A STUDY TO DETERMINE THE SOUNDNESS OF PROCEDURES TO COMPENSATE FOR INDIVIDUAL DIFFERENCES IN THE HIGH SCHOOL PUPILS OF SELECTED COUNTIES IN TEXAS

APPROVED:

Harold Brinkley
Major Professor

O. F. Curry
Minor Professor

W. T. Blain
Director of the Department of Education

Dean of the Graduate School
A STUDY TO DETERMINE THE SOUNDNESS OF PROCEDURES TO COMPENSATE FOR INDIVIDUAL DIFFERENCES IN THE HIGH SCHOOL PUPILS OF SELECTED COUNTIES IN TEXAS

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

Sam Gray, Jr.
Bremond, Texas
August, 1949
# TABLE OF CONTENTS

**LIST OF TABLES.** ...........................................  v

**Chapter**

I. INTRODUCTION. ........................................... 1

- Purpose of the Study
- Source of Data
- Limitation of Study
- Method of Procedure
- Previous Studies in the Field

II. CRITERIA FOR COMPENSATING FOR INDIVIDUAL DIFFERENCES IN HIGH SCHOOL PUPILS

- Purpose of the Chapter
- The Right and the Need for Secondary Education
- Types of Individual Differences
- Methods of Diagnosing Individual Differences
- Provisions for Meeting Individual Differences in Secondary School Pupils
- Criteria for Evaluating a Program for Meeting Individual Differences

III. PRESENTATION AND INTERPRETATION OF DATA ON PRACTICES AND PROCEDURES OF TWENTY-FIVE SECONDARY SCHOOLS IN MEETING INDIVIDUAL DIFFERENCES ................. 25

- Purpose of the Chapter
- Number of Secondary Schools, Total Enrollment and Number of Teachers
- Summary

IV. EVALUATION OF THE DATA IN TERMS OF CRITERIA FOR COMPENSATING FOR INDIVIDUAL DIFFERENCES . 44

- Purpose of the Chapter
- Meeting the Needs of All Pupils
- Procedures for Meeting Individual Differences
TABLE OF CONTENTS--Continued

Chapter V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS . . . 52

Summary
Conclusions
Recommendations

APPENDIX. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 56

BIBLIOGRAPHY. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 61
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Data on School Population and Number of Teachers in the Secondary Schools in Nine Counties.</td>
<td>26</td>
</tr>
<tr>
<td>2.</td>
<td>Number and Percentage of Schools in Each Population Group</td>
<td>27</td>
</tr>
<tr>
<td>3.</td>
<td>The Number and Percentage of Secondary Schools with Provisions for Meeting Individual Differences in Pupils</td>
<td>28</td>
</tr>
<tr>
<td>4.</td>
<td>The Number and Percentage of Secondary Schools Indicating a Felt Need for Procedures to Compensate for Individual Differences Among Pupils</td>
<td>29</td>
</tr>
<tr>
<td>5.</td>
<td>The Number and Percentage of Sixteen Schools Using the Procedures Mentioned for Meeting Individual Differences</td>
<td>31</td>
</tr>
<tr>
<td>6.</td>
<td>The Procedures Rated Most Successful in Meeting Individual Differences by Twenty-two Small Secondary Schools</td>
<td>32</td>
</tr>
<tr>
<td>7.</td>
<td>Length of Time Secondary Schools Have Been Using Procedures for Meeting Individual Differences</td>
<td>34</td>
</tr>
<tr>
<td>8.</td>
<td>The Number of Secondary Schools Participating in Survey That Had Annual Testing Program</td>
<td>34</td>
</tr>
<tr>
<td>9.</td>
<td>The Type of Tests Given Pupils in Twenty Secondary Schools Having Testing Programs</td>
<td>35</td>
</tr>
<tr>
<td>10.</td>
<td>The Items Kept in Cumulative Records on the Pupils in Twenty-Two Secondary Schools</td>
<td>36</td>
</tr>
<tr>
<td>11.</td>
<td>The Methods Used in Secondary Schools to Diagnose Individual Differences.</td>
<td>37</td>
</tr>
<tr>
<td>12.</td>
<td>The Methods Found to be Most Successful by Sixteen Secondary Schools in Diagnosing Individual Differences</td>
<td>38</td>
</tr>
</tbody>
</table>
CHAPTER I

Introduction

The problem in this study is to determine the soundness of the procedures to compensate for the individual differences in the high school pupils of nine selected counties in Texas. No two individuals are exactly alike either in their ways of growth or in their methods of adjustment. These differences are the reasons for differing degrees of accomplishment. They add interest to life and relieve the monotony of all activity on the same level. However, individual differences among learners increase the difficulty of educators in adequately meeting all the needs of all the learners.

Purpose of the Study

The purpose of this study is to make an analysis of the practices and procedures for meeting individual differences by a group of secondary schools to determine the extent to which they meet accepted criteria in this field.

Source of Data

Criteria for practices and procedures for meeting individual differences in secondary schools are taken from recent literature in the field of secondary school administration.
Data on the practices and procedures of the group of secondary schools for meeting individual differences are taken from the results of a questionnaire filled out by school administrators in their respective fields.

Limitation of Study

The study is limited to an analysis of practices and procedures for meeting individual differences in a group of twenty-five secondary schools in the following nine selected counties in Texas: Robertson, Limestone, Falls, Leon, McLennan, Madison, Freestone, Brazos and Milam.

Method of Procedure

A review of educational literature was made in order to obtain some knowledge of previous studies in practices and procedures for meeting individual differences and to get an overview of the entire problem. Recent literature in the field of secondary school administration was read to formulate criteria or a standard of measurement for evaluating the work of secondary schools in meeting individual differences. A questionnaire designed to reveal practices and procedures in use was mailed out to thirty secondary schools in the selected counties of Texas. Twenty-five usable returns were received. Data from the questionnaires were tabulated and presented, and an analysis made to determine the degree to which the recorded practices and procedures met those set up
from the literature in the field. Conclusions were formulated from the data, and recommendations offered where need for improvement was indicated.

Previous Studies in the Field

Individual differences have been recognized for many years. The implications of individual differences for education, however, have developed mostly within the present century. In 1904, Binet and Simon developed mental tests for school children, but many psychologists had been experimenting with tests before this time.\(^1\) Binet and Simon's test, however, was the first successful known test of mental ability.

One principle formed the basis of the Binet tests. It is called the age-grade idea and means that "any normal child has arrived at a certain grade of ability commensurate with that age."\(^2\) That is, a normal child of six years knows certain things and can do certain things that a five-year-old child cannot.

The Binet-Simon tests were revised in 1908, and a new concept added to age-grade-Mental Age.\(^3\) In 1916, and again in 1937, Terman revised the tests, added several new ones and

\(^1\)Joseph Peterson, *Early Conception and Tests of Intelligence*, p. 9.


\(^3\)Ibid.
assigned a definite number of tests for each age. In addition he divided the mental age of the child by the actual or chronological age to obtain the Intelligence Quotient.4

Once a test was devised to measure the differences in intelligence, research turned to measures seeking to measure other traits or differences. Studies began to be made in this respect in the field of education. In 1909, Leonard P. Ayres published a book, Laggards in Our Schools, which dealt with differences in children in thirty-one schools.5 Special attention was given to retarded children. Remedial measures were proposed by many studies. Eventually the superior child as well as the retarded one was studied. The ensuing result has been intensive study on the part of educators to provide for meeting the individual differences of all pupils. These studies are too numerous to catalog, and attention will be directed only to those in the field of secondary education.

One of the main problems studied in this respect has been ways and means of meeting individual differences. Some of the difficulties encountered in attempting to provide for individual differences are reported in the Fifteenth Yearbook of the National Council for the Social Studies. The following statement is made:

In diagnostic instruction, the teacher assembles the basic data which have been collected for the pupils in a given class and himself applies the techniques of analytical and critical thinking to these data in order to arrive at an instructional program applicable to a given group. The teacher goes even further and analyzes the data for each individual pupil and plans for the unique pattern of interests, skills, and attitudes displayed by that individual. This is no mean task, but it is the necessary, ultimate step in individualizing instruction.6

The further statement is made that there is no ready solution to the problem of providing for individual differences:

Significant progress will be made only as scientific psychological research, systematic educational experimentation, and continuous, persistent applications and evaluations of a variety of techniques in the classroom are pursued over a period of years.7

The Dallas Council of Social Studies undertook in 1946, to make a survey of the methods used to meet individual differences in a dozen school systems in the state.8 A questionnaire which contained the following questions was sent to the social studies teachers in the school system.

1. Do you use units of work which have definite higher and lower levels of achievement?
2. If you use such units, what are their value?


7Ibid.

3. Do you think that social studies classes should be homogeneous (based on the I.Q. of pupils as ascertained by intelligence tests)?

4. In homogeneous grouping pupils differ in background, interests, attitudes, work habits, critical evaluation of materials, and in reading ability. If you think that homogeneous grouping is of value, what allowances or plans do you use for these differences which are found even in homogeneous groups?

5. Should social studies classes be heterogeneous groups?

6. In a heterogeneous group, how can the teacher understand and develop the talent abilities of each pupil (based on teacher-pupil relationship)?

7. What types of materials and classroom techniques should be used in heterogeneous groups?

8. In a homogeneous group what flexibility do you use in grading the pupils?

9. In a heterogeneous group what flexibility do you use in grading the pupils?

10. Do you distinguish between (1) the acquisition of facts (i.e., critical thinking or consciousness of good citizenship or cooperation with a group)? How?

11. What are some of the stages in the mental growth of pupils which you recognize and use?

12. How can you use individual differences to mold intelligent public opinion and then to make it count in the formation of a policy?

The majority of the social studies teachers contacted through the questionnaire stated that they did not have homogeneous grouping. The most common reasons advanced for this opinion were:

1. Life is heterogeneous in a democracy.
2. A heterogeneous class is a cross section of young America.
3. Homogeneous grouping makes the problems of the classroom unlike those outside the classroom.
4. Pupils get acquainted and get use to differences; the more intelligent pupils inspire the others.
5. Grouping of pupils of various levels of ability together helps create a feeling of equality of opportunity.

Ibid., pp. 298-299.
6. Homogeneous facts form human values.
7. Pupils of lower intelligence often have qualities of personality which are needed in the work of any group.
8. Heterogeneous classes build more effective human relationships. 10

However, some Junior High teachers preferred homogeneous groups for these reasons:

1. Those with higher intelligence were better satisfied; those with lower intelligence were not so apt to become timid.
2. Homogeneous grouping provides for the acceleration of the more able.
3. Heterogeneous grouping necessitates the devotion of too much time to the slow learner.
4. The slow learner should not be asked to travel as fast as the brighter student.
5. Heterogeneous grouping often results in inferiority complexes.
6. With a large class the teacher does not have time to take account of individual differences.
7. Outside the classroom each has to seek its own level.
8. Homogeneous grouping makes for a fairer distribution of the teacher's load and lightens his problems. 11

The teachers who preferred homogeneous grouping would make allowances for differences still existing by: extra reading, drawing, map work, auditorium programs, and special reports, dividing classes into groups, pupil-planned activity, and by differences in grading. Those opposed to heterogeneous grouping thought this could be done just as well in any class.

This study by Gerlock is like the present study in that it considers ways of meeting individual differences. It differs from this research in that it is limited to the social

10 Ibid., p. 299. 11 Ibid., pp. 299-300.
studies, while the present one is limited to secondary schools in nine counties of Texas.

Doughty, in 1941, made an investigation to determine the relation of achievement to two different methods of providing for individual differences: the qualitative, degree of difficulty of the work assigned, and the quantitative, which means the amount of work done or the minimum-maximum assignment. Two sections of the fifth grade of San Jacinto School, San Angelo, Texas, were used for the study. The sections were grouped heterogeneously. The conclusions indicated that the quantitative method of providing for individual differences was superior to the qualitative method.

The study is related to the present one in that they both are concerned with ways of meeting individual differences. It differs in that the Doughty study is made with the children in an elementary grade in one school.12

CHAPTER II

CRITERIA FOR COMPENSATING FOR INDIVIDUAL DIFFERENCES IN HIGH SCHOOL PUPILS

Purpose of the Chapter

The purpose of the chapter is to make a review of literature in the field of high school education to determine criteria for evaluating a program for compensating for individual differences as used by twenty-five secondary schools in nine counties in Texas. Areas studied in this respect are the rights of all children to an education fitting their capabilities, the differences in typical high school groups, types of individual differences, diagnosing individual differences, special facilities for meeting individual differences, and needed qualifications of the teaching personnel in dealing with individual differences.

The Right and the Need for Secondary Education

Under the ideals of American democracy there must be equality of educational opportunity which of course does not mean identical opportunities for all. It does mean, though, that each child is entitled to an education. In the Declaration of Independence the statement is found that "all men are created equal."¹ The Texas State Constitution declares

¹The Declaration of Independence.
that a general diffusion of knowledge is essential to the
preservations and the rights of the people. The Joint Com-
mmission on the Emergency in Education made the following rec-
ommendation in 1933:

That universal education suited to the needs of
groups and individuals be provided and required at public
expense for youth of all ages from early childhood until
such time as proper employment is advisable and obtain-
able.\footnote{Joint Commission on the Emergency in Education, Report
of the National Conference on the Financing of Education, p.4.}

The proposal that America should establish an educational
system by which all boys and girls may be given a secondary
education is of comparatively recent origin. At the time at
which the government of the United States was organized, New
England alone provided the beginnings of a publicly supported
and publicly controlled school system. Indeed there were
many to doubt that a program of secondary education was feas-
ible in the light of individual differences—many maintained
that some individuals did not have the capacity to progress
beyond the elementary level, if they managed to get that far
in school. Nock, in his evaluation of the fundamental assump-
tions on which American public education has been built de-
clared that the Creator had not "made all persons educable."\footnote{A.J. Nock, The Theory of Education in the United States,
p. 55.}

\footnote{The Texas State Constitution, Article VII, Section.1.}
should be an education for all, has grown up within recent years. The development of industry and its mechanization has increased the period of time available for secondary education; in pioneer days youth dropped out of school to assume adult duties in his early teens. Except in a few vocations, there is no place for youth at all today at this age. Social, industrial, and economic conditions have changed, too, until there is almost a universal opinion that youth not only have the right to education but that there is an essential need for it. Norton states that "it is no longer safe to look on high-school education as the privilege of a selected few."\(^5\) Judd declared that a high-school education is as necessary in the twentieth century as an elementary one in the nineteenth.\(^6\) The Committee on Curriculum Planning and Development of the National Association of Secondary School Principals declared in 1947, that all youth had the following imperative needs:

1. All youth need to develop salable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life. To this end, most youth need supervised work experience as well as education in the skills and knowledge of their occupation.

2. All youth need to develop and maintain good health and physical fitness.

3. All youth need to understand the rights and duties of a citizen in a democratic society, and to be

---

\(^5\) J.K. Norton, Should Our Children Go to High School, p. 91.

diligent and competent in the performance of their obligations as members of the community and citizens of the state and nation, and of the world.

4. All youth need to understand the significance of the family for the individual and society and the conditions conducive to successful family life.

5. All youth need to know how to purchase and use goods and services intelligently, understanding both the values received by the consumer and the economic consequences of their acts.

6. All youth need to understand the methods of science, the influence of science on human life, and the main scientific facts concerning the nature of the world and of man.

7. All youth need opportunities to develop their capacities to appreciate beauty in literature, art, music, and nature.

8. All youth need to be able to use their leisure time well and to budget it wisely, balancing activities that yield satisfactions to the individual with those that are socially useful.

9. All youth need to develop respect for other persons, to grow in their insight into ethical values and principles, and to be able to live and work cooperatively with those that are around them.

10. All youth need to grow in their ability to think rationally, to express their thoughts clearly, and to read and listen with understanding.7

All youth in this instance means those with the high intelligence rating, those with the low I.Q.'s, those with mechanical ability and little academic leanings, those with handicaps, and those that are normal average boys and girls. An education is their right, and the future welfare of the democracy makes it a necessity.

Types of Individual Differences

The most common types of individual differences are as follows: differences in mental ability, differences in

personality, differences in tendencies or skills, and differences in socio-economic status. Attention will be directed toward each of these.

Individual differences.—Many authors appear to agree that there is definitely a wide range of differences in the intelligence of typical groups in the high schools. In Terman's book, The Intelligence of School Children, he cites a study by Proctor which shows that in typical groups of first year high school children the I.Q. distribution ranges from seventy-nine to one hundred and thirty-nine. It is evident from this study that there is a wide distribution in intelligence and it follows that there is probably a wide range in the ability of these students.

This wide distribution range in intelligence and in ability to do school work indicates that all pupils are not capable of doing the same work. Although the following quotations considers differences other than in intelligence, it highlights the statement that all pupils cannot do the same work:

The uniqueness of the individual is expressed in many ways. Physically, each is a different person. Intellectually, we vary in our expression and ability to create. Socially, we vary in our concepts of what promotes the general welfare. Economically and politically, we differ on the opinions we hold regarding the values for which we strive. We are able to grasp ideas or skills with varying degrees of speed and understanding, and emotionally each reacts differently to the same situation.

6Pupils are People, A report of the Committee on Individual Differences, National Council of Teachers of English, p. 7.
Many studies other than those by Proctor have been made and they demonstrate clearly that the larger portion of people are of normal (average) intelligence, that approximately twenty per cent are bright and an equal number dull in dealing with abstract subject matter. Geniuses and morons tend to be more or less in balance.

Systematic study of individual differences has shown that, contrary to popular opinion, persons do not fall into distinct types so far as psychological traits are concerned. If it were true that human beings are divisible into types, statistical distribution of the measurement would reveal a bimodal or a multi-modal curve; that is, a curve having more than one mode or point of concentration, at or near which a large portion of the population would fall in the distribution, with significant gaps between the modes.9

If such distinct types did exist, the educational implications would be clear and relatively simple, for then it would only be a matter of identifying each individual and allocating him to the group of which he is a representative. But human beings do not divide themselves so simply and readily; consequently, the educational problem is more difficult and involved. Individuals in their range and complexity or variability cannot be classified into, for example, a three-fold division of genius, mediocrity, or idiocy, nor as

---

introverts or extroverts, nor as giants and dwarfs. This does not mean that there are no geniuses or idiots in the population, but it does mean that these two groups are but the extremes of a continuous gradation in mental capacity from the almost totally incompetent to the most brilliant.¹⁰

The implication of these facts for education is simply this: All pupils do not have the same ability to learn. If there is equality of opportunity in education, these differences must be recognized and some means provided for meeting them.

There are other differences besides those in ability. Crow and Crow say that it is a commonly accepted psychological fact that individuals not only differ greatly from each other, but that each individual differs greatly in his ability in the several areas of learning. One boy may be much more capable in the field of music or mechanics, than another, but the latter may be much better on the athletic field or in the more academic areas of learning, such as mathematics or foreign languages. Such differences are generally known as individual differences. One of the boys, however, may differ in his own traits. For instance, he learns rapidly in the field of music and plays in both band and orchestra, but he has a great deal of difficulty in learning geography in spite of hard work and a determination to make a good grade.

¹⁰Ibid.
Differences within the individual are known as trait differences.11

Pupils also differ in behavior tendencies. The extent to which these are inborn and which are caused by environment will not be entered into here, but there is no denying the fact that the school has to consider behavior patterns in planning a program that will meet the needs of all children. Crow and Crow say:

If education is to be effective in developing socially desirable behavior patterns, educators must learn how to deal with individual discrepancies in behavior tendencies.12

Other differences are physical. The physical health of a pupil may keep him out of school or otherwise serve to retard him. The hard-of-hearing child cannot compete with the child with normal hearing. Special services are often needed to overcome physical handicaps.13 Van Dorne states that the type of body build is largely inherited and has a definite effect on the rate of growth and maturity.14 Maturity has a definite relation to readiness for different activities and social program. Besides this factor of health, the author

---


12Ibid., p. 158.

13State Department of Education of Texas, Teacher's Guide to Special Education for Exceptional Children, p. 52.

says race, socio-economic status, occupations, and family
life may cause great variation in children.\textsuperscript{15}

The significance of these differences for education is
expressed in the following quotation:

To meet the needs of modern life the school must no
longer aim to secure conformity of all pupils. It must
discover the needs of all pupils and design a program to
meet them.\textsuperscript{16}

Methods of Diagnosing Individual Differences

If the school is to be successful in planning a curriculum
that will meet the individual needs of its pupils, it must
know what these needs are. Diagnosing these needs is not a
hap-hazard affair, or one that can be left to chance. "Meas-
urements of abilities and interests in terms of the qualifi-
cations necessary for the various pursuits under considera-
tion are necessary elements in prediction."\textsuperscript{17} Such measure-
ments must be scientific. Fortunately for the teacher, much
research has been done in this field and there are available
today many reliable tests that can be used as measurements in
diagnosing individual differences.

Koos and others list the following data as essential in
diagnosing individual differences: (1) knowledge of the pupil's
educational and vocational plans or preferences; (2) items

\textsuperscript{15}ibid., p. 315.  \textsuperscript{16}Freeman, op. cit., p. 19.

\textsuperscript{17}Leonard V. Koos and others, Secondary School Administra-
tion, p. 206.
relating to the home environment; (3) out-of-school experience and activities; (4) physical conditions; (5) interest in the various school subjects; (6) intelligence; and (7) personality traits and adjustment. Much of this information, it is evident, must be obtained through the personal observation and investigation of the classroom teacher. Her skill in observation, her knowledge of psychology and understanding of human nature, and her sympathy with the maladjusted will greatly affect the value of the diagnosis made of this phase of individual differences. In the field of intelligence testing, measuring personality traits and differences, and in detecting physical deficiencies the new scientific measurement tests are needed.

Strang, a student of personality adjustments, says that instruments for the measurement of character and personality traits are not as efficient as the intelligence and special aptitude tests. She recommends rating scales as the best means of trait appraisal. Another source asserts that the traits on which pupils are to be rated should be carefully defined, preferably in terms of school behavior—so that the raters will have a common understanding of them.

---

18 Ibid., pp. 206-216.
20 Koos, and others, p. 213.
too, should really know the people they rate, and as many as three teachers should participate in the rating activities. Beaumont and Macomber say that the most effective measurements for personality adjustment are of an inventory or questionnaire type, and that their value lies in the extent of the cooperation of the pupil and the understanding of the teacher.\textsuperscript{21}

Achievement tests are extremely valuable in determining levels of accomplishment in such fairly specific fields as reading, writing, spelling, mathematics, and similar areas where skill is an important aim sought. Their use is much more limited in complex learning situations. The tests, however, are valuable "if learning is seen in its proper perspective."\textsuperscript{22} Reading, writing, spelling, and the ability to solve common mathematical problems are among the abilities essential to everyday life, but these skills are "tools of learning rather than the fundamentals of education"\textsuperscript{23} and are of value only to the extent that they make possible a more adequate adjustment of the individual to his environment and open up a fuller and better life.

Measurement of individual differences, it is apparent, from these discussions is not the work of an amateur. Much

\begin{itemize}
  \item \textsuperscript{21} Beaumont and Macomber, \textit{op. cit.}, p. 203.
  \item \textsuperscript{22} \textit{Ibid.}, p. 201.
  \item \textsuperscript{23} \textit{Ibid.}, p. 203.
\end{itemize}
of the efficiency or worth of the results will depend on trained personnel in the field. Beaumont and Macomber say:

It should be recognized that diagnostic tests do not give the cause of the difficulty, nor do they point out the remedy. They are like the physician's thermometer or stethoscope; they indicate a condition, but they tell neither the cause nor the cure. The cause must be determined by a careful study of the individual and his educational history; the cure must be dictated by the teacher's understanding of the learning process and of the individual to be cured.24

Dunsmoor and Miller state that the educational requirements for teaching in the modern school are different from those prevailing in a past era.25 Mastery of certain subject matter is still considered indispensable, but it can no longer be considered the sole measure of a teacher's qualifications for a job. Providing adequate guidance involves more than an understanding of curriculum materials; it requires, in addition, knowledge and understanding of students and the society in which they belong. Eikenberry, in his study of the professional training of secondary school principals, asserts that the principal, as leader of his school, has the responsibility for initiating and supervising the guidance program, a part of which is the study of individual differences.26 The principal's training, he says, should include

24Ibid.
special courses in the administration of pupil guidance, and
tests and measurements in secondary education. With this
training, he will be able to give his teachers on-the-job
training where they have not had an opportunity to secure
this in college.

**Provisions for Meeting Individual Differences**

**In Secondary School Pupils**

Many procedures and techniques have been utilized by
teachers in endeavoring to provide for individual differences
among pupils in the secondary schools. In a National Survey
of Secondary Education covering 8,594 secondary school prin-
cipals, a wide variety of provisions for meeting individual
differences was found.\textsuperscript{27} These provisions were divided into
the following categories: (1) homogeneous groupings, (2) spe-
cial classes, (3) plans characterized by the unit assignment,
(4) scientific study of problem cases, (5) variation in pupil
load, (6) out-of-school projects and studies, and (7) advisory
or guidance programs.\textsuperscript{28} Of the seven, the first three—homoge-
neous grouping, special classes, and the unit assignment—
were referred to as the core elements in a typically success-
ful program to provide for individual differences.

\textsuperscript{27}Koos and others, *op. cit.*, p. 274.

\textsuperscript{28}Roy C. Billett, *The Administration and Supervision of
Koos and others state that ability grouping is the practice most commonly followed in provisions for meeting individual differences. Marshall and Varner found in an experiment conducted at Central High School that interest holds quite an important place as a means of caring for individual difference. They recommend a curriculum differentiated to the extent that every pupil could find subject matter within the range of his interest and ability.

However, special classes is still another method of caring for individual differences, but it is not used as much as ability and interest grouping. This, in part, appears to be due to the fact that special classes for retarded and exceptional children are an added expense which many school systems cannot afford. Too, the personnel capable of handling these classes successfully are not too numerous.

Some teachers are already aware of the facts concerning individual differences and possess the desire and ability to use the necessary guidance procedures. When a truly democratic school has such teachers, they have all they need in the way of freedom and encouragement to do their best. The implications is that schools must work from within and promote the democratic process so that teachers may be free to think straight, to act upon their best thinking, and to take responsibility for their actions.

---

29 Koos and others, op. cit., p. 270.


31 The National Elementary Principal, Nineteenth Yearbook of the Department of Elementary School Principals, National Education Association, XIX, July, 1940, 643.
The present study is concerned in finding and evaluating the provisions made by modern teachers to meet individual differences. The discussions here of these methods, it is believed, will furnish orientation for evaluation of the present practices.

Criteria for Evaluating a Program for Meeting Individual Differences

If the foregoing discussions are utilized as source material for formulating criteria for evaluating a school program for meeting individual differences, the following statements may be offered for use in this respect:

1. Every child, regardless of its ability or social status, has the right to an education that includes secondary school training.

2. Pupils have varying needs as well as varying characteristics.

3. If there is to be equality of educational opportunity, the individual differences in pupils will have to be studied and met with procedures designed to meet individual needs.

4. Pupils differ in intelligence, in personality traits, in physical characteristics, and in the environments in which they live; all these are contributing factors to individual differences.

5. If individual differences are to be met, they must
be diagnosed scientifically in order to determine needed procedures for meeting them.

6. Diagnosing individual differences is not a haphazard affair, but requires special testing techniques.

7. Tests and experiments will be valuable only to the extent that the personnel administering them understands them, is sympathetic with the children, and knows how to interpret the findings.

8. The findings of tests for determining individual differences should be implemented with the teaching procedures if adequate results are to be gained from the testing program.

9. The principal, as leader of his school, should have had training in the administration of guidance programs and in the tests and measurements necessary as a base for such a program.

10. An in-service training program should be conducted by the principal to acquaint his teachers with procedures and methods of interpreting and applying test data which many of them have not had an opportunity to obtain.
CHAPTER III
PRESENTATION AND INTERPRETATION OF DATA ON PRACTICES
AND PROCEDURES OF TWENTY-FIVE SECONDARY SCHOOLS
IN MEETING INDIVIDUAL DIFFERENCES

Purpose of the Chapter

The purpose of this chapter is to present and interpret the data taken from the questionnaires sent to twenty-five secondary schools regarding practices and procedures in meeting individual differences. The number of secondary schools in the counties studied, the total enrollment of the secondary schools, the number of secondary schools with definite procedures to compensate for individual differences, the number of secondary schools with no procedures, special training of personnel, methods of diagnosing individual differences, and procedures and methods reported as most successful are all given attention in the presentation and discussion of data.

Number of Secondary Schools, Total Enrollment and Number of Teachers

The secondary schools in the nine counties were grouped for purposes of tabulating the data on school population and number of teachers. Table 1 presents the data on these items.
TABLE 1

DATA ON SCHOOL POPULATION AND NUMBER OF TEACHERS
IN THE SECONDARY SCHOOLS IN NINE COUNTIES.

<table>
<thead>
<tr>
<th>County</th>
<th>Number of Pupils in Schools</th>
<th>Number of Teachers in Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1193</td>
<td>71</td>
</tr>
<tr>
<td>2</td>
<td>302</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>256</td>
<td>22</td>
</tr>
<tr>
<td>4</td>
<td>482</td>
<td>39</td>
</tr>
<tr>
<td>5</td>
<td>1766</td>
<td>96</td>
</tr>
<tr>
<td>6</td>
<td>235</td>
<td>18</td>
</tr>
<tr>
<td>7</td>
<td>861</td>
<td>44</td>
</tr>
<tr>
<td>8</td>
<td>910</td>
<td>49</td>
</tr>
<tr>
<td>9</td>
<td>1394</td>
<td>75</td>
</tr>
<tr>
<td>Totals</td>
<td>7397</td>
<td>439</td>
</tr>
</tbody>
</table>

According to the data in Table 1, there were 7,397 pupils in the secondary schools participating in the survey. More than four hundred teachers were employed in these schools. The apparent discrepancy in the school population represented in the different counties may be explained by the presence of large city secondary schools in three of the counties.

For purposes of comparison, the secondary schools participating in the survey have been grouped into two sections:
(1) schools with less than 500 school population, and (2) schools with over 500 population. Practices and procedures have sometimes been found to differ in the larger and smaller secondary schools, and the division is made here in order to compare the two groups in this respect.

Table 2 shows the number of schools in each classification.

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Number of Schools in Group</th>
<th>Percentage of Schools in Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 500</td>
<td>22</td>
<td>88.0</td>
</tr>
<tr>
<td>Over 500</td>
<td>3</td>
<td>12.0</td>
</tr>
</tbody>
</table>

Almost 90.0 per cent of the secondary schools participating in the survey had less than 500 school population, whereas only three secondary schools, or 12.0 per cent, had over this number of pupils. The practices and procedures, therefore, will be mainly from small secondary schools operating in the nine counties where the study was conducted.

Table 3 shows the number and percentage of secondary schools with provisions for meeting individual differences.
TABLE 3

THE NUMBER AND PERCENTAGE OF SECONDARY SCHOOLS WITH PROVISIONS FOR MEETING INDIVIDUAL DIFFERENCES IN PUPILS

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Number of Secondary Schools with Provisions for Meeting Individual Differences</th>
<th>Per Cent of Secondary Schools with Provisions for Meeting Individual Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 500</td>
<td>13</td>
<td>59.0</td>
</tr>
<tr>
<td>Over 500</td>
<td>3</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Thirteen of the secondary schools, or 59.0 per cent, it is indicated in Table 3, had definite procedures for meeting individual differences, and all of the larger population group indicated procedures used for this purpose. The data may be interpreted to mean that a comparatively large percentage of the smaller population group secondary schools had not made any study of individual differences or developed any procedures for meeting them.

The opinions of the school leaders in these districts were asked concerning their attitude toward a need for compensating for individual differences. The specific question asked was: "In your opinion is there a need to compensate for individual differences?" Table 4 presents the data on the answers to this question.
TABLE 4

THE NUMBER AND PERCENTAGE OF SECONDARY SCHOOLS INDICATING A FELT NEED FOR PROCEDURES TO COMPENSATE FOR INDIVIDUAL DIFFERENCES AMONG PUPILS

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Number Schools Indicating Need for Procedures</th>
<th>Per Cent of Schools Indicating Need for Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 500</td>
<td>20</td>
<td>90.9</td>
</tr>
<tr>
<td>Over 500</td>
<td>3</td>
<td>100.0</td>
</tr>
</tbody>
</table>

According to the data in Table 4, over 90.0 of the secondary schools in Group 1 indicated that they felt a need for procedures to compensate for individual differences, and all the secondary schools in Group 2 said that they held the opinion that procedures were necessary. Two of the secondary schools, or 9.1 per cent, said that they did not think any procedures were necessary to meet individual differences of pupils.

In Table 3 it was shown that there were thirteen schools in Group 1 and three schools in Group 2 that had provisions in the curriculum for meeting individual differences. Of these secondary schools, only one reported an individual head of the program to meet individual differences; in all other secondary schools, the classroom teacher performed this function.
The secondary school with one individual at the head of the program for meeting individual differences stated that this leader had had special training in the study of ways and means of meeting individual differences. This educator held a Master of Arts degree in education and had 150 semester hours of academic training. Special courses had been taken in diagnosis of individual differences and methods for meeting these differences.

Eighteen procedures for meeting individual differences were listed in the questionnaires sent out and each secondary school was asked to check the procedures used. Table 5 presents the data on this phase of the study. The procedure most used heads the list and the others follow in descending order. The data show variations in procedures used to meet individual differences. Ten of the smaller schools, 55.55 per cent, used three procedures: variation in number of subjects, special coaching of slow pupils, and individualized instruction. Over 40.0 per cent of these schools used advisory programs and differentiated assignments. Study of the problem cases was made by 33.30 per cent of the schools. In the larger schools, all of them used variation in the number of subjects, special coaching of slow pupils, individual instruction, and ability grouping. The significant difference was in the use of ability grouping.
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Number of Schools in Group 1 Using Procedure</th>
<th>Per Cent of Schools in Group 1 Using Procedure</th>
<th>Number of Schools in Group 2 Using Procedure</th>
<th>Per Cent of Schools in Group 2 Using Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation in number of subjects a pupil may carry</td>
<td>10</td>
<td>55.55</td>
<td>3</td>
<td>100.00</td>
</tr>
<tr>
<td>Special coaching of slow pupils</td>
<td>10</td>
<td>55.55</td>
<td>3</td>
<td>100.00</td>
</tr>
<tr>
<td>Individualized instruction</td>
<td>10</td>
<td>55.55</td>
<td>3</td>
<td>100.00</td>
</tr>
<tr>
<td>Advisory program for pupil guidance</td>
<td>8</td>
<td>44.44</td>
<td>2</td>
<td>66.67</td>
</tr>
<tr>
<td>Differentiated assignments</td>
<td>8</td>
<td>44.44</td>
<td>2</td>
<td>66.67</td>
</tr>
<tr>
<td>Psychological studies</td>
<td>7</td>
<td>33.30</td>
<td>1</td>
<td>33.34</td>
</tr>
<tr>
<td>Study of problem cases</td>
<td>6</td>
<td>33.30</td>
<td>1</td>
<td>33.34</td>
</tr>
<tr>
<td>Vocational guidance</td>
<td>6</td>
<td>33.30</td>
<td>1</td>
<td>33.34</td>
</tr>
<tr>
<td>Long unit assignments</td>
<td>5</td>
<td>27.50</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Problem method</td>
<td>3</td>
<td>16.65</td>
<td>1</td>
<td>33.34</td>
</tr>
<tr>
<td>Homogeneous or ability grouping</td>
<td>3</td>
<td>16.65</td>
<td>3</td>
<td>100.00</td>
</tr>
<tr>
<td>Opportunity room for slow pupils</td>
<td>3</td>
<td>16.65</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Special classes for pupils who fail</td>
<td>3</td>
<td>16.65</td>
<td>1</td>
<td>33.34</td>
</tr>
<tr>
<td>Laboratory plan of instruction</td>
<td>3</td>
<td>16.65</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Remedial classes or rooms</td>
<td>3</td>
<td>16.65</td>
<td>1</td>
<td>33.34</td>
</tr>
<tr>
<td>Special coaching</td>
<td>2</td>
<td>11.10</td>
<td>2</td>
<td>66.67</td>
</tr>
<tr>
<td>Adjustment class or room</td>
<td>2</td>
<td>11.10</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Restoration classes</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Table 6 gives the procedures regarded by the small secondary schools as most adequate for meeting individual differences. First, second, third, fourth, and fifth choices are indicated.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Number Schools Rating Procedure*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Variation in number of subjects a pupil may take</td>
<td>3</td>
</tr>
<tr>
<td>Special coaching of slow pupils</td>
<td>2</td>
</tr>
<tr>
<td>Individualized instruction</td>
<td>1</td>
</tr>
<tr>
<td>Advisory program for pupil guidance</td>
<td>1</td>
</tr>
<tr>
<td>Differentiated assignment</td>
<td>1</td>
</tr>
<tr>
<td>Psychological studies</td>
<td>0</td>
</tr>
<tr>
<td>Study of problem cases</td>
<td>0</td>
</tr>
<tr>
<td>Vocational guidance</td>
<td>0</td>
</tr>
<tr>
<td>Long unit assignments</td>
<td>0</td>
</tr>
<tr>
<td>Problem method</td>
<td>1</td>
</tr>
<tr>
<td>Ability grouping</td>
<td>3</td>
</tr>
<tr>
<td>Opportunity room for slow pupils</td>
<td>0</td>
</tr>
<tr>
<td>Special classes for pupils who fail</td>
<td>0</td>
</tr>
<tr>
<td>Laboratory plan of instruction</td>
<td>0</td>
</tr>
<tr>
<td>Remedial classes or rooms</td>
<td>0</td>
</tr>
<tr>
<td>Special coaching</td>
<td>0</td>
</tr>
<tr>
<td>Adjustment class</td>
<td>0</td>
</tr>
<tr>
<td>Restoration class</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
</tr>
</tbody>
</table>

*Degree of preference
1. First choice
2. Second choice
3. Third choice
4. Fourth choice
5. Fifth choice
According to the data in Table 6, special coaching received more ratings for first choice in meeting individual differences than any other procedure. Variation in number of subjects received more ratings for second choice of procedure. Ability grouping was the most successful procedure used by three secondary schools; two secondary schools gave it second and third choice ratings, respectively. Individual instruction had four ratings of first choice in procedures. The data may be interpreted to mean that there was little agreement on choice of procedures for meeting individual differences.

In the three large secondary schools, the most successful procedure used for meeting individual differences was ability grouping. Variation in the number of subjects taken and special coaching were rated second choice. The larger secondary schools were more in agreement on procedures than the smaller ones.

The length of time the secondary schools had been using procedures for meeting individual differences is shown in Table 7. The three larger secondary schools had been using procedures for meeting individual differences longer than the smaller secondary schools. Six of the smaller secondary schools had been using them less than five years, six between five and six years, and one ten years or more. The data may be interpreted to mean that the majority of the schools with
procedures for meeting individual differences had been using them for some time.

### TABLE 7

LENGTH OF TIME SECONDARY SCHOOLS HAVE BEEN USING PROCEDURES FOR MEETING INDIVIDUAL DIFFERENCES

<table>
<thead>
<tr>
<th>Length of time</th>
<th>Number of Small Schools</th>
<th>Number of Large Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 5 years</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>5 to 10 years</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>10 years or more</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

All the secondary schools are included in the data on the question about the testing program because some of the schools gave tests without using the results to determine individual differences. Table 8 gives the data taken from the questionnaires on the number of secondary schools using the testing program.

### TABLE 8

THE NUMBER OF SECONDARY SCHOOLS PARTICIPATING IN SURVEY THAT HAD ANNUAL TESTING PROGRAM

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Small Schools With Testing Program</th>
<th>Number of Larger Schools With Testing Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testing program</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>No testing program</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>
Five of the smaller secondary schools did not have an annual testing program. All of the larger secondary schools gave their pupils annual tests. Sixteen of the secondary schools reported the tests were used for determining individual differences between pupils, while four secondary schools did not use the results of their tests for these purposes.

The type of tests given the pupils by the secondary schools is shown in Table 9.

**Table 9**

**The type of tests given pupils in twenty secondary schools having testing programs**

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Number Small Schools Using Tests</th>
<th>Number Larger Schools Using Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Prognostic</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Interest</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Intelligence</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>Personality</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Achievement</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>Aptitude</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Intelligence and achievement tests, the data in Table 9
show, were given by all the secondary schools. Diagnostic
tests were given by sixteen secondary schools, but the number
giving other types of tests was small.

Twenty-two of the secondary schools reported that they
kept cumulative records on the pupils. Table 10 shows the
items included in the records.

**TABLE 10**

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Smaller Schools With Item</th>
<th>Number of Larger Schools With Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photograph of pupil</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Fingerprint identification</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Personal qualities (athletic ability, cooperation, effort)</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Health record</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>Physical development</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Attendance record</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>Test results</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>Extra-curricular achievements</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Cumulative elementary record</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Cumulative high school record</td>
<td>17</td>
<td>2</td>
</tr>
</tbody>
</table>

Of the secondary schools keeping cumulative records,
three items were kept by all the schools: personal qualities,
attendance records, and health records. Other items were kept in varying numbers, but the larger schools kept all items mentioned except fingerprint identification.

Only four of the secondary schools reported that the pupils in their schools were given physical examinations to determine individual differences, and three of these schools reporting examinations were the larger schools. No efforts were made to determine if the pupils have physical examinations by a family physician each year. Four of the secondary schools reported that they gave annual vision and auditory tests.

Table II gives the methods used in the high schools in diagnosing individual differences.

TABLE II

THE METHODS USED IN SECONDARY SCHOOLS TO DIAGNOSE INDIVIDUAL DIFFERENCES

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of Smaller Schools Using Method</th>
<th>Number of Larger Schools Using Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselors</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Guidance program</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Home visitation</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Background study of pupils</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher observation</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Health records</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Health nurse</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Test results</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>X-ray, dental clinic and audiometer</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
Guidance programs of the secondary schools, it is indicated, were the most common method used in the study of individual differences. These guidance programs, because many of the schools are small, were carried on by the classroom teachers. Two of the larger secondary schools reported an organized guidance program. Only one secondary school reported the use of X-ray, dental, and audiometer tests in diagnosing differences among the pupils.

Table 12 lists the methods found to be most successful by the secondary schools in diagnosing individual differences.

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of Smaller Schools Rating Method Successful</th>
<th>Number of Larger Schools Rating Method Successful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselors</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Guidance program</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Home visitation</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Background study of pupils</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Testing</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Background study of pupils, it is indicated in Table 12, was reported as the method found to be most successful in
diagnosing individual differences. Only three secondary schools reported that they found the testing program to be the most effective method.

A number of the administrators made comments in the space provided in the questionnaires. These are listed as follows.

More time should be given this phase of the educational program. To lose sight of the individual is a breakdown in any program.

We have followed the guidance method and have found it good in determining and remedying individual differences.

We use tests, and close supervision in educational guidance as well as vocational.

Convert the majority of teachers to this philosophy of education. Unless this is done all other efforts are futile.

Flexible curriculum. Allow some students to receive high school diplomas without college entrance requirements.

Our school spread between the very slow and the very capable is greater than most schools. For that reason individual help, extra-credit problems, and all such devices are used to advantage.

The last comment is from the administrator of a large secondary school in a college town where a large number of professors live. The secondary school, it is indicated, is alert to the needs for methods that will take care of the gifted pupil as well as the slow. One of the comments "convert the teachers to this philosophy" emphasizes the responsibility of the classroom teacher in the diagnosis and remediying of individual differences. The administrator can lead the way, but the ultimate responsibility rests on individual teachers who are in daily contact with the pupils.
The findings of this study of procedures used by twenty-five secondary schools in nine counties in southeast Texas to diagnose and remedy individual differences in pupils are as follows:

1. Twenty-three of the secondary schools participating in the study were small; only three schools in the survey had a school population of over 500 pupils.

2. The schools studied were divided into two groups: under 500 pupils, and over 500 pupils.

3. Fifty-nine per cent of the smaller schools and 100.0 of the larger schools had provisions for meeting individual differences.

4. Over 90.0 per cent of the smaller schools and 100.0 of the larger schools indicated a need for procedures for meeting individual differences. Two schools, 9.1 per cent, reported that they saw no need for such procedures.

5. In all instances except in one of the smaller secondary schools, the administrators reported that the program for administering individual differences was in the hands of the classroom teachers.

6. Only one secondary school had an individual at the head of its program for meeting individual differences.

7. The secondary schools varied widely in the use of procedures to meet individual differences; in the smaller secondary schools variation of subject matter, special coaching of slow pupils, and individual instruction were most
used; in the larger secondary schools these three procedures plus ability grouping were the ones rated most successful.

8. Special coaching was the most favored procedure reported for meeting individual differences by the smaller secondary schools and ability grouping received more ratings by the larger schools.

9. More than 50.0 per cent of the schools with programs for meeting individual differences had had them in effect for over five years.

10. Seventeen of the smaller secondary schools and all of the larger secondary schools had an annual testing program.

11. Intelligence, achievement, and diagnostic tests were the ones most commonly administered.

12. The majority of the secondary schools reported that the tests given the pupils were used in determining individual differences.

13. Twenty-two of the secondary schools kept cumulative records of the pupils; the most common items in these records were: personal qualities, attendance records, and health records.

14. Few of the secondary schools reported any physical examination tests for the pupils.

15. Guidance programs were the methods mentioned most often as used for diagnosing individual differences.

16. Background study of pupils was reported to be the
most effective method used in diagnosing individual differences.

17. Flexible curriculums, provisions for the mentally gifted as well as the slow, graduating from high school with certificate without college admission requirements, and conversion of teachers to educational philosophy of understanding needs for study of individual differences were some suggestions written in by school administrators answering the questions.

Summary

This chapter has been a presentation of the data and findings from questionnaires answered by twenty-five administrators of secondary schools in nine counties in southeast Texas relative to their programs for meeting individual differences. Attention was given to the number of pupils in the secondary schools, the number of teachers, the presence or absence of a program for meeting individual differences, and the practices and procedures used by the secondary schools in diagnosing and meeting individual differences where the programs were in use. The following conclusions have been reached from the study of this chapter:

1. The majority of the secondary schools studied had very limited procedures for meeting individual differences.

2. Teacher observation or background study instead of
diagnostic testing comprised the major portion of the procedures for diagnosing individual differences.

3. Many of the schools contacted showed very little interest in the program as a whole.
CHAPTER IV

EVALUATION OF THE DATA IN TERMS OF CRITERIA
FOR COMPENSATING FOR INDIVIDUAL DIFFERENCES

Purpose of the Chapter

The purpose of this chapter is to evaluate the findings developed from a study of the data on the procedures used by twenty-five secondary schools in Texas to meet individual differences. The procedures in use are evaluated against the recommended practices and procedures of the literature studied in Chapter II.

Meeting the Needs of All Pupils

According to the criteria, pupils have varying needs in all schools. These needs may vary from school to school, but they exist to some degree in all schools. In the study of the twenty-five secondary schools in the nine counties in southeast Texas, it was found that nine of them had no provisions whatever for meeting the individual needs of children. Two school administrators, in answering the questionnaire, stated that they saw no need for a school program designed to meet individual differences. In this respect they very
definitely fail to meet modern educational theory concerning the need for such a program.

... appreciable differences exist among the members of a school population ... Unless we choose to ignore these unavoidable and highly desirable differences, arrangements must be made to respect the differential needs resulting from them.¹

The activities of the modern secondary school present many opportunities for the detection of individual differences and for providing means to meet these differences. For the slow learner in the academic field, vocational opportunities are provided. In many instances, pupils show decided abilities in the field of manual arts but have very little ability in the subjects of English and history. The world today has need for its gifted children, for the development of special abilities. It is the responsibility of the teachers in the school of today to understand each child in his classes so that he can guide it into learning situations conducive to optimal development of special abilities. If the school administrator sees no need for a program to meet individual differences, the classroom teachers cannot be expected to accomplish what they otherwise might be able to do. The administrator, as leader of his school, is responsible for the presence or absence of any needed program for the pupils.

¹Beaumont and Macomber, op. cit., p. 176.
Diagnostic Procedures Used to Meet the Individual Needs of Pupils

In the smaller secondary schools, it was found that diagnosis of individual needs was not made on a scientific basis. The main tests given in the smaller secondary schools were achievement and intelligence tests. The larger secondary schools used these and diagnostic testing as well. The use of achievement tests and intelligence tests are not adequate means of diagnosing the real individual differences of pupils.

So-called intelligence tests often are thought of erroneously as being measures of individual capacity of making adequate adjustments in all manner of life situations, and even regardless of the nature of previous experiences. Actually their scope is much more limited; nor do they measure ability irrespective of previous experience. They are neither reliable nor valid measures of what may be termed social intelligence, nor of one's potentiality in such highly specialized fields as mechanics, music, or the arts and crafts.\(^2\)

Intelligence tests, therefore, are devised to measure general capacity for learning--at least certain types of learning--but they are very closely dependent upon past learning experiences. They are valuable in their field. Other tests, however, are necessary to determine specialized differences in pupils. Douglass says:

Teachers should be encouraged to practice diagnosis and remedial teaching: to construct tests which will enable them to bring into relief the fundamental sources

\(^2\text{Ibid.}, \ p. \ 198.\)
of pupils' errors and weaknesses and to formulate and administer learning exercises to eliminate such errors. Diagnostic-remedial methods are most fruitful in beginning classes in foreign languages and mathematics and English. Teachers of shop and laboratory subjects may prevent much unsatisfactory work if they will observe their pupils closely in the first few weeks of their courses, to note those who seem unusually inept at handling the equipment they are called on to use.3

The testing program of the majority of the secondary schools, when judged by the criteria in professional literature on the administration of secondary schools, was inadequate. Not only were the tests given inadequate, but the results of the tests, in a number of instances, were not applied to the study of individual differences. The test itself is no guarantee of any value; the value lies in the application of the test results to the learning situation.

Procedures for Meeting Individual Differences

In the smaller secondary schools the three most used procedures for meeting individualized differences in the pupils were variation in number of subjects a pupil may carry, special coaching, and individualized instruction. Modern educational theory favors grouping according to ability and personal conferences and case studies to reduce the number of failures over other procedures. Douglass states:

Though we are not yet able to pronounce judgement with any scientific assurance on the question of the  

3Harl R. Douglass, Organization and Administration of Secondary Schools, pp. 350-351.
relative results obtained by grouping pupils on the basis of ability for the purpose of better adapting instruction to the ability of the individual student, the available experimental data tend to show that grouping yields somewhat better results, though the superiority is not uniform or pronounced.

Flexibility in procedure, however, is advisable. If at all possible within the limits of scheduling, students should be grouped and scheduled so as to permit reclassification when that seems advisable. Situations vary from school to school. A measure of the teacher's efficiency is the ability displayed in adapting the curriculum to meet varying needs.

The larger secondary schools in the counties studied, it is indicated, were more in accord with modern accepted theories of adequate procedures than the smaller secondary schools. To say that the smaller secondary schools were inadequate in this respect would perhaps be too strong a statement. The information developed from the questionnaires could not possibly measure many features of the program which might be worthwhile. There is an indication, however, that there could be much improvement made in the program for the procedures to meet individual differences in the secondary schools.

Cumulative records are a valuable source of information to the teacher who wished to find out why one particular pupil or a number of pupils are failing to make normal grade progress. Twenty-two of the secondary schools reported that they

\[4\text{Ibid.}, \ p. \ 340. \ \ 5\text{Ibid.}, \ p. \ 343.\]
kept cumulative records of the pupils, but only eight schools used these records as a base for their study of individual differences. Another mark against the schools was that they had no organized guidance program. Modern educational theory is subscribing to the belief today that the classroom teacher rather than the special guidance counselor is one of the best means of reaching and advising the pupil. However, there should be leadership in such a program. The principal of the secondary school, as school leader, is responsible for this leadership. The criteria, as developed in Chapter II, indicate a need for an in-service training program in every secondary school to train the teachers in the principles of meeting the needs of the pupils. In the larger schools a director of the guidance program may direct the training of the classroom teachers, but in the smaller schools the responsibility often rests squarely on the shoulders of the school administrator.

Douglass says:

In all but the smaller schools an effort should be made to obtain on the staff one individual who, perhaps, in schools of medium size, may do some teaching, who is especially trained in guidance theory, organization and techniques and in underlying psychology and psychological testing, and on whom responsibility may be placed for organizing and supervising a modern functional guidance program. He should be charged with the plan of setting up the plan of organization and the machinery for guidance, with training registration and home-room advisers, and with supervising their activities.

6 Beaumont and Macomber, op. cit., p. 126.

7 Douglass, op. cit., p. 184.
The twenty-five secondary schools surveyed in this study reported one trained individual in charge of a guidance program. Questionnaires, it should be stressed, are not always adequate measurements of actual situations. Enough data has been presented in this study, however, to warrant a few conclusions on the adequacy of the programs of the secondary schools in the nine counties. These conclusions are:

1. The secondary schools appear, as a whole, to be following traditional lines of teaching. Much lip service is accorded newer educational theories and the need for guidance and for formulating some method of meeting individual differences; practiced procedures indicate that in many instances no attention is given the subject and no provisions made to meet it.

2. The schools do not follow scientific procedures in diagnosing individual differences. Intelligence and achievement tests are the main ones used and their use alone does not give an adequate measure of personality traits and other factors that enter into individual differences. The writer, after studying the data, is inclined to agree with Beaumont and Macomber in the following statements:

1. These differences are natural and expected human characteristics;
2. The wholesome development of the individual requires that a school curriculum be developed in harmony with, rather than contrary to, these characteristics;
3. The better school systems of today still have a long
and hard road to travel before this long-recognized psychological fact becomes an accepted reality in curricular practice.\footnote{Beaumont and Macomber, \textit{op. cit.}, p. 158.}
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The present study has been an investigation of the practices and procedures used by twenty-five secondary schools in diagnosing and meeting individual needs of their pupils. Attention has been given to sound principles governing the administration of such procedures, to criteria developed for evaluating them, and to the practices and procedures of the secondary schools as shown by answers to a questionnaire sent by the writer to the administrators of the secondary schools.

Conclusions

The conclusions reached from a study of the professional literature in the field and from the data taken from the questionnaires may be summarized as follows:

1. All the children are entitled to the benefits of an education and this extends to the secondary school as well as the elementary.

2. Pupils have varying needs as well as varying characteristics.

52
3. If there is to be equality of educational opportunity, the individual differences in pupils will have to be studied.

4. Pupils differ in intelligence, in personality traits, and in the environments in which they live.

5. If individual differences are to be met, they must be diagnosed scientifically in order to determine needed procedures for meeting them.

6. Diagnosing individual differences requires special testing techniques and trained personnel.

7. Diagnostic tests are valuable to the extent that they are implemented into the actual practices and procedures of meeting individual differences.

8. The classroom teacher has a great responsibility in the administration of a program for meeting individual differences.

9. The majority of the secondary schools studied did not meet the criteria set up for administering a program for meeting individual differences.

10. Nine of the secondary schools had no program for meeting individual differences, and two of the administrators reporting stated that they did not see any need for such a program.

11. The methods of diagnosing individual differences, in the majority of instances, were inadequate.

12. The secondary schools failed to avail themselves of
many opportunities and much valuable material for improving their school curriculum in regard to meeting individual differences.

13. The practices and procedures for meeting individual differences were more inadequate in the small secondary schools than they were in the larger secondary schools.

14. The larger secondary schools had more adequate methods of testing for individual differences.

15. The practices and procedures for meeting individual differences were more traditional in nature than they were progressive; the modern theory of education was not realized in many instances.

Recommendations

The following recommendations are offered in the light of the data developed in this study:

1. Secondary school administrators should evaluate their individual schools against criteria for an adequate program for meeting individual differences.

2. An in-service training program should be instituted which would study types of individual differences, factors that would cause individual differences, ways of diagnosing these differences, and ways of remedying them.

3. Further study should be made along these lines in similar studies to determine if the results approximate the
present findings. Isolated studies, by themselves, have value only as they are corroborated or refuted by other studies in the field.
APPENDIX

Questionnaire

I. Name of school __________________________

II. Located in (city or town) ______________, Texas

III. Person completing questionnaire: Superintendent__,
PrINCIPAL __, TEACHER ___.

IV. Enrollment of high school _____; Number of teachers __________.

V. Does your school have procedures set up by the admin-
istration to meet the individual differences in pupils?
Yes ____  No ____. 

VI. In your opinion, is there a need to compensate for
the individual differences in the pupils of your high
school? Yes __ No ___.

VII. In your school, is the problem of individual differ-
ences under the direction of one head? Yes __ No__. 
Is it the individual problem of each teacher? Yes__
No___.

VIII. Does the person heading the program in your high school
have any special training in the field of individual
differences? Yes____ No____—If so, what does this
training consist of: Degree____; Major____; Number
semester hours____.
IX. Given below are a number of procedures employed over the country to compensate for individual differences in pupils; please check any of these that are in use in your high school.

_1. Variation in number of subjects a pupil may carry.

_2. Special coaching of slow pupils.

_3. Differentiated assignments.

_4. Advisory program for pupil guidance.

_5. Homogeneous or ability grouping.

_6. Special classes for pupils who fail.

_7. Laboratory plan of instruction.

_8. Long unit assignments.

_9. Individualized instruction.

_10. Vocational guidance through exploratory courses.

_11. Psychological studies.


_13. Special coaching.

_14. Remedial classes or rooms.

_15. Adjustment classes or rooms.


_17. Restoration classes.

_18. Others: __________________________
X. Which of the above mentioned procedures have you found to be most successful in your high school? Number ___; from the list above, place the numbers of the five procedures you consider most desirable, in order of importance: Numbers ___ ___ ___ ___ ___.

XI. How long has your school employed procedures to compensate for individual differences in high school pupils? 1 to 5 years ___; 5 to 10 years ___; 10 years or more ___.

XII. Is a testing program conducted annually in your high school? Yes ___ No ___.

XIII. If so, are the results used to help in diagnosing individual differences? Yes ___ No ___.

XIV. What types of test are given? Diagnostic ___; Prognostic ___; Interest ___; Intelligence ___; Personality ___; Achievement ___; Aptitude ___; Others: ___ ___ ___.

XV. Does your high school keep a system of cumulative records for each pupil? Yes ___ No ___. Are records kept all through school career? Yes ___ No ___. Check below, the following items, if shown on your cumulative records: Photograph of pupil ___, Fingerprint identification ___, Personal qualities (athletic ability, cooperation, effort, etc.) ___, Health ___.
record ___, Physical development ___, Attendance record ___, Results from interest, achievement and other test ___, Extra-curricular achievements ___, Results from intelligence test ___, Cumulative elementary record ___, cumulative high school record ___.

XVI. Are cumulative records used to help in diagnosing individual differences in high school pupils? Yes ___
No ___.

XVII. Are pupils in your high school given physical examinations to determine any existing physical differences? Yes ___
No ___.

XVIII. If not, do the majority of the pupils have a physical examination by a family physician each year? Yes ___
No ___.

XIX. If no physical examinations are given, is any attempt made to disclose the pupil with: poor hearing ___,
Poor sight ___, other defects ___, what methods are used to determine these defects? ________________

XX. Check below any of the following methods used in your high school to help in diagnosing individual differences in pupils: Counselors ___, Guidance program ___,
Home visitations ___, Background study of pupils ___,
Others ___________________________.
XXI. Which of the methods mentioned above have you found to be most successful in diagnosing individual differences in the pupils of your high school? ______.

XXII. Please list below any suggestions and recommendations you may have acquired in your own experience that would improve or aid in setting up a program to diagnose and compensate for the individual differences in high school pupils.

__________________________________________

__________________________________________

__________________________________________
BIBLIOGRAPHY

Books


Reports


Articles


Unpublished Material