine the interrelationship of groups of secondary student teachers' sociabilities, first teaching field choice and preference for lecture or group method of instruction.

The major aspects of the study were:

1. The use of Heston's (S) or sociability test scores to classify 211 secondary student teachers as extroverts, ambiverts or introverts. This represented the total population of secondary student teachers at North Texas State University, Denton, Texas, in the fall term of the 1962-1963 school year.

2. The grouping of all subjects into seven teaching field categories (Language Arts, Mathematics and Science, Social Studies, Business Education, Health and Physical Education, Industrial Arts, Home Economics and Library, and Fine Arts). Individuals were assigned to these groups according to their first teaching field choice.
3. The use of Patterson's **Student Instructional Preference Scale** to determine the student teachers' preference for lecture or group instruction.

4. The use of appropriate statistical techniques to determine the degree and significance of the numerical relations existing among the seven groups and within each group of student teachers. Sociability and instructional preference were also analyzed for the entire population without regard for subgroupings.

The data of this study indicated certain facts relative to the hypotheses presented in Chapter I. From an interpretation of these data, the following findings are presented:

1. The first hypothesis was sustained. The total population contained three sociability groups of relatively normal distribution.

2. The second hypothesis was also sustained. Three sociability classifications were found to exist within each of seven teaching field groups.

3. The third hypothesis was sustained. A significant product moment correlation was obtained between the total extrovert sociability scores and instructional preference
scores. It was concluded that extrovert sociability and preference for group instructional practices are significantly related.

4. The fourth hypothesis was rejected. An insignificant product moment correlation was obtained between the ambivert group's sociability and instructional preference scores. This indicated that within this group, instructional preferences consist of a mixture of lecture and group techniques of instruction. This pattern corresponds favorably to the mixture of sociability traits which characterize these student teachers as ambivalent in social adjustment.

5. The fifth hypothesis was rejected. An insignificant product moment correlation was obtained between introvert sociability and instructional preference scores. This finding indicates that low sociability was not always accompanied by a definite preference for lecture methods of instruction.

6. The sixth hypothesis was rejected. Simple analysis of variance revealed an insignificant value of F. The conclusion was reached that instructional preferences among the three sociability groups do not vary in a significant amount.
7. The seventh hypothesis was rejected. Simple analysis of variance revealed seven separate insignificant F's. Tests were conducted among the instructional preference means of the three sociability groups found within each of the seven teaching field groups. There were no significant differences in instructional preference found within any of these seven groups. It was concluded that within the teaching field groups, instructional preferences were not significantly different.

8. The eighth hypothesis was also rejected. Simple analysis of variance revealed an insignificant value of F. No significant difference in instructional preference existed among the total populations of the teaching field groups.

9. The ninth hypothesis was rejected. Simple analysis of variance revealed an insignificant value of F. This value, while approaching significance at the .05 level, was not great enough to warrant the conclusion of consistent significant differences in sociability among the populations of the seven teaching field groups. Teaching field choice and social adjustment were shown by these data to have no identifiable pattern of relationships.
Conclusions

It can be concluded that differences in social adjustment exist (extroversion, ambiversion and introversion) within the population studied. These differences exist within the total population and within each of the seven teaching field groups.

Extrovert social adjustment was significantly correlated with a preference for group oriented methods of instruction. A significant positive correlation was not maintained for the ambivert group. There was no significant correlation between ambivert sociability and instructional preferences. There was also no significant correlation between introvert sociability and lecture instructional preferences. These findings further indicated that if a teacher preferring to use group methods of instruction is desired, the extrovert will be the best selection for this work. When a teacher preferring to use a variety of instructional methods is desired, the ambivert would be the proper selection. Introverts could also be expected to prefer to use a variety of teaching methods.

It was concluded that the mean instructional preference of each of the three total sociability groups did
not differ significantly from one another. Data concerning the extrovert instructional preference indicated that the higher the extroversion factor the greater the preference for group instructional practice. The mean instructional preference score of the extrovert group was, however, not large enough to differ significantly from the other two sociability group preference means. This indicated that for the total population, sociability and instructional preference were not significantly different.

The division of the study population into first teaching field subgroups produced populations which did not differ significantly in instructional preference either within the teaching group or from other teaching groups. These seven groups were also found to have no significant differences in sociability when compared one to the other. The conclusion that teaching field area has no significant relation to social adjustment or instructional preference was warranted by the data of this study.

Recommendations

The significance of this study lies in the fact that it has narrowed the field of investigation into the reasons underlying the teacher's choice of instructional methods.
Although most of the relationships hypothesized in this study were not found, this investigation tends to indicate that teacher instructional preference is not based primarily upon social adjustment.

Therefore, it is recommended that additional research be conducted to determine the true basis of teacher instructional preference. Study of the relationship existing among other traits of teacher personality and instructional preference may produce findings of great worth.

The effect of teaching experience upon the interrelationship of personality and instructional preference is an area in need of investigation. After this interrelationship has been determined, it is recommended that a further study, designed along the lines presented in this paper, be conducted. Experienced teachers, rather than student teachers should compose the study population. If it is safe to assume that experienced teachers are employing instructional methods of their own choice, then classroom observation would become valuable data to aid in the determination of relationships existing between verbal preferences and actual practices.
APPENDIX
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*No. represents the individual student teacher.

**S** represents Heston's sociability raw score.

***SIPS represents Patterson's Student Instructional Preference raw score.
### TABLE XVI

**Sums, Means and Standard Deviations of Heston’s Sociability and Patterson’s Instructional Preference Raw Scores - Grouped According to First Teaching Field**

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*S represents Heston’s sociability raw score.

**SIPS represents Patterson’s Student Instructional Preference raw score.**
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Books


Articles


Himmelweit, H. T., "The Intelligence Vocabulary Ratio as a Measure of Temperament," *Journal of Personality*, XIV (December, 1945), 93-105.


Unpublished Materials


Test Manuals