THE INFLUENCE OF CERTAIN FACTORS ON
THE ADJUSTMENT OF COLLEGE STUDENTS
OF SOCIAL FUNDAMENTALS

APPROVED:

Editha Rueck
Major Professor

George B. Beamer
Minor Professor

Florence J. Scoular
Dean of the School of Home Economics

Dean of the Graduate School
THE INFLUENCE OF CERTAIN FACTORS ON
THE ADJUSTMENT OF COLLEGE STUDENTS
OF SOCIAL FUNDAMENTALS

THESIS

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

For the Degree of

MASTER OF SCIENCE

By

Isabel Stuart Phelps, B. S.

Keller, Texas

August, 1954
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>iv</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Review of Related Studies</td>
<td></td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td></td>
</tr>
<tr>
<td>PROCEDURE</td>
<td>10</td>
</tr>
<tr>
<td>Sources of Data</td>
<td></td>
</tr>
<tr>
<td>Statistical Treatment</td>
<td></td>
</tr>
<tr>
<td>RESULTS</td>
<td>19</td>
</tr>
<tr>
<td>DISCUSSION OF FINDINGS</td>
<td>26</td>
</tr>
<tr>
<td>CONCLUSIONS</td>
<td>29</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>30</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Mean Difference, Standard Error, and Critical Ratio for Pre-test and Final Test on Social Comprehension</strong></td>
<td>20</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Analysis of Variance of Score Gains on Four Measures of Adjustment</strong></td>
<td>21</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Interclass Gains on Health Adjustment in Terms of $D/S_d$</strong></td>
<td>25</td>
</tr>
</tbody>
</table>
INTRODUCTION

Review of Related Studies

In the past twenty years there has been a steady increase in the number of non-major students enrolled in the social fundamentals course offered by the School of Home Economics at North Texas State College, Denton, Texas. In a survey of social conduct, Luecke, 1 1952, made a study of one hundred forty-one students, registered in four sections of the social fundamentals course. Guided by the tentative objectives of the course, the contents and activities for the semester were planned by the teacher and the students. Through student co-operation, the Guilford-Martin Personal Inventory, McKnight and McKnight's Test on Social Usage, and the Bell Adjustment Inventory were administered at the beginning and upon completion of the course. The data obtained from the pre-test and final test gave evidence of better home, health, social, and emotional adjustment as a result of this course.

Gresham, 2 1952, made a study to determine whether increased knowledge of social conduct is accompanied by the personal and social

---


adjustment of students and to compare the adjustment progress in different college classes. The data for the study were obtained from one hundred forty-one students, enrolled in four social fundamentals classes offered by the School of Home Economics at North Texas State College. For the purpose of this study Gresham grouped the students according to their respective classification levels; there being sixteen freshmen, twenty-one sophomores, twenty-seven juniors, and thirty-seven seniors. The test included the Guilford-Martin Personnel Inventory, McKnight and McKnight's Test on Social Usage, and the Bell Adjustment Inventory. The results showed consistently high and significant gains on objectivity, agreeableness, co-operativeness, and social usage. Definite gains for each class were also achieved in social, health, and emotional adjustment. Comparison between the different groups showed no measurable gain in favor of any one group in the area of home adjustment, health adjustment, and social usage. The sophomores made greater gain than the freshmen on social adjustment, and the juniors made greater gain than the sophomores and seniors in this area. Gresham concluded that, measured by adjustment inventories, an increase in the knowledge of desirable social conduct is accompanied by pronounced improvement in home, health, social, and emotional adjustment.

3 Ibid.
4 Ibid.
In 1952, Randolph, at North Texas State College, made a study of five social fundamentals classes elective in the School of Home Economics, four business administration classes, and four education classes, to determine the adjustment progress of students in social fundamentals classes and to compare their adjustment progress with the progress of students in other subject matter fields. There were one hundred sixty-eight students enrolled in social fundamentals classes, one hundred eleven enrolled in education classes, and seventy-one enrolled in business administration classes, participating in the study. To measure the gain in the social comprehension of students of social fundamentals, the Furbay-Schrammel Social Comprehension Test was administered as a pre-test and final test. The Bell Adjustment Inventory was given the students in the control group as well as the students of the experimental group as a pre-test and final test. The results showed that students in home economics classes made a significant gain on the social comprehension test. The home economics students also made greater gains in home adjustment, health adjustment, and emotional adjustment than did the members of the other groups included in the study.

According to another study, course content is a factor in promoting student adjustment. From a survey prior to Moore's study, 1948, fourteen traits of a successful student in business administration were compiled. These personality traits were objectivity, co-operation, agreeableness, independence, resourcefulness, responsibility, self-reliance, sense of personal worth, sense of personal freedom, feeling of belonging, withdrawing tendencies, family relations, social relations, and community relations. Twelve Latin-Americans and eighteen Anglo-Americans composed one group, which employed the discussion method. The control group was composed of the same number of students. For the purpose of equating the groups, the California Test of Mental Maturity was given to the students in the study hall and in the stenography class. With these data, the course content was planned by the teacher and students. Three tests, the Guilford-Martin Personnel Inventory I, Every Day Life, together with the California Test of Personality, Secondary Form A, served as an inventory of the students' personality traits. Differences in the pre-test and final test showed that the experimental group made significant gains in the adjustment variables while the control group showed no improvement.

---

A study by Wester, 1951, shows that personal improvement and social experience are important factors in adjustment. This investigator measured the effectiveness of a specialized unit in improving the personal development and social adjustment of homemaking over a period of one semester. Two homemaking classes were chosen from a small high school. These classes were comparable in intelligence quotients, chronological ages, mental ages, school classification, and socio-economic status. A specialized unit on personal improvement was taught the experimental group for one month, while the control group had only incidental helps with this problem. The results of the study show that the experimental group made significant improvement on eight of the twelve personality measures, whereas the control group made no improvement. Sociograms showed that there was marked improvement in the students' relationships. The specialized unit was judged to be effective in improving the social adjustment of the homemaking students.

Pinkston, 1950, in an introductory education course, compared the textbook method with the group process method in teaching, to find

---


the effect upon the general adjustment of eighty-eight freshmen. The Guilford-Martin Temperament Inventory was administered to two groups of forty-four students, for the pre- and final testing. The experimental group planned their course according to their class needs, pointed out in a pre-test, and used the group process method of teaching. Upon completion of the course, the tests were given again and the scores analyzed. The control group showed no improvement, while the experimental group showed improvement in freedom from depression, cycloid tendencies, inferiority feelings, and nervousness. Through the group process technique there was improvement in social leadership and cheerful disposition among the students.

Mauck, the director of a new sewing center at Rich's, Inc., in Atlanta, Georgia, who previously was a faculty member of the School of Home Economics of Ohio State University, during ten or twelve trials with the group process of teaching, in class groups of twenty-five to fifty members, found a consistent improvement in certain personality traits. This method led each student to express himself freely, to formulate an opinion, and to become a semi-authority on a phase of subject matter. Mauck found that the group process method provided proper and sufficient stimulus to the timid and non-expressive

10 Ibid.
student, and proper restraint from the assured and overly talkative student.

In another study in 1941, Odell \textsuperscript{11} compared the adjustment and the factors influencing the adjustment of freshman and senior girls at North Texas State College. The investigator chose two groups of fifty students, alphabetically, from dormitory files, and administered the Sims Score Card to determine the general background of the homes of these students. The California Test of Personality, Adult Form A, was given to indicate the general personal and social adjustment of each girl. The results indicated that the social activities of students, while they are still in high school, have some effect upon personal and social adjustment.

Malone, \textsuperscript{12} 1953, made a study to determine whether or not teacher-pupil relationships brought about improvement in social adjustment. The goal-seeking method was used to develop specified units of study for thirty-three homemaking students in a small high school. Through teacher-pupil planning the following units were developed:

- personal care and grooming,
- clothing construction,
- feeding the family,


child care, home care of the sick, home improvement, the wise use of money, and family and personal relationships. To determine the social and emotional adjustment of the students, the Washburne Social Adjustment Inventory was used at the beginning of the school year and again at the end of the year. The results showed that teacher-pupil relationship is an important factor in bringing about a change in the social adjustment of students.

In 1945, Bollinger gave a battery of tests on social information, attitudes, and adjustment to the pupils and teachers in three high schools in the vicinity of Madison, Wisconsin. The purpose of this investigation was to discover the relationship between pupils' scores on the tests and the social qualities of their teacher. Four hundred and five students and eighteen teachers were given the Woods Right Conduct Test, the Washburne Social Adjustment Inventory, Symonds' What Kind of Years Are You Having?, and Bell's Adjustment Inventory, as well as several other social adjustment tests. The investigation was concerned with the social impact of teachers upon pupils. Statistical analysis of the data indicated that, according to the critical ratio, pupils in these three schools approached significant gains in adjustment; but that, in a period of six months, only one school group had made a significant gain.

---

Approximately 85 per cent of the students thought that the teacher's character and personality had an important influence on their adjustment. One hundred per cent, 88 per cent, and 66 per cent, respectively, of the teachers in the three schools thought that students expected teachers to be models of good conduct.

Statement of the Problem

The foregoing studies show that many factors are related to the adjustment of students. Such factors include course content, classroom method, social experiences, teacher-pupil relationships, and the teacher's personality. The question arises: What additional factors, besides those already investigated, contribute to the adjustment of college students? The purpose of this study is two-fold: (1) to determine whether students of either sex, or of any particular college class or subject matter major, make greater adjustment progress than students of the opposite sex, or of another college class or major field; and (2) to study the influence of these factors on the adjustment of college students of social fundamentals.
PROCEDURE

Sources of Data

Data for this study were obtained from a test administered to college students of North Texas State College during the fall of 1952. The persons taking these tests were enrolled in five sections of a home economics course in social fundamentals, four education classes, and four business administration classes. The five groups in social fundamentals courses constituted the experimental group, while the four groups of education classes together with the four groups of business administration classes were the control groups.

Essential to the study was the measurement of achievement in social comprehension by students in the social fundamentals classes. Planned by the students under the guidance of the teacher, the objectives and contents of the course in social fundamentals were set up to include an out-of-class social program, which provided for the development of social skills. The social program included such functions as an informal picnic, a semi-formal tea, a formal dance, and a mock wedding. The entire course was based on social usage related to public courtesies such as table etiquette, conversation, making and keeping friends, and
the various ceremonies of life. Informal group discussions, reports, lectures, socio-drama, committee work, demonstrations, and films were used to carry out the plans of the course.

To measure achievement in social comprehension, the Furbay-Schrammel Social Comprehension Test was administered to the home economics classes in social fundamentals at the beginning and again at the end of the semester. This test is made up of 330 items which measure the students' acquaintance with and understanding of the rules of correct behavior in all types of social situations. The test measures the students' knowledge of correct usage relative to social calls, teas, parties, and receptions, introductions, invitations, table etiquette, dress and personal habits, public courtesies, correspondence, house guests, conversation, traveling, funerals, dances and balls, courtship, engagements and weddings, and miscellaneous social activities. Since only one form of the test is available, the odd numbered questions were used for the pre-test and the even numbered ones for the final test. The reliability of the test as reported by the authors, for the split-half method, showed a coefficient of .86 ± .01. This is satisfactory for a test of this type.

The test on social comprehension was followed by an adjustment test. Administered as a pre-test and again as a final test, the Bell Adjustment Inventory was employed. This test provides for four
separate measurements of personal and social adjustment; namely, home adjustment, health adjustment, social adjustment, and emotional adjustment. It is a self inventory consisting of one hundred forty questions, thirty-five in each of the four measures. Low scores on the test indicate positive adjustment.

The control group was used to determine whether or not similar changes in adjustment occurred in classes in which social comprehension was not an observed achievement. The classes which made up the control group were selected on the basis of several criteria. There must be a satisfactory number of men and women, as well as comparable numbers of students in each of the four college classes, freshman, sophomore, junior, and senior. Furthermore, although the course content must be different from that of the social fundamentals classes, the method of teaching and the class time needed to be comparable with that of the experimental group. The four classes in education and the four classes in business administration were selected because they seemed to meet these criteria most nearly. In these classes the group process method of teaching was used and the general class procedure was similar to that in social fundamentals classes. The class procedure included informal discussion, reports, and individual help.

Both the pre-test and the final test of the adjustment inventory were administered to the classes in the experimental group and in the
control group at the same time. The interest of the teachers of these classes was enlisted in the study, as well as the interest and co-operation of the students. Every effort was used to make the testing objective and complete. There were 350 students in the thirteen classes which participated.

**Statistical Treatment**

The score differences between the pre-test and final test on social comprehension were analyzed to determine whether statistically significant gains had been made. After the mean difference had been derived, the standard error of the difference and the critical ratio (t) were computed. To obtain the mean difference ($M_d$) for the men and women, the sum of the differences ($\Sigma X$) between the pre- and post-test scores was divided by ($N$) the number of students in the group. The formula

$$M_d = \frac{\Sigma X}{N}$$

was used. Then, to compute the standard deviation of the difference ($S_D$), the squared mean difference ($M_d^2$) was subtracted from the sum of the squared score difference ($\Sigma X^2$), divided by ($N$) the number of individuals in the group. The square root was then extracted, as shown in the formula,

$$S_D = \sqrt{\frac{\Sigma X^2}{N} - M_d^2}.$$
To derive the standard error of the mean, the standard deviation of the difference is divided by the square root of the number of students in the group:

\[ S_d = \frac{S_D}{\sqrt{N-1}}. \]

To determine whether the gain made is significant, the t-test is applied by dividing the mean difference between the pre- and post-test scores by the standard error of the mean difference. The formula used is,

\[ t = \frac{D}{S_d}. \]

Tables of F and t are used for judging significant differences between mean scores of various groups. If the ratio \( D / S_d \) exceeds the 5 per cent tabular value of t for samples which correspond to the specified degrees of freedom, the difference is judged significant. \(^1\) If it is less than this, it is not considered significant.

In its analysis of the adjustment of college students, this study seeks to determine whether the gains in adjustment progress can be attributed to differences between the sexes, to differences among the college classes, or to differences among the subject matter majors. Since several sources of variation are involved, the t-test is unsatisfactory

\(^1\) George W. Snedecor, Calculation and Interpretation of Analysis of Variance and Covariance, Iowa State College, Collegiate Press, 1934.
for determining differences; for, when using this technique to compare
two or more differences, it is impossible to determine whether differ-
ences are due to the variation of the particular groups that are being
compared or to other sources of variation.

The analysis of variance was used to search out the designated
sources of variation. This technique for separating from comparable
groups of data the variation due to specified groups, furnishes a stand-
ard error for the part of the variability whose origin is designated. By
means of this method the gross variation of the entire sample can be
separated into several portions: (1) the variation of the scores between
the sexes, (2) the variation among the college classes, and (3) the
variation among the subject matter majors.

In order to separate the gross variation of the entire sample into
the three desired portions, the array of scores for each test was re-
classified three times. First, the score array was classified accord-
ing to men and women; namely, one hundred sixty-nine men and one hun-
dred eighty-one women. Next, the array was classified according to
college classification. There were eighty-seven freshmen, seventy-two
sophomores, sixty-four juniors, and one hundred twenty-seven seniors.
The third classification was made according to subject matter majors.
There were one hundred sixty-nine students from the business field,
ninety-two from education, thirty-four from the field of arts and sciences,
thirty-two from industrial arts and physical education, twelve from music, and eleven from home economics.

The first step in the analysis of variance is to derive the sum of the squares for the total number of students. This sum is obtained by adding the squared score differences, $\sum \varepsilon x^2$, and subtracting from the total a correction factor. The correction factor is the square of the sum of the score differences divided by the number of students, $\frac{(\varepsilon X)^2}{N}$.

The next step is to derive the sum of the squares for the between-sex variable. This sum of squares is obtained for the sexes by dividing the square of the total score difference for the men by their number, and then using similar procedure for the women's score. The sum of the scores for men and women is squared and divided by their total number to obtain the correction term. The two quotients are added before the correction term is subtracted. The formula used is:

$$\left[ \frac{\varepsilon X^2}{N_m} + \frac{\varepsilon X^2}{N_w} \right] - \left[ \frac{(\varepsilon X)^2}{N_t} \right]$$

The third step is to derive the mean square for the source of variation. This is obtained by dividing the sum of squares for each variable by its degrees of freedom. The formula for the mean square between the sexes is:
Mean squares are obtained in a similar manner for the four college class groups and the five subject matter majors.

The remainder variance (V), or experimental error, is obtained by subtracting the sums of the squares between the sexes, among the college classes, and among the majors from the total squares and then dividing the remainder by the total degrees of freedom. A typical formula is:

\[
V = \left[ \frac{\sum x^2}{N_t} - \left( \frac{\sum x}{N_t} \right)^2 \right] - \left[ \frac{\sum x^2 + \sum y^2}{N_m + N_w} - \left( \frac{\sum x}{N_m} \right)^2 - \left( \frac{\sum y}{N_w} \right)^2 \right]
\]

°F within the class

To derive the F value, the mean square for the variable is divided by the remainder variance. This value shows whether the variation among the classes, which constitutes the source of variation, is greater than the variation within the class. The significance of F is determined by comparing its value for a specific variable with Snedecor's\(^2\) values of F and t.

\(^2\)Ibid.
The degrees of freedom, \( N-1 \), are obtained for the total number of samples in the analysis by subtracting one from the total. This statistic is obtained for each of the variables by subtracting one from the number of classes in each source of variation. It is used for entering tables of \( F \) and \( t \) when probability values are being determined.

When the analysis of variance shows by a significant \( F \) value that interclass variation is greater than intraclass variation, further examination is necessary to discover which groups are responsible for the variation. The following procedure is used for comparing the mean scores of the groups involved:

1. The differences between the two means are divided by the estimated standard error of the combined groups. The formula is

\[
\frac{D}{s_d} = t.
\]

2. In these analyses, \( s_d \) is

\[
\sqrt{\frac{V_1}{N_1} + \frac{V_2}{N_2}}.
\]

\( V \) is the remainder variance or experimental error, after variation traceable to the specified factors has been removed, whereas \( N \) is the number in each group.

Groups which are being compared are kept homogeneous with respect to all factors for which variation has been eliminated. If the error is left in the groups, it is also left in the remainder variance.
RESULTS

Results of the tests on social usage show that students in home economics classes made marked gains on social adjustment.

Table 1 presents the mean difference ($M_D$), the standard error of the differences ($S_d$), and the critical ratio ($t$) for pre-test and final test scores on social comprehension for students in social fundamentals classes. A comparison of the critical ratio for the social comprehension test with Snedecor's\(^1\) values shows that the score gains are highly significant for both men and women. The ratios—7.23 for men and 11.33 for women—are much higher than the tabular values of 2.66 and 2.63 necessary for significance at the .01 level of confidence for the respective groups. Also, the ratio of 15.63 for the total home economics group on social comprehension exceeds 2.61, which is the $t_{01}$ value for one hundred sixty-nine degrees of freedom.

The analysis of variance for the adjustment progress of students in social fundamentals is given in Table 2, Analysis of Variance of Score Gains on Four Measures of Adjustment. This table gives the

\(^{1}\)George W. Snedecor, Calculation and Interpretation of Analysis of Variance and Covariance, Iowa State College, Collegiate Press, 1934.
<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>Mean Difference</th>
<th>Standard Error</th>
<th>Critical Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>63</td>
<td>11.68</td>
<td>1.616</td>
<td>7.23</td>
</tr>
<tr>
<td>Women</td>
<td>106</td>
<td>11.85</td>
<td>0.104</td>
<td>11.33</td>
</tr>
<tr>
<td>Total</td>
<td>169</td>
<td>12.82</td>
<td>0.820</td>
<td>15.63</td>
</tr>
</tbody>
</table>

source of variation, the degrees of freedom, the sum of squares, the mean square, and the F value for home, health, social, and emotional adjustment. The three sources of variation are: variation between the sexes, variation among the classes, and variation among the majors.

The first column shows the degrees of freedom for each of the three sources of variation as they are derived from the number of classes in each group. Thus, the degrees of freedom for the two sex groups, the four class groups, and the six subject matter groups or majors are 1, 3, and 5, respectively. The degrees of freedom in the remainder are 340.
### TABLE 2

ANALYSIS OF VARIANCE OF SCORE GAINS ON
FOUR MEASURES OF ADJUSTMENT

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Degrees of Freedom</th>
<th>Home Sum of Squares</th>
<th>Home Mean Square</th>
<th>Home F</th>
<th>Health Sum of Squares</th>
<th>Health Mean Square</th>
<th>Health F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totals</td>
<td>349</td>
<td>4,193</td>
<td></td>
<td></td>
<td>5,273</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between the sexes</td>
<td>1</td>
<td>15</td>
<td>15</td>
<td>1.20</td>
<td>2</td>
<td>2.00</td>
<td>.13</td>
</tr>
<tr>
<td>Among the classes</td>
<td>3</td>
<td>75</td>
<td>25</td>
<td>2.10</td>
<td>8</td>
<td>2.66</td>
<td>.19</td>
</tr>
<tr>
<td>Among the majors</td>
<td>5</td>
<td>73</td>
<td>15</td>
<td>1.20</td>
<td>98</td>
<td>19.60</td>
<td>1.20</td>
</tr>
<tr>
<td>Remainder</td>
<td>340</td>
<td>4,030</td>
<td>11.9</td>
<td></td>
<td>5,165</td>
<td>15.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social</td>
<td></td>
<td>Emotional</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>-----------</td>
<td>--------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sum of Squares</td>
<td>Mean Square</td>
<td>F</td>
<td>Sum of Squares</td>
<td>Mean Square</td>
<td>F</td>
<td>F .05</td>
</tr>
<tr>
<td>7,058</td>
<td>16</td>
<td>16.0</td>
<td>.80</td>
<td>8</td>
<td>8.00</td>
<td>.31</td>
<td>3.87</td>
</tr>
<tr>
<td>76</td>
<td>76</td>
<td>25.3</td>
<td>1.26</td>
<td>720</td>
<td>14.60</td>
<td>.57</td>
<td>2.64</td>
</tr>
<tr>
<td>166</td>
<td>166</td>
<td>33.2</td>
<td>1.66</td>
<td>125</td>
<td>2.50</td>
<td>.98</td>
<td>2.25</td>
</tr>
<tr>
<td>6,800</td>
<td>6,800</td>
<td>20.0</td>
<td></td>
<td>8,612</td>
<td>25.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The second column gives the sum of the squares on home adjustment. These sums of squares, 15, 75, and 73, respectively, for the three sources of variation, are subtracted from the total sum of squares on home adjustment, 4,193, to give the remainder, 4,030. The mean squares, 15, 25, and 14.6, in the third column are derived by dividing the sum of squares for each variable by its degrees of freedom. The remainder variance, 11.9, is obtained in a similar manner. The F values of 1.20, 2.10, and 1.20 are the ratios of the remainder variance to the mean squares for the three variables. None of the F values represents a significant difference among the classes, according to Snedecor's values; hence, neither sex, college classification, nor subject matter major is a factor in promoting adjustment.

The other three sections of the table give the analysis of variance of health, social adjustment, and emotional adjustment. Examination of the table shows that the F values for health adjustment, .13 and .19, between the sexes and among the college classes were larger within the variables than among them. The value of 1.20 for the among-majors groups is also insignificantly small. The F value .80 on social adjustment shows that variance within the respective groups is larger than among the groups, and the values 1.26 and 1.66 are not large enough to indicate a significant difference among the groups. Apparently, the

\[2\text{Ibid.}\]
variables sex, college class, and subject matter majors are not factors in adjustment. Similarly, the F values .31, .51, and .98 for emotional adjustment are not significant and the variables sex, class groups, and subject matter majors are not factors in this area of adjustment.

Table 3 compares the mean scores of the four classes, freshmen, sophomores, juniors, and seniors, on health adjustment. According to Table 2, variation on this measure of adjustment was greater within the classes than among the classes. In Table 3 the number, mean score, and mean difference in terms of $\frac{D}{S_d}$ are given for interclass comparisons. Application of the t-test showed that none of the interclass gains was significant. The mean score difference, 1.1, between freshmen and seniors, although significantly large, is interpreted to mean that there was a greater variability within the senior class than within the freshman class. It does not, however, indicate a significant gain of freshmen over seniors. Since $F$ values in Table 2 are too small to indicate a difference between sex groups or among subject matter groups, no further examination of interclass relationships was attempted.
# TABLE 3

INTERCLASS GAINS ON HEALTH ADJUSTMENT IN TERMS OF D/S<sub>d</sub>

<table>
<thead>
<tr>
<th>Class</th>
<th>Number</th>
<th>Mean Score</th>
<th>Mean Difference in Terms of D/S&lt;sub&gt;d&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sophomores</td>
</tr>
<tr>
<td>Freshmen</td>
<td>87</td>
<td>2.1</td>
<td>.5</td>
</tr>
<tr>
<td>Sophomores</td>
<td>72</td>
<td>1.6</td>
<td>...</td>
</tr>
<tr>
<td>Juniors</td>
<td>64</td>
<td>1.2</td>
<td>...</td>
</tr>
<tr>
<td>Seniors</td>
<td>127</td>
<td>1.0</td>
<td>...</td>
</tr>
</tbody>
</table>

*The asterisk indicates significance.*
DISCUSSION OF FINDINGS

The results of the study point up several significant findings. One of these findings is that students in home economics made marked gains in social comprehension. These gains are evidence that the course achieved one of its major objectives.

Another finding, in measurement of adjustment gains for the experimental and control groups, is that there was no considerable gain of one group over the other between the sex groups, among the four college classes, or among the six groups of majors. The lack of gain was apparent in all of the four areas of adjustment; namely, in home, health, social, and emotional adjustment.

Failure of one of these groups to make significantly greater gains than the other is not clearly understandable. On the one hand, there is no apparent reason for expecting men to make greater or lesser progress in adjustment than women simply because they are of a different sex; on the other hand, if social comprehension contributes to adjustment, as shown in previous studies, and if women make greater gains in social comprehension than do men, as shown in previous studies, it is logical to look for measurably different levels of achievement for the
two sex groups. Even though the results of this study and of the previous ones point up an apparent discrepancy, the results may not necessarily be inconsistent. The different testing instruments used for measuring social comprehension in the two studies may account for the different results. One or the other of these instruments, or both of them, may not have been valid enough for the results to be reliable.

Failure to find significant gains of one college class over the other also presents questions. Does home, health, social, and emotional adjustment occur uniformly and progressively at each class level? Does the breaking of home ties and the establishment of new relationships promote or retard the adjustment of freshmen? Either there are factors involved which are not apparent, within the limits of this study, or the testing program was inadequate.

Failure to find significant gains among the subject matter majors may be explained by the limitations of the data. Since the samplings in the major fields of education were limited, small groups of majors in several fields were grouped together. For instance, physical education and industrial arts, with only thirty-two majors in the combined group, were classified as one major. Similarly, majors in English, history, biology, chemistry, physics, government, languages, mathematics, journalism, and speech were grouped as arts and science majors. Obviously, the classification according to majors was too
limited; the achievement of majors in one subject matter field might very well have been offset by the lack of achievement of other majors in the same group.
CONCLUSIONS

Results of the study show that neither sex, college classification, nor subject matter major is a factor in the adjustment of college students of social fundamentals. Further study is needed to determine whether majors in a particular subject matter field make greater adjustment gains than majors in another field. Further study is also needed to determine the rate of adjustment and the permanency of adjustment.
BIBLIOGRAPHY

Unpublished Materials


Tests


Bell, Hugh M., The Adjustment Inventory, Student Form (for students of high school and college age), Stanford University, California, Stanford University Press, 1934.

Books

Snedecor, George W., Calculation and Interpretation of Analysis of Variance and Covariance, Iowa City, Iowa State College, Collegiate Press, 1934.

Articles

