PUPIL ADJUSTMENT AMONG SEVENTH GRADERS IN SCHOOLS ORGANIZED UNDER DIFFERENT PLANS: 8-4, 6-6, 6-3-3, AND 5-3-4

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Thomas F. Stark

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THESIS

This is to certify that the

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PUPIL ADJUSTMENT AMONG SEVENTH GRADERS IN SCHOOLS ORGANIZED UNDER DIFFERENT PLANS: 8-4, 6-6, 6-3-3, AND 5-3-4

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ABSTRACT

PUPIL ADJUSTMENT AMONG SEVENTH GRADERS IN SCHOOLS ORGANIZED UNDER DIFFERENT PLANS: 8-4, 6-6, 6-3-3 and 5-3-4

by Thomas F. Stark

The purpose of this study was to compare the relative effects of four organizational plans upon the personal-social adjustment of seventh grade pupils. The four plans under investigation were the 8-4, 6-6, 6-3-3 and 5-3-4 plans. The California Test of Personality was employed as the instrument for obtaining measures of personal-social adjustment.

To implement the study, all Michigan school systems accredited by the North Central Association of Colleges and Secondary schools representing the 8-4, 6-6, 6-3-3 and 5-3-4 organizational plans were identified. From each of the four plans a representative group of schools was selected for study. Ten schools represented the 8-4 plan; nine schools the 6-6 plan; twelve schools the 6-3-3 plan; and thirteen schools the 5-3-4 plan. From each school ten seventh grade pupils, five boys and five girls, were selected for testing. Ultimately, 439 pupils were tested.

Analysis of variance procedures were employed to assess the significance of differences found among the four groups of pupils in regard to scores on the various parts of the test. No significant differences were found among the four groups in regard to: Self-Reliance, Sense of Personal Worth, Sense of Personal Freedom, Feeling of Belonging, Withdrawing Tendencies, Nervous Symptoms, Social Standards, Social Skills, Anti-Social Tendencies, Family Relations, Community Relations, Total Personal Adjustment, Total Social Adjustment, and Total Personal-Social Adjustment.

A significant difference was found between the 8-4 group and the 6-3-3 group in regard to the School Relations section of the test, the 8-4 group scoring significantly higher than the 6-3-3 group.

Conclusions

The basic assumption of this study was that pupil adjustment, as measured by the California Test of Personality, is significantly influenced by the organizational structure of the school attended. Since eleven of the twelve sub-tests revealed no significant differences among the groups, it is concluded that organizational structure has little effect upon the overall personal-social adjustment of seventh grade pupils. However, a significant difference was found between two of the groups of

students on the School Relations section of the test, a section which probes perhaps more closely to the core of the problem than do any other parts of the test. With this in mind it is concluded that organizational structure does affect a limited aspect of personal-social adjustment as measured by the California Test of Personality.

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By

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CHAPTER I

INTRODUCTION

Nature of the Problem

During the school year 1959-60 American school districts invested an estimated 3.2 billion dollars in school construction.[1] This amount is more than the assets of the country's richest railroad, the Pennsylvania. In the same year, the city of Los Angeles constructed schools at the rate of a million dollars a week.[2] At the present time in Michigan and elsewhere, the mushrooming population and school district reorganization are causing school districts to construct schools at a phenomenal rate.

Since differences are observable among children at different levels of maturation and since children at various levels of maturation are thought to possess unique learning problems, educators have developed numerous schemes for grouping youngsters of similar development within the same building. Thus we see elementary schools, junior

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[1] The Cost of a Schoolhouse (Educational Facilities Laboratories, Inc., 477 Madison Avenue, New York 22, New York, 1960), p. 4.

[2] Ibid.

high schools and senior high schools, with the grades included in each school varying greatly. Consequently, whenever a school district is faced with the problem of school construction, it must decide which of the many plans of grade organization is best. Since little objective information is available, economic practicality, tradition and opinion generally form the basis for such decisions.

Purpose of the Study

The purpose of this study is to investigate the relative effects which various plans of grade organization have upon the personal-social adjustment of seventh graders. Four plans of grade organization are included in the study: the 8-4 plan, the 6-6 plan, the 6-3-3 plan and the 5-3-4 plan.

Statement of the Problem

To what extent, if any, is a pupil's personal-social adjustment, as measured by the California Test of Personality, influenced by the internal organizational structure of the grades within the school?

Operational Definitions

Organizational Structure

The term, "organizational structure," will be used to describe the various schemes of grade organization

found in public schools, such as the 8-4 plan, the 6-6 plan, the 6-3-3 plan and the 5-3-4 plan. The term, "organizational structure," will often be interchanged with the terms, "organizational plan," "organizational scheme," and "plan of organization."

8-4 Plan

An organizational plan where grades one through eight are housed together as an elementary school and where grades nine through twelve are housed together as a high school.

6-6 Plan

An organizational plan where grades one through six are housed together as an elementary school and where grades seven through twelve are housed together as a secondary school.

6-3-3 Plan

An organizational plan where grades one through six are housed together as an elementary school, where grades seven through nine are housed together as a junior high school and where grades ten through twelve are housed together as a high school.

5-3-4 Plan

An organizational plan where grades one through five are housed together as an elementary school, where grades

six through eight are housed together as a junior high school or intermediate school, and where grades nine through twelve are housed together as a high school.

Reorganization (internal)

The term, "reorganization," refers to the process of changing the organizational structure of a school district from the traditional 8-4 scheme to some plan other than the 8-4; generally a plan including some form of junior high school.

Traditional High School

The term, "traditional high school," refers to a four-year school preceded by an eight-year elementary school.

Undivided High School

The term, "undivided high school," refers to a six-year secondary school which is housed in one building. No division is made, however, between the lower grades of the school and the upper grades.

Junior-Senior High School

The term, "junior-senior high school," refers to a six-year secondary school in which the lower three grades are identified as a junior high school and the upper three grades as a senior high school. One principal administers both divisions which are housed in one building.

Junior High School

The term, "junior high school," refers to an intermediate school, housed in a separate building, preceded by an elementary school and followed by a senior high school.

Senior High School

The term, "senior high school," refers to a school housing the upper three or four secondary grades. It is preceded by a junior high school.

Pupil Adjustment

The term, "pupil adjustment," will be used to describe the predisposition of a pupil to act, perceive, think or feel in a given way, as measured by the California Test of Personality. Overall adjustment will be viewed as a blend of personal and social adjustment. Personal adjustment will consist of the following traits: self-reliance, sense of personal worth, sense of personal freedom, feeling of belonging, withdrawing tendencies and nervous symptoms. Social adjustment will consist of the following traits: social standards, social skills, anti-social tendencies, family relations, school relations and community relations.

Self-Reliance

> An individual may be said to be self-reliant when his overt actions indicate that he can do things independently of others, depend upon himself in various situations, and direct his own activities.

The self-reliant person is also characteristically stable emotionally, and responsible in his behavior.[1]

Sense of Personal Worth

An individual possesses a sense of being worthy when he feels he is well regarded by others, when he feels that others have faith in his future success, and when he believes that he has average or better than average ability. To feel worthy means to feel capable and reasonably attractive.[2]

Sense of Personal Freedom

An individual enjoys a sense of freedom when he is permitted to have a reasonable share in the determination of his conduct and in setting the general policies that shall govern his life. Desirable freedom includes permission to choose one's own friends and to have at least a little spending money.[3]

Feeling of Belonging

An individual feels that he belongs when he enjoys the love of his family, the well-wishes of good friends, and a cordial relationship with people in general. Such a person will as a rule get along well with his teachers or employers and usually feels proud of his school or place of business.[4]

Withdrawing Tendencies

The individual who is said to withdraw is the one who substitutes the joys of a fantasy world for actual successes in real life. Such a person is characteristically sensitive, lonely, and given to self-concern. Normal adjustment is characterized by reasonable freedom from these tendencies.[5]

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[1] California Test Bureau Manual, 1953 (California Test of Personality, 5916 Hollywood Boulevard, Los Angeles, California,) p. 3.

[2] Ibid. [3] Ibid. [4] Ibid. [5] Ibid.

Nervous Symptoms

The individual who is classified as having nervous symptoms is the one who suffers from one or more of a variety of physical symptoms such as loss of appetite, frequent eye strain, inability to sleep, or a tendency to be chronically tired. People of this kind may be exhibiting physical expressions of emotional conflicts.[1]

Social Standards

The individual who recognizes desirable social standards is the one who has come to understand the rights of others and who appreciates the necessity of subordinating certain desires to the needs of the group. Such an individual understands what is regarded as being right or wrong.[2]

Social Skills

An individual may be said to be socially skillful or effective when he shows a liking for people, when he inconveniences himself to be of assistance to them, and when he is diplomatic in his dealings with both friends and strangers. The socially skillful person subordinates his or her egotistic tendencies in favor of interest in the problems and activities of his associates.[3]

Anti-Social Tendencies

An individual would normally be regarded as anti-social when he is given to bullying, frequent quarreling, disobedience, and destructiveness to property. The anti-social person is the one who endeavors to get his satisfactions in ways that are damaging and unfair to others. Normal adjustment is characterized by reasonable freedom from these tendencies.[4]

Family Relations

The individual who exhibits desirable family relationships is the one who feels that he is loved and well-treated at home, and who has a sense of security and

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[1] Ibid. [2] Ibid. [3] Ibid. [4] Ibid.

self-respect in connection with the various members of his family. Superior family relations also include parental control that is neither too strict nor too lenient.[1]

School Relations

The student who is satisfactorily adjusted to his school is the one who feels that his teachers like him, who enjoys being with other students, and who finds the school work adapted to his level of interest and maturity. Good school relations involve the feeling on the part of the student that he counts for something in the life of the institution.[2]

Community Relations

The individual who may be said to be making good adjustments in his community is the one who mingles happily with his neighbors, who takes pride in community improvements, and who is tolerant in dealing with both strangers and foreigners. Satisfactory community relations include as well the disposition to be respectful of laws and of regulations pertaining to the general welfare.[3]

Assumptions

Basic Assumption

Pupil adjustment, as measured by the California Test of Personality, is significantly influenced by the organizational structure of the school attended.

Other Assumptions

The results of the study are based upon the following assumptions:

1. The California Test of Personality is a valid and reliable instrument for the measurement of pupil adjustment.

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[1] Ibid., p. 4. [2] Ibid. [3] Ibid.

2. The design of the study adequately controls all variables which could affect the results of the study, save the experimental variable, organizational structure.

Limitations

The results of the study are applicable to Michigan Public Schools, whose high schools are accredited by the North Central Association of Colleges and Secondary Schools. Generalizing the results of the study to other school populations should be done with a great deal of caution.

Basic Design of the Study

All Michigan public school systems representing the 8-4, 6-6, 6-3-3 and 5-3-4 plans of organizational structure, whose high schools were accredited by the North Central Association of Colleges and Secondary Schools, constituted the parent population for sampling. Ten schools representing the 8-4 plan, nine schools representing the 6-6 plan, twelve schools representing the 6-3-3 plan and thirteen schools representing the 5-3-4 plan were included in the study. The schools included in each group were comparable to the schools in the other groups in regard to size of schools (pupil population), operation expenditures per child and the types and sizes of the communities in which the schools were located.

From each of the schools selected, ten seventh grade pupils were chosen for testing, five boys and five girls. To each pupil the California Test of Personality was administered. Analyses of variance were computed among the four groups in regard to the various adjustment scores provided by the test.

Summary and Conclusions

In Chapter I an attempt has been made to present the reader with an introduction and overview of the problem under investigation. The following topics have been dealt with: nature of the problem, purpose of the study, statement of the problem, operational definitions, assumptions, limitations and the basic design of the study.

Chapter II includes an attempt to relate in a meaningful way the evolution of present organizational plans and a review of research literature pertinent to the study under consideration.

Chapter III describes the various methods and procedures used in obtaining and analyzing the data.

Chapter IV presents an analysis of the data.

Chapter V includes a summary of the study, conclusions drawn and recommendations for further research.

CHAPTER II

REVIEW OF THE RESEARCH AND LITERATURE

Introduction

The first part of this chapter attempts to describe and relate the various types of schools which evolved during the history of our country. Each type cannot be thought of as a separate entity but must be viewed in a broader context, as part of an evolving continuum of progress. Most types of schools came upon the scene and later faded, but they left an indelible imprint upon the shape of succeeding types. One might say that our present system of education is the collectivity of segments of all that went before.

The second part of the chapter will provide a review of literature related to the various factors in schools which have been shown to have an effect upon pupil adjustment. This part of the review of the literature was necessary in order that the study could be designed to control significant variables. By so doing, any differences found among groups might more appropriately be attributed to the experimental variable, organizational structure.

The third part of the review of the literature presents the findings of other studies which have been

conducted to compare the various effects that differently organized schools have upon pupils.

The Evolution of Present Organizational Plans

Though wide differences exist regarding the years embraced in each of the divisions of education, the threefold arrangement of elementary, secondary and higher education has become firmly established in America. The causes for the evolution of such an arrangement cannot be clearly demonstrated and seem to have a multitude of antecedent causes.

Antecedents in the Old World

The division of educational experiences into three distinct periods; elementary, secondary and higher, was first noted in ancient Greece, where three periods of formal instruction were observed: ages six to fourteen, fourteen to twenty, and for indefinite lengths of time beyond age twenty.[1]

The Romans also divided educational experience into three distinct periods. Basic instruction in reading, writing and simple calculation began in a child's sixth or seventh year in a *lundus publicus* or in the child's own

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[1]Frank F. Bunker, "Reorganization of the Public School System," *United States Bureau of Education Bulletin, 1916*, No. 8, (Washington: U. S. Government Printing Office, 1916), p. 41.

home, under the direction of a private tutor. At about age twelve a child advanced into the school of the grammaticus where he studied grammar, Homer and the other poets, literature and composition. At about age sixteen, the toga praetexta was exchanged for the toga virilis, a ceremony which marked the assumption of the responsibilities of manhood. At this point a young man's future education depended upon his future plans; if farming, he would go to a farm station to learn the techniques of farming; if the military, he would enlist in the military service; if public life, he would enroll in the rhetorical schools. After attendance at a rhetorical school, the students "thereafter attended the forum, the comitia and the senate, attaching themselves to some admired orator or jurist."[1]

In the sixteenth century Melancthon, Sturm and Trotzendorf made recommendations which formed the model upon which German schools would be organized. The German schools were later to form the model upon which American education would be structured. Melancthon, Sturm and Trotzendorf suggested that schools be organized with three subdivisions; a school for those learning to read, a school for those who had learned to read and were ready to begin the study of grammar, and a school for those ready

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[1] Ibid.

to take up "prosody" and advanced work in the classics. The school code of Wurttenberg, developed in 1559 and based upon these suggestions, stated that the purpose of such an organization was "to carry youth from the elements through successive grades to the degree of culture demanded for offices in church and state."[1]

The first plan for a system of education, comprehensive and articulated in all parts, was not formulated until it was proposed by Comenius (1592-1670) from Morovia. Comenius's plan consisted of providing instruction at three levels; childhood, adolescence and youth. Childhood education would include education in the vernacular for youngsters from age six to age twelve. Adolescent education would have a Latin orientation and would encompass youngsters in the twelve to eighteen year age group. The third area, youth education, would extend from ages eighteen to twenty-four and would involve travel and study at the academies.[2]

American Mission Schools

Most histories of American education tend to begin with the early schools in New England and Virginia. The first schools in America, however, were established by Roman Catholic priests under the express directions of the

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[1] Ibid., p. 42.

[2] Ibid.

Spanish and French governments. The first known attempt at establishing a mission school was made by Dominican Friars under the direction of the Spanish government on the island of Hispaniola in 1510.[1]

Similarly, the French, with their avowed purpose of converting Indians to Christianity, established a series of missions along the St. Lawrence River, the Great Lakes, the headwaters and tributaries of the Mississippi River and the Gulf of Mexico. In these and other missions, books were translated and an Indian grammar was formed. In many of the schools both Indian and white children attended.[2]

Although record remains that the mission schools existed, little is known about how the instructional process was organized. No doubt much of the instruction was conducted on an informal basis.

Early Schools in the Colonies

The first attempt at establishing a school in the colonies is noted in 1616, ten years after the settling of Jamestown. Unfortunately the Indian massacre of 1622 prevented these plans from being carried out, and it wasn't until 1636 that a school was successfully opened.[3]

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[1]Henry Barnard, "Contributions to the History of Education," American Journal of Education, Vol. 27 (1877), p. 17

[2]Ibid., p. 22.

[3]Edwin Grant Dexter, A History of Education in the United States (New York: MacMillan Co., 1904), p. 6.

Each group of colonists that came to America brought with and transplanted to America the basic systems of education found in their home countries. The Dutch in New Amsterdam, the Swedes along the Delaware, the Germans in Pennsylvania, the Quakers in the central colonies all emulated the kinds of educational programs with which they were familiar, the kinds found in their home countries. The programs were religious in nature, often taught by a pastor.

The earliest reference to the successful establishment of a public, non-sectarian school in the colonies is recorded in the minutes of a town meeting in Boston on April 13, 1635, at which time it "was then generally agreed upon y^t o^r brother Mr. Philemon Pormort shalbe intreated to become scholemaster for the teaching and nourtering of children w^{th} us."[1] This school, came to be known as the Boston Latin Grammar School. An interesting, if not unusual, aspect of the development of this school was that ability in reading was a requirement for entrance. A year later, in 1636, the general court of the colony passed an act appropriating money for the establishment of a college. This college later became known as Harvard University. It should be noted that the Boston Latin Grammar School and

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[1]Robert Francis Seybolt, The Public Schools of Colonial Boston: 1635-1775 (Cambridge: Harvard University Press, 1935), p. 1.

Harvard University were the only public schools to serve Boston until 1684 when the first public "writing school" was opened. The first American schools established to teach reading came to be known as dame schools. The dame schools were generally conducted in homes by women who had in their youth obtained some of the basic rudiments of education and who saw in conducting a school the chance to earn a small amount of money, generally a few pennies per week per child. Cubberley, citing an earlier reference, notes,

> The selectmen agreed with Goodwife Mirick, to encourage her in the good work of training up of children and teaching children to read, that she should have 3d a week for every child that she takes to perform this good work for.[1]

The dame school served the purpose, as it were, of preparing youngsters for grammar school until the advent of the writing schools. The writing schools were first noted in order by the General Court of Massachusetts in 1683, which required towns of five hundred families to maintain "two gramar schooles and two wrighting schooles."[2] It seems that such schools were established to provide a more extensive background in basic skills than the dame

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[1]Elwood P. Cubberley, The History of Education, (New York: Houghton, 1920), p. 27.

[2]Pauline Holmes, A Tercentary History of the Boston Public Latin School: 1635-1935 (Cambridge: Harvard University Press, 1935), pp. 9-10.

schools were capable of doing. It should be noted, however, that writing schools were not adopted extensively throughout the colonies and in many, if not most communities, the dame schools continued to be the basic vehicle for obtaining the skills prerequisite to attending the grammar school. This was true until the establishment of public primary schools in 1818.

Consequently, the vertical organizational plan of the early schools in America consisted basically of four levels. The articulation of the four levels is presented in Figure 1.

Primary Schools and English Grammar Schools

It is indeed a curious fact that in most parts of the new country pupils were expected to be able to read prior to entering the public school. The need for such instruction at public expense became increasingly more evident until in 1818 the city of Boston appropriated $5000 for the purpose of organizing primary schools which would supplant the private dame schools. The primary schools were to admit children at four years of age and were to prepare youngsters for entry into city schools, which had come to be known as English grammar schools.[1] The primary school idea was popular and quickly spread throughout other cities and states.

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[1]Cubberley, op. cit., p. 138.

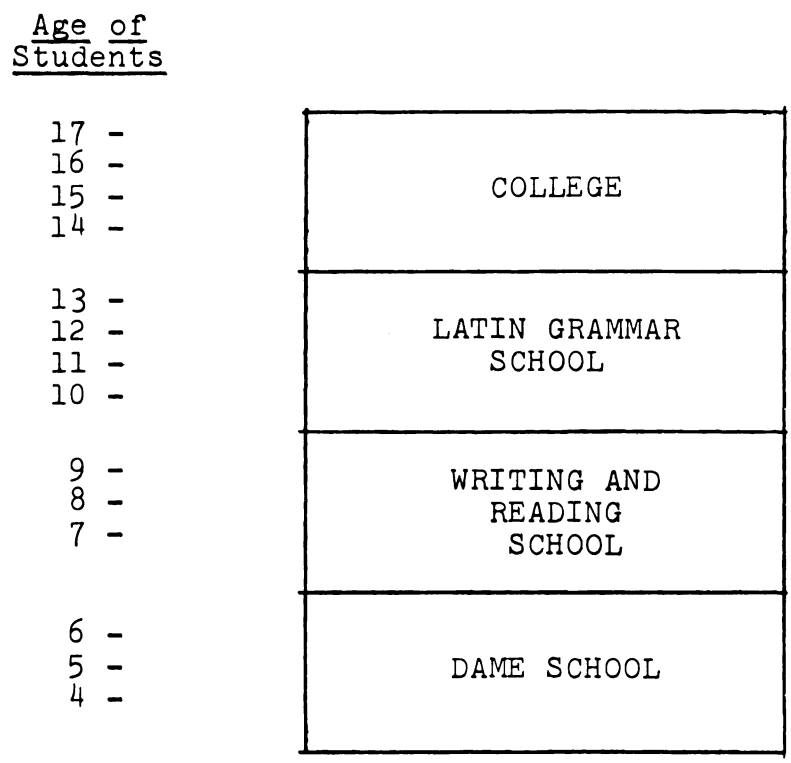

Figure 1.--The Vertical Organizational Plan of Early New England Schools.

The Academies

Another significant factor in the evolution of the American system of education was the development of the academy, which came about as a protest against the classical orientation of the Latin grammar schools. During the first half of the eighteenth century, the country witnessed rapid expansion. Shipping and shipbuilding, commerce and trade, banking and manufacturing, were developing rapidly and with such development came a need for a more practical approach to education than was being offered by the Latin schools. As a result, in 1751, Benjamin Franklin established an academy in Philadelphia for the purpose of bridging the gap from elementary education to college with a more useful course of study. Such schools became very popular and quickly supplemented the traditional Latin grammar schools. Bunker notes that in 1850 there were 6,000 academies with an enrollment of over 263,000 pupils.[1]

The High School

The first genuinely public secondary school, public in the sense that it was supported by public taxation (the academies required tuition), was established in Boston in 1821.[2] The school was to be for boys twelve years

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[1]Bunker, op. cit., p. 17.

[2]Elmer E. Brown, The Making of Our Middle Schools (third edition; New York: Longmans, 1907), pp. 297-303.

of age and older and was to consist of three years of study. It is noted that the school was not immediately called a "high school" but was first known as the English Classical School. Three years after its founding, however, it was referred to as the English High School.[1]

Barnard, in his fourth annual report to the Connecticut Legislature (1842), supported the high school concept by saying:

> This school should receive such pupils as are found qualified in the studies of the secondary (intermediate) schools, on due examination, and conduct them forward in algebra, geometry, surveying, natural, moral, and mental philosophy, political economy, the history and Constitution of Connecticut and the United States, bookkeeping, composition and drawing with reference to its use in the various kinds of business. Whatever may be the particular studies, this school should afford a higher elementary education than is now given in the district school, and at the same time, furnish an education preparatory to the pursuits of commerce, trade, manufactures, and the mechanical arts. All that is now done in this way for the children of the rich and educated should be done for the whole community, so that the poorest parent who has worthy and talented children may see the way open for them to a thorough and practical education.[2]

The idea of a free public high school for the purpose of providing at public expense what the Latin grammar had failed to provide, and what otherwise was provided only by private academies, was a popular conception and spread rapidly throughout the country. Figure 2, adapted from

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[1] Ibid.

[2] Bunker, op. cit., p. 18.

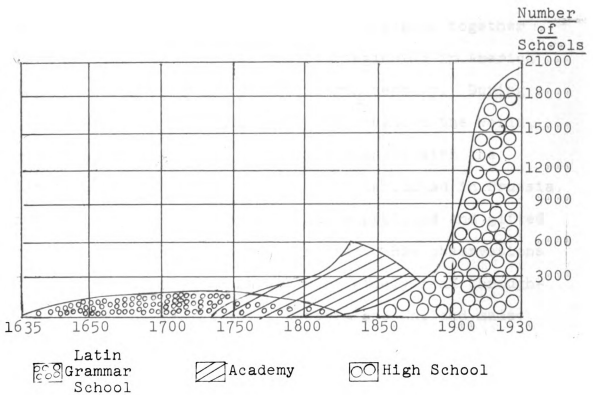

Figure 2.--The development of secondary education in America, 1635-1930.

Cubberley, indicates the development of the three types of secondary schools in America.[1]

The Evolution of the 8-4 System

The practice of segregating pupils of the same age into grades and grouping the first eight grades together to form an elementary school had its beginning in America during the early part of the nineteenth century. During this period of time, educators from throughout the world, Americans included, became grossly enchanted with the system of education which had become established in Prussia. France, in 1831, sent Victor Cousin, a profound and gifted writer, to examine the Prussian program. His observations were translated into English and were widely read throughout the United States. Italy, Austria and England made similar studies and were equally impressed with the Prussian system.

In 1836, Professor Calvin E. Stowe described the Prussian system to a convention of teachers assembled in Columbus, Ohio. He described the system as follows:

> The whole course comprises eight years and includes children from the ages of 6 till 14, and it is divided into four parts of two years each.[2]

Bunker, in examining the school codes of Germany, found that in almost every case children were required to

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[1]Cubberley, op. cit., p. 255.

[2]Bunker, op. cit., p. 36.

enter school during their sixth year of age and remain until after their first communion, if a Catholic, or until confirmation, if "evangelical." Both of these church rites generally occurred during a child's fourteenth year.[1]

Many prominent Americans became disciples of the Prussian system, including John Quincy Adams, John Pierce (Michigan's first superintendent of public instruction), Henry Barnard and Horace Mann. Mann visited the schools of Prussia in 1843 and in 1844 made a report to the Massachusetts Board of Education in which he promoted the adoption of the German system.[2]

As a result of Mann's report, John Philbrick, principal of the Quincy Grammar School in Boston, reorganized his school after the German model as described by Mann. This is considered to be the first fully graded public school in the United States.[3]

Gradually, as city and state school systems developed, the graded plans became more and more popular. As early as 1836, John R. Pierce, Michigan's newly appointed and first state superintendent of public instruction expressed his belief in the preeminence of the Prussian system of school organization.[4] Francis W. Sherman, a later superintendent of the Michigan system, stated in 1852:

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[1] Ibid., p. 37. [2] Ibid., p. 25.

[3] Cubberley, op. cit., p. 311.

[4] Bunker, op. cit., p. 22

> The system of public instruction which was intended to be established by the framers of the constitution (Michigan), the conception of the office, its province, its powers, and its duties were derived from Prussia. That system consisted of three degrees: Primary instruction, corresponding to our district schools; secondary instruction, communicated in schools called Gymnasia; and the highest instruction communicated in the universities.[1]

By the year 1870, the graded concept of education, with one teacher in charge of a group of youngsters of the same age, had become firmly established. A single elementary school had evolved, consolidating the schools which had been known by various names (writing, reading, primary, grammar, intermediate, etc.), containing either seven, eight or nine grades, with a preference for the eight year plan. Youngsters began the elementary school at the age of five, six, or seven and generally completed the course of study by age fourteen. The public high s schools, which had their beginning in Boston in 1821 had by 1870 become, in general, four year institutions.

Table 1 highlights the organizational plans found in forty-five cities in 1870.

The Evolution of the 6-6 System

The 8-4 plan of vertical organization was still in its infancy when criticisms began to be levied against it. The first to express such criticism was President Charles

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[1] Ibid., p. 23.

TABLE 1.--Organizational plans of selected schools, 1870.[1]

Cities	Length of El. School	Length of Sec. School
Boston, Mass.	9 yrs.	4 yrs.
Cambridge, Mass		4 yrs.
Chicago, Ill.	10 yrs.	4 yrs.
Cincinnati	8 yrs.	4 yrs.
Cleveland	8 yrs.	4 yrs.
Columbus	9 yrs.	4 yrs.
Dayton	9 yrs.	4 yrs.
Dubuque		3 yrs.
Fond du Lac		4 yrs.
Fort Wayne		4 yrs.
Indianapolis	8 yrs.	4 yrs.
Kingston, N. Y.	9 yrs.	3 yrs.
Louisville		4 yrs.
Lowell, Mass.		4 yrs.
Madison	8 yrs.	2 yrs.
Manchester, N. H.		4 yrs.
New Bedford, Mass.	9 yrs.	4 yrs.
Newburyport, Mass.		4 yrs.
New Brunswick, N. J.	8 yrs.	3 yrs.
New Haven	7 yrs.	3 yrs.
Newark	6 yrs.	4 yrs.
Oswego, N. Y.	9 yrs.	3 yrs.
Philadelphia	8½yrs.	4 yrs.
Portsmouth		4 yrs.
Providence	9 yrs.	4 yrs.
Rochester, N. Y.	7 yrs.	4 yrs.
Sacramento	7 yrs.	3 yrs.
Springfield, Ill.		3 yrs.
St. Louis	8 yrs.	4 yrs.
Syracuse	9 yrs.	3 yrs.
Terre Haute	8 yrs.	4 yrs.
Toledo	8 yrs.	3 yrs.
Troy, N. Y.	9 yrs.	4 yrs.
Washington, D. C.	8 yrs.	4 yrs.
Worcester, Mass.		4 yrs.

[1]Frank F. Bunker, "Reorganization of the Public School System," United States Bureau of Education Bulletin, 1916, No. 8 (Washington: U. S. Government Printing Office, 1916), p. 35.

W. Eliot of Harvard, who in 1872-73 objected to the fact that the 8-4 system had raised the entering age of college freshmen to over eighteen years.[1] In earlier years, youngsters had been able to enter college at a younger age.

Apparently President Eliot's early objections had little effect, for in 1888 and again in 1892 his concern for lowering the entrance age of college students was expressed before the National Education Association.[2] As a result of Eliot's activities, the National Education Association appointed the Committee of Ten, with Eliot as its chairman, to evaluate the country's program of secondary education. One of the committee's recommendations was that some of the courses which were taught in the high school could more profitably be included in the later years of the elementary school. An alternative suggestion was to include grades seven and eight in the secondary school, thus leaving six years instead of eight in the elementary school (the 6-6 plan).[3]

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[1]William T. Gruhn and Harl R. Douglass, The Modern Junior High School (New York: The Ronald Press Co., 1947), p. 7.

[2]Ibid.

[3]N. E. A., Report of the Committee of Ten on Secondary School Studies (New York: American Book Co., 1894), p. 3.

In 1895 the National Education Association appointed a committee to consider the problem of the standardization of college entrance requirements. The committee consisted of fourteen members representing high schools and colleges from different sections of the country and was chaired by Dr. A. F. Nightingale, superintendent of schools in Chicago. In addition to studying college entrance requirements, the committee addressed itself to the problem of the vertical organization of school grades. Its final report in 1899 stated:

> The seventh grade, rather than the ninth, is the natural turning point in the pupil's life, as the age of adolescence demands new methods and wiser direction. Six elementary and six high school, or secondary, grades form symmetrical units. . . .Statistics show that the number of students leaving school at the end of the sixth grade is comparatively small, while the number is very large at the end of the eighth grade. By the proposed change, the students in the seventh and eighth grades would gradually gain the inspiration of the high school life, and the desire to go farther in the languages and sciences which they have already begun under favorable conditions. The result would doubtless be a more closely articulated system, with a larger percentage of high school graduates.[1]

In 1907, further support was presented for the 6-6 plan by the Committee on an Equal Division of Time, which had been established by the National Education Association in 1905. This committee felt that by such a plan better teachers could be obtained, better conditions for teaching

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[1]National Education Association, Journal of Proceedings and Addresses (Los Angeles: National Education Association, 1899), p. 659.

could be produced and departmentalized instruction could be introduced.[1]

The Junior High School

In 1911 the National Education Association appointed a committee which became known as the Committee on Economy of Time, chaired by H. B. Wilson, superintendent of schools in Berkeley, California.[2] Its first report published in 1913 recommended six years of elementary education and six years of secondary education. A unique feature of their recommendation was the idea that secondary education should consist of two divisions, the first four years long and the second two years long.[3] This was perhaps the first formal recommendation made by any national group for an intermediate school, although several districts had instituted intermediate or junior high schools by that time (1913).

At the same time that various educational groups were expressing objections to the 8-4 plan and suggesting in its place a 6-6 organization, two school systems, Columbus, Ohio, and Berkeley, California, introduced the 6-3-3 organization. With its introduction, the junior high school movement was launched.

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[1]Gruhn and Douglass, op. cit., p. 12.

[2]Cubberley, op. cit., p. 344.

[3]Gruhn and Douglass, op. cit., p. 14.

The factors underlying the formation of some of the early junior high schools were often based upon expediency rather than upon what was best educationally. Berkeley, for example, moved to the 6-3-3 plan because of crowded pupil conditions and lack of certain kinds of facilities. Gradually, however, the junior high school concept became predicated upon certain assumed educational advantages, most important of which was the fact that this plan would better meet the unique social, emotional and physical needs of the early adolescent.

The 6-3-3 experiments in Columbus and Berkeley drew considerable attention and were viewed favorably across the nation. As a result of the success of the 6-3-3 system in these two cities and also due, no doubt, to the recommendation of the Committee on the Economy of Time for two divisions within the secondary school, reorganized secondary schools were introduced elsewhere.

Additional impetus was given to the movement as a result of widely publicized studies by Thorndike, Ayres and Strayer,[1] which illustrated the fact that in traditionally organized schools (the 8-4 plan) the retention of pupils from grade 8 to grade 9 was poor.

Reorganization was generally accomplished in one of two ways; providing a separate school building for grades

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[1] Ibid., p. 15.

7, 8 and 9 (6-3-3 plan) or by including grades 7 and 8 in a secondary building (6-6 plan). The latter plan frequently emulated features of the 6-3-3 plan by creating junior and senior high school divisions within the school.

Bennett reported that by the end of 1917 there were junior high schools organized in 365 school systems.[1] Briggs estimated that in 1920 there were "upwards of 800 junior high schools in the United States."[2] Both men were no doubt referring to the six-year junior-senior high school as well as the separately organized junior high school in their statistics, since in 1920 the United States Office of Education reported only 55 separately organized junior high schools, while 828 junior-senior high schools were reported.[3]

Trends in Reorganization Since 1920

Though the trend to reorganize the traditional 8-4 plan had begun before the 1920's, it was not until that decade that any significant changes in organization were

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[1]Vernon G. Bennett, The Junior High School (Baltimore, Maryland: Warwick and York, Inc., 1919), pp. 39-40.

[2]T. H. Briggs, The Junior High School (Boston: Houghton Mifflin Co., 1920), p. 60.

[3]United States Department of Health, Education and Welfare, Office of Education, Statistics of Education in the United States, 1958-59 Series, Public Secondary Schools, Number 1, Washington D. C., p. 31.

made. Reviewing Table 2, we see that in 1919-20, 93.7 per cent of all secondary schools consisted of traditional, four-year high schools, preceded by eight-year elementary schools. Ten years later, in 1929-30, this type of school represented 74.0 per cent of all secondary schools. By 1961-62 the number of four-year high schools preceded by an eight-year elementary school had dropped to include only 29.0 per cent of all secondary schools. From the data presented in Table 2, one will note that it was not until the year 1951-52 that the number of reorganized secondary schools exceeded the number of traditionally organized (8-4) high schools.

Another way of viewing the trend away from the traditional 8-4 plan of organization is to examine the number of pupils attending the various types of secondary schools. Table 3 allows such an examination and indicates that in 1919-20, 83.4 per cent of all secondary school youngsters were attending traditionally organized four-year high schools. In 1929-30 only about half of the nation's secondary school pupils were attending such schools. By 1958-59 this number had decreased to 17.5 per cent. Comparable statistics are not available for more current years.

The preceding data indicates a steady trend away from the 8-4 plan of organization and toward some form of a junior high school followed by a senior high school,

TABLE 2.--Number and per cent of public secondary schools in the United States by type, 1919-20 to 1961-62[1]

Number and Per Cent	Total	Type of School			
			Reorganized Schools		
		Traditional[2]	Junior[3]	Senior[4]	Junior-Senior[5]
1919-20					
number	14,326	13,421	55	22	828
per cent	100.0	93.7	.4	.1	5.8
1929-30					
number	22,237	14,460	1,842	648	3,287
per cent	100.0	74.0	8.3	2.9	14.8
1937-38					
number	25,057	15,523	2,372	959	6,203
per cent	100.0	61.9	9.5	3.8	24.8
1945-46					
number	24,122	13,797	2,653	1,312	6,360
per cent	100.0	57.2	11.0	5.4	26.4
1951-52					
number	23,746	10,168	3,227	1,760	8,591
per cent	100.0	42.8	13.6	7.4	36.2
1958-59					
number	24,190	6,024	4,996	3,040	10,130
per cent	100.0	24.9	20.6	12.6	41.9
1961-62					
number	24,823	7,202	6,612	4,502	6,507
per cent	100.0	29.0	26.6	18.2	26.2

[1]Statistics for the years 1919-20 to 1958-59 obtained from Public Secondary Schools, Statistics of Education in the United States, 1958-59 Series, Number 1, United States Department of Health, Education and Welfare, Office of Education, p. 31. Statistics for 1961-62, United States Department of Health, Education and Welfare, Office of Education, p. 31.

[2]Includes four-year high schools preceded by eight-year elementary schools.

[3]Includes two-year and three-year junior high schools.

[4]Includes three-year and four-year senior high schools preceded by junior high schools.

[5]Includes five-year and six-year high schools.

TABLE 3.--Number and per cent of pupils enrolled in public secondary schools in the United States by type, 1919-20 to 1958-59[1]

Number and Per Cent	Total	Type of School			
		Traditional[2]	Reorganized Schools		
			Junior[3]	Senior[4]	Junior-Senior[5]
1919-20					
number	1,999,106	1,667,480	37,331	17,791	276,504
per cent	100.0	83.4	1.9	.9	13.8
1929-30					
number	5,212,179	2,652,271	1,036,919	543,813	979,176
per cent	100.0	50.9	19.9	10.4	18.8
1937-38					
number	7,423,573	3,230,708	1,408,584	972,218	1,812,063
per cent	100.0	43.5	19.0	13.1	24.4
1945-46					
number	6,840,799	2,632,021	1,274,523	1,148,632	1,785,623
per cent	100.0	38.5	18.6	16.8	26.1
1951-52					
number	7,688,919	1,937,210	1,526,996	1,528,006	2,696,707
per cent	100.0	25.2	19.8	19.9	35.1
1958-59					
number	11,044,000	1,939,000	2,749,000	2,819,000	3,537,000
per cent	100.0	17.5	25.0	25.5	32.0

[1]Public Secondary Schools, Statistics of Education in the United States, 1958-59 Series, Number 1, United States Department of Health, Education and Welfare, Office of Education, p. 43. (Statistics not available on enrollment for 1961-62).

[2]Includes four-year high schools preceded by eight-year elementary schools.

[3]Includes two-year and three-year junior high schools.

[4]Includes three-year and four-year senior high schools preceded by junior high schools.

[5]Includes five-year and six-year high schools.

or toward the combined junior-senior high school. During the decade 1919-20 to 1929-30 more youngsters attended combined junior-senior high schools, followed by senior high schools, than separately organized junior high schools followed by senior high schools. Since that time, however, the separately organized junior and senior high schools have proven capable of accomodating more of the youngsters who attend reorganized schools. The trend has been for smaller communities to establish combined junior-senior high schools and for larger communities to establish separate secondary units. Consequently, it was not until 1961-62 that the actual number of separately organized junior and senior high school buildings exceeded the number of combined junior-senior high school buildings.

What Grades Are Included in Junior High Schools?

A further question remains: namely, what grades are included in the separately organized junior high schools? Koos reports, based on a study of 1,372 city school systems in 1948, the following frequencies: 6-3-3 plan, 35 per cent; 8-4 plan, 23 per cent; 6-6 plan, 16 per cent; 6-2-4 plan, 12 per cent; 6-3-3-2 plan, four per cent; 7-5 plan, three per cent; 5-3-4 plan, two per cent; 6-2-4-2 plan, one per cent; 7-2-3 plan, one per cent; "other," three per cent.[1]

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[1]Leonard V. Koos, "The Junior High School After a Half-Century," The School Review, No. 61 (October, 1953), p. 398.

Gaumnitz reports that in 1952, 74.2 per cent of all junior high schools in the United States consisted of grades 7, 8 and 9; 19.4 per cent consisted of grades 7 and 8; 4.6 per cent consisted of grades 7 through 10 and 1.7 per cent were organized to include other grade groupings.[1]

Tomkins, in 1957, surveyed all schools which had previously been reported to be two-year junior high schools. Of the 750 such schools, replies were received from 523. Some of the 523 replying were no longer two-year schools, since their structures had been changed. Of those schools that remained, 332 included grades 7 and 8, and 30 included grades 6, 7 and 8 (Tomkins called these schools two-year schools because "grade 6 in this type of school more characteristically belongs to the elementary school.") Fifteen included grades 8 and 9, one included grades 9 and 10. On the basis of the data presented by Tomkins, it is surprising to note that in several states the two-year junior high school is the most popular type. Montana reported that 79 per cent of their junior high schools were of a two-year duration; Wyoming, 78 per cent; New

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[1]Walter H. Gaumnitz et al., "Supplementary Statistics of Public Secondary Schools, 1951-52, with Special Emphasis upon Junior and Junior-Senior High Schools," United States Office of Education Circular Number 423 (Washington: U.S. Government Printing Office, 1955), p. 4.

Hampshire, 75 per cent; Illinois, 66 per cent; Idaho, 65 per cent; Indiana, 58 per cent; Oregon, 50 per cent.[1]

At the present time, as has been demonstrated, a wide variety of organizational plans exist. The 8-4 plan is definitely on the decline, and there appears to be an increasing amount of interest shown in plans which incorporate some form of junior high school, the 6-3-3 plan being most popular.

This increase in interest in the junior high school is exemplified in the visibility it receives in journals, monographs, pamphlets, books, etc. Stricklund reports that between 1935 and 1953 the number of listings under "junior high school" in the Education Index averaged 18 entries per year. In the 1957-59 volume there were 48 entries; and in the 1959-61 volume there were 68 entries.[2]

Rasmussen indicates that the 1947-50 volume of the Education Index listed six times as many entries under "elementary education" as under "junior high school." The 1953-55 volume had five times as many elementary

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[1]Ellsworth Tompkins and Virginia Roe, "The Two-Year Junior High School," NASSP Bulletin, Volume 41, pp. 27-41.

[2]Virgil E. Stricklund, "The Role and Significance of the Junior High School in the Total School Program," NASSP Bulletin, Volume 46, pp. 69-77.

entries as junior high entries; the 1959-61 volume having only twice as many.[1]

Summary

The preceding sections have attempted to portray, in a sequential way, the various antecedents of our present system of public education in America. As has been demonstrated, society has witnessed numerous plans for organizing schools for the education of young people. Most have risen only to fade into oblivion; even their names have been forgotten. All, however, have left behind certain ideas, certain concepts, which have been gradually amalgamated into the present system of education found in America. In a sense, then, our present system is a product of the past and cannot be adequately understood apart from it.

Factors Which Affect Pupil Adjustment

A review of the literature reveals that many factors are related to a youngster's personal-social adjustment. Menninger claims that

> . . . the school, for better or for worse, is second only to the home in its influence on the development of a child's personality. . . .In every instance the school continues to shape the plastic immature personality that comes into its doors at the age of five or six. The teacher next to the father and mother, has a greater responsibility and opportunity

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[1]Glen R. Rasmussen, "The Junior High School--Weakest Rung in the Educational Ladder?" NASSP Bulletin, Volume 46, pp. 63-69.

to facilitate the development of good mental health of the child than any other person.[1]

Personal-Social Adjustment Related to Sex

Bonnie administered the California Test of Personality to thirty-eight elementary boys and forty-four elementary girls to determine whether or not personal-social adjustment is related to sex. Bonnie concluded that girls have a slight edge over boys in attaining desirable personal and social traits, although a significant difference was found in only one trait, social skills.[2] A similar study by Valentine corroborated the results of Bonnie's study.[3]

Kratoliva studied the personal-social adjustment of a sample of fourth, fifth and sixth graders in Cleveland, Ohio. A general difference was found in adjustment between boys and girls; girls being better adjusted than boys.[4]

Using the California Social Adjustment Profile Test, Clark studied the adjustment of 678 pupils in grades seven and eight and 334 pupils in grades four to eight, to

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[1]William C. Menninger, "Mental Health in Our Schools," Educational Leadership, Volume 7, 1950, p. 511.

[2]Merl E. Bonnie, "Sex Differences in Social Success and Personality Traits," Child Development, Volume 15 (March, 1944), pp. 63-79.

[3]B. Valentine, "An Investigation of the Problems of the Seniors of a Small High School in Arizona" (unpublished Master's dissertation, University of Southern California, 1942).

[4]Julia H. Kratoliva, "Appraisal of Character and Personality at Robert Fulton School" (unpublished Master's dissertation, Western Reserve University, May, 1941).

determine differences that might exist due to sex. Statistically significant differences were found between boys and girls in both groups in regard to anti-social tendencies, knowledge of social standards and school relations.[1]

Socio-Economic Status

Shuttlesworth, using the California Test of Personality, studied 234 seventh grade pupils in Austin, Texas, and found that socio-economic status was significantly related to personal-social adjustment. Among the same sample, socio-economic status was also found to be related to achievement and intelligence.[2]

Sewell and Haller studied the relationship between social status and personality adjustment among 1,462 eighth graders in Wisconsin, employing the California Test of Personality as a measure of personality adjustment and the occupation of the child's father as an indication of social status. The two factors were found to be positively and significantly correlated.[3]

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[1]W. W. Clark, "Significant Differences in Boy-Girl Adjustment" (unpublished paper, Los Angeles County Superintendent of Schools, Division of Administrative Research, 1938).

[2]Reba Hudson Shuttlesworth, "The Relationship of Socio-Economic Status to the Measured Adjustment of Seventh Grade Students in Johnston Junior High School, Houston, Texas, for the year of 1951-52," NASSP Bulletin, February, 1962, pp. 289-293.

[3]William H. Sewell and Archie O. Haller, "Social Status and the Personality Adjustment of the Child," Sociometry, Volume 19 (June, 1956), pp. 114-125.

Rothman found no relationship between socio-economic status and patterns of purpose, aspiration, attitudes, interest, action, feeling, thinking and belief among junior high youngsters.[1]

Place of Residence

Mangus conducted a study using the California Test of Personality to determine the effect of farm living on personality adjustment. Three groups of youngsters were included in the study: 371 pupils living on farms; 573 pupils living in rural areas, but not on farms; 285 pupils living in a city of about 17,000 population. Little difference was found in personality adjustment between rural farm children and rural non-farm children. Both groups of rural children, however, scored significantly higher than the urban group in most areas of adjustment. They were more self-reliant; they had a greater sense of belonging, greater freedom from withdrawing tendencies and nervous symptoms. They also rated higher in social skills and in school and community relations.[2] Stott

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[1]Philip Rothman, "Expressed Values of Selected Junior High School Students and the Relationship of These Values to Socio-Economic Status," NASSP Bulletin, February, 1962, pp. 277-278.

[2]A. R. Mangus, "Personality Adjustment of Rural and Urban Children," American Sociological Review, Volume 13 (October, 1948), pp. 566-575.

reported similar results in a study of 806 adolescents in Nebraska.[1]

Matlin conducted a study to determine the social adjustment of transient fifth and sixth grade pupils as opposed to pupils who had spent most of their school life in the same school environment. It was concluded that transient pupils were less well adjusted than non-transient pupils.[2]

General Educational Practices

Adams studied the practices of forty-two teachers and concluded that many teaching practices cause inferiority feelings and fears in children.[3] Similar results were reported by Whitley.[4]

Sandin studied the emotional and social adjustment of regularly promoted and non-promoted pupils and

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[1]L. H. Stott, "Some Environmental Factors in Relation to the Personality Adjustments of Rural Children," Rural Sociology, 1945, pp. 394-403.

[2]John P. Matlin, "The Social Acceptance and Adjustment in the Classroom of Fifth and Sixth Grade Children Analyzed on the Basis of Transiency in the School" (unpublished Master's dissertation, Sacramento State College, Sacramento, California, 1954).

[3]Clifford R. Adams, "Classroom Practices and Personality Adjustments of Children," Understanding the Child, Volume 13 (June, 1944), pp. 10-12.

[4]Harold E. Whitley, "Mental Health Problems in the Classroom," Understanding the Child, Volume 23 (1954), pp. 98-103.

concluded that non-promotion was associated with many symptoms of poor adjustment.[1]

An experiment by Lantz revealed that success experiences resulted in better future performance and better personal-social adjustment than did failure experiences.[2]

Zander discovered that artificially induced frustration caused poor personal-social adjustment among fifth and sixth graders.[3]

Kaplan and O'Dea surveyed the practices of sixty-seven experienced teachers to determine what educational factors, if any, contributed to poor personal-social adjustment on the part of pupils. It was concluded that the home had the greatest influence on such development, but that various school factors also played a part. Such things as:

1. Failure to recognize individual differences.
2. Inadequate playground materials.
3. Inability to participate in desired activities because of finance.

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[1]Adolph A. Sandin, "Social and Emotional Adjustments of Regularly Promoted and Non-Promoted Pupils," Child Development Monographs, Number 3 (New York: Teachers College, Columbia, University, 1944), pp. 1-142.

[2]Beatrice Lantz, "Some Dynamic Aspects of Success and Failure," Psychological Monographs, Volume 59, No. 1 (1945), pp. 1-40.

[3]Alvin F. Zander, "A Study of Experimental Frustration," Psychological Monographs, Volume 56, Number 32, American Psychological Association (1944), pp. 1-38.

4. Failure of report cards to indicate a child's potentialities.
5. Labeling students as delinquent or lower social class.[1]

Anderson classified a sample of second, fourth and sixth grade teachers according to their demonstrated classroom behavior as either dominative or integrative teachers. Teachers with high mental hygiene characteristics (integrative teachers) fostered personality characteristics of spontaneity, initiative and social contribution to a greater extent than did teachers with less high mental hygiene characteristics (dominative teachers).[2]

Musselman attempted to relate certain life circumstances with the expressed problems of seventh and eighth graders. It was found that children who were Negroes, who came from broken homes, who had poor church attendance records, who had low levels of achievement, who had low mental ability, who had low reading ability, who had undesirable characteristics of student behavior as expressed by teachers and who had high rates of truancy expressed a

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[1]Louis Kaplan and J. David O'Dea, "Mental Health Hazards in School," Educational Leadership, Volume 10 (1953) pp. 351-354.

[2]Harold Anderson and Others, Studies of Teachers' Classroom Personalities, III; Follow-Up Studies of the Effects of Dominative and Integrative Contacts on Children's Behavior, Stanford University (1945), p. 1-156.

greater number of problems on the SRA Youth Inventory than did other children.[1]

Davidson and Lang studied fourth, fifth and sixth graders in the New York City school system and found that their self-concepts were directly related to their perceptions of how their teachers felt about them.[2]

Flanders and Havumaki studied the effects of positive pupil-teacher interaction on the socio-metric choices of children. It was discovered that when the number of teacher-pupil contacts involving praise increased, the pupil's acceptance by his peers also increased.[3]

Kounin and Gump studied the effects of punitive and non-punitive teachers upon children's behavior. It was revealed that children who have punitive teachers manifest more aggression in their misconduct, are more unsettled and confused about misconduct and are less concerned with

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[1]Donald L. Musselman, "Patterns of Circumstances Related to Problems Expressed by Seventh and Eighth Grade Pupils," NASSP, Volume 46 (University of Colorado, 1958), pp. 264-265.

[2]Helen H. Davidson and Gerhard Lang, "Children's Perceptions of Their Teachers' Feelings Toward Them Related to Self-Perception, School Achievement and Behavior," Journal of Experimental Education, Volume 29 (1960), pp. 107-118.

[3]Ned A. Flanders and Sulo Havumaki, "The Effect of Teacher-Pupil Contacts Involving Praise On the Sociometric Choices of Students," Journal of Education Psychology, Volume 51 (April, 1960), pp. 65-68.

learning and school values than are children with non-punitive teachers.[1]

Livingston administered the SRA Youth Inventory to two groups of fifth grade pupils. One group of 1223 pupils had experienced self-contained classrooms in grades one and two and semi-departmentalization in grades three through five; the second group of 831 pupils had experienced semi-departmentalization in all of the first five grades. It was concluded that semi-departmentalization does not hinder pupils' personal and social adjustment.[2]

Triplett made a comparative study of well-adjusted and poorly adjusted junior high school children in Waco, Texas. She concluded that the poor adjustment evolved from a variety of causes; insecurity at home, family tensions, over-indulgence of parents, extreme poverty, inferiority feelings from physical handicaps, appearance, failure in school, unfavorable comparison with siblings or classmates, low intelligence and parental attitudes of rejection, deprivation, over-protection or exploitation.[3]

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[1]Jacob S. Kounin and Paul V. Gump, "The Comparative Influence of Punitive and Non-Punitive Teachers upon Children's Concepts of School Misconduct," Journal of Educational Psychology, Volume 52 (1961), pp. 44-49.

[2]Hugh A. Livingston, "Does Departmental Organization Affect Children's Adjustment?" Elementary School Journal, Volume 61 (1961), pp. 217-220.

[3]Ruth Triplett, "A Comparative Study of Well Adjusted and Poorly Adjusted Children in a Junior High School" (unpublished Master's dissertation, University of Texas, August, 1964).

Brownstein conducted a study of sixth graders employing the California Test of Personality to determine the effects of various factors on social adjustment. He concluded that:

1. Girls were better adjusted than boys.
2. Older sixth graders were more poorly adjusted than younger sixth graders.
3. Height and weight were not related to social adjustment.
4. Ordinal position in the family was not related to social adjustment.
5. The only child did not tend to be more poorly adjusted than children who came from families with more than one child.
6. Well adjusted children tended to come from more stable families than did poorly adjusted children.
7. Social adjustment was related to reading ability. Poor readers tended to operate at lower levels of social adjustment.
8. Social adjustment was related to intelligence. Average or above average intelligence seemed to be related to good social adjustment.[1]

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[1]Jewell Brown Brownstein,"A Study of Children with Contrasting Records of Social Adjustment in Relation to Certain School, Home, and Community Factors"(unpublished Doctoral dissertation, Indiana University, 1958).

Nielson identified two groups of fifty fifth grade pupils in New Jersey. One group was taught by traditional or formal methods, while the other group was exposed to informal methods with a great deal of individual assistance by the teacher and a conscious attempt to develop desirable social attitudes and competencies. At the end of the experimental period no differences were observed between the groups in regard to academic ability as assessed by standardized achievement tests. The California Test of Personality, however, revealed a significant difference between the two groups in regard to the self-adjustment section of the test; the pupils exposed to informal methods indicating better adjustment. No significant differences were found between the two groups in the social adjustment section of the test.[1]

Summary

The foregoing material seems to indicate that certain factors play a part in determining the nature of a pupil's personal-social adjustment, while other factors appear to be unrelated. In general it seems that:

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[1]Esther W. Nielson, "An Evaluation of Two Methods of Teaching the Social Studies As Measured by the California Test of Personality and the National Achievement Social Studies Test" (unpublished Master's dissertation, New Jersey State Teachers College, Glassboro, 1952).

1. Girls are better adjusted than boys.
2. Socio-economic status is related to adjustment, although not consistently.
3. Factors such as place of residence, frequency of moves, promotion or non-promotion, pupil-teacher relationships, and various life circumstances affect the personal-social adjustment of pupils.

The Effectiveness of Various Plans

One of the earliest studies comparing the effectiveness of alternative plans of vertical organization was reported by Stetson in 1917.[1] Two groups of pupils in Grand Rapids, Michigan, one prepared in eight-grade elementary schools and the other in a junior high school, were compared on the basis of high school achievement in English and mathematics. No significant differences between the groups were found. A second study by Stetson was reported in the following year (1918).[2] This study demonstrated that with the advent of a junior high school in Grand Rapids, Michigan, in 1911-12, retention of pupils

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[1]Paul C. Stetson, "Statistical Study of the Scholastic Records of 404 Junior and Non-Junior High School Students," School Review, Volume 25 (November, 1917), pp. 617-636.

[2]Paul C. Stetson, "A Statistical Study of the Junior High School from the Point of View of Enrollment," School Review, Volume 26 (April, 1918), pp. 233-245.

from grades eight to nine improved. The retention rates for several years preceding and following the establishment of a junior high school were as follows:

Year	Per Cent Retention
1907-08	67.1
1908-09	60.2
1909-10	65.0
1910-11	72.8
1911-12	75.0
1912-13	83.7
1913-14	86.3
1914-15	103.0

Childs studied the reorganization movement in the Indiana public schools and concluded that differences in retention rates were insignificant between traditionally organized schools and those that had been reorganized.[1]

In 1917 Briggs conducted a study of 402 pupils who had attended junior high school (6-3-3) and 413 pupils, similar in economic status, who had attended the traditional eight-grade elementary school.[2] It was found that 65.9 per cent of the youngsters who had attended the elementary school entered grade nine, while 87.2 per cent of those who had attended the junior high school entered grade

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[1]H. G. Childs, An Investigation of Certain Phases of the Reorganization Movement in the Grammar Grades of Indiana Public Schools (Fort Wayne, Indiana: Fort Wayne Printing Co., 1918).

[2]Briggs, op. cit., pp. 310-311.

nine. In the tenth grade 55.8 per cent of those who had attended the elementary school remained, while 65.5 per cent of the junior high group were still in attendance.

Briggs, citing a study in Cuba, New York, observed that the average mark in grade nine rose from 73.2 to 84.8 following reorganization.[1]

Pratt surveyed the superintendents of schools in all cities with a population of 100,000 or more.[2] Sixty-eight such cities were contacted, with sixty replying. It was the opinion of the superintendents replying that junior high schools retained pupils in school more successfully than did the traditional eight grade elementary schools. They indicated, further, that the cost of maintaining a reorganized district exceeded that of maintaining a traditionally organized district, that few teachers were being prepared specifically for teaching in a junior high school and most educators were favorably impressed with the junior high school concept.

A study reported in 1923 by the Rochester, New York, board of education found that the holding power of their

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[1] Ibid., p. 313.

[2] O. C. Pratt, "Status of the Junior High School," School Review, Volume 30 (1922), pp. 663-670.

school system increased after the opening of their junior high school.[1]

In 1924 Porter compared the achievement of 200 seventh and eighth grade junior high school pupils with 200 seventh and eighth grade pupils in the 8-4 plan in Minneapolis.[2] The two groups were equated on the basis of sex and intelligence. Achievement tests revealed no significant differences between the groups in reading, spelling, arithmetic, geography and history. Porter's study also compared the senior high school grades of 100 pupils who had attended junior high schools with 100 pupils who had attended elementary schools in grades seven and eight. No significant differences were found.

Bruner studied a typical American community of 25,000 people over a period of five years and found that adoption of junior high schools increased high school retention rates significantly.[3] A study by Fritz showed

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[1]The Junior High Schools of Rochester (Rochester, New York: Board of Education), 1923.

[2]W. A. Porter, "A Comparative Study of the Scholastic Achievements Made by Junior and Non-Junior High School Pupils in Minneapolis, Minnesota" (unpublished Master's dissertation, University of Minnesota, 1924).

[3]H. B. Bruner, The Junior High School at Work, Contributions to Education Number 177, New York, Teachers College, Columbia University, 1925.

that reorganization of the 8-4 plan tended to delay withdrawal from school by one year.[1]

A 1928 study by Powers contained some unusual findings.[2] All Minneapolis youngsters in grades seven, eight and nine were tested in regard to competence in reading, arithmetic, geography and history. Students attending non-junior high schools scored significantly higher than did those youngsters attending junior high schools. Powers found further that: (1) Retention rates from grade seven to grade eight were better in junior high schools. (2) Retention rates from grade eight to grade nine were better in non-junior high schools. (3) Junior high schools retained fewer pupils beyond compulsory attendance age.

Holloway found marked increases in retention rates in the state of Kentucky among schools that had adopted the 6-3-3 plan.[3]

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[1]R. A. Fritz, "An Evaluation of Two Special Purposes of the Junior High School: Economy of Time and Bridging the Gap," University of Iowa Studies in Education, Number 143, 1927.

[2]J. O. Powers, "Is the Junior High School Realizing Its Declared Objectives?" School Life, Volume 14 (1928), pp. 76-79.

[3]J. B. Holloway, "A Study of the Reorganization of the Public School System of Kentucky in Accordance with the Junior High School Idea" (unpublished Master's dissertation, Department of Education, University of Chicago, 1928), p. 142.

In a study of the city of Wabash, Carpenter found that failure rates decreased and that holding power increased with the advent of junior high schools.[1]

Landsittel studied 371 pairs of university freshmen at Ohio State University. One youngster from each pair had attended a 6-3-3 school; the other had attended an 8-4 school.[2] The members of each pair were equated on the basis of intelligence, age, size of school and type of community from which they came. The findings revealed that the 8-4 group showed slightly better results in high school achievement and also during the first year of college.

Clem studied the achievement levels of tenth grade youngsters who had come from elementary schools or junior high schools in Central High School, Syracuse, New York.[3] Pupils who had attended the traditional elementary schools earned higher grades in all subjects except English than did those youngsters who had attended junior high schools.

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[1]L. H. Carpenter, "A Study of the Effects of the Junior High School Organization of Wabash, Indiana" (unpublished Master's dissertation, Department of Education, University of Chicago, 1928), p. 85.

[2]F. C. Landsittel, "Scholastic Accomplishment in the Junior High School," Journal of Educational Research, Volume 18 (1928), pp. 127-135.

[3]O. M. Clem and H. M. Roberts, "The Tenth Year Progress of Junior High School and Elementary School Pupils," Journal of Educational Research, Volume 21 (1930), pp. 288-296.

Twice as many failures in algebra were found among pupils who had attended junior high schools as were found among pupils who had attended eight-grade elementary schools.

Mills studied six Massachusetts communities, three organized on the 6-3-3 plan and three on the 8-4 plan. The communities were matched according to size and type. He found that in junior high schools pupils devoted less time to fundamentals but did as well on achievement tests as did pupils who attended schools organized on the 8-4 plan.[1]

Beatley compared the achievement of seventh, eighth and ninth grade pupils in three New England schools organized on the 8-4 plan with three similar schools organized on the 6-3-3 plan.[2] Even though the youngsters who had attended the 6-3-3 plan had devoted less time to the subjects measured by the tests and had spent more time on other subjects such as social studies, science, fine and practical arts, and extra-curricular activities, they did as well as the pupils who had attended traditionally organized schools.

Spaulding, Frederick and Koos made a comprehensive study comparing the characteristics and advantages of

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[1]H. C. Mills,"The Comparative Efficiency of the 8-4 and 6-3-3 Systems of Schools"(unpublished Doctoral dissertation, Harvard University, 1931).

[2]Bancroft Beatley,"Achievement in the Junior High School,"Harvard Studies in Education, Number 18 (Cambridge, Massechusetts: Harvard University Press, 1932).

reorganized schools with schools maintained under the 8-4 plan.[1] Over 600 schools throughout the United States were included in the study. Most of the reorganized schools were of the 6-3-3 or 6-6 variety. The findings were as follows:

1. In reorganized plans there was better articulation with the high school unit.
2. Reorganized schools had made more systematic arrangements for guidance.
3. Reorganized schools exhibited greater flexibility of program and more extensive extra-curricular offerings.
4. In reorganized schools there were smaller class sizes and longer class periods.
5. Teachers in grades seven and eight were found to be better qualified in reorganized plans.
6. Reorganized schools tended to devote more time and attention to the improvement of curriculum.
7. Reorganized schools tended to have poorer articulation between grades six and seven.
8. The qualifications of teachers in grades nine through twelve tended to be lower in reorganized schools.

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[1]Francis T. Spaulding, O. I. Frederick and Leonard V. Koos, "Reorganizationof Secondary Education," United States Office of Education Bulletin No. 17 (Washington: U. S. Government Printing Office, 1932).

9. No differences were found between 8-4 schools and reorganized schools in regard to instructional equipment available, provision for individual differences or general supervision of instruction.

Other general factors revealed by the study were:

1. The effectiveness of all schools studied, regardless of organizational type, was related to the number of pupils enrolled; large schools being more effective than small schools.
2. Six-year junior-senior high schools and undivided six-year schools were superior to schools organized under other plans of reorganization.
3. Undivided six-year high schools tended to neglect the lower grade levels. Consequently, the junior-senior high school was viewed to be superior to undivided six-year high schools.

The writers summarize by saying:

> When schools of the various types are rated in terms of their internal organization, the undivided six-year schools and the junior-senior high schools organized on a 6-3-3 basis [last six grades in one building, but divided] stand out above all other types. The separate three-year junior and senior high schools seem to have whatever advantage they obtain largely, though not entirely, to the size of their enrollments. Unreorganized schools prove superior in comprehensiveness of organization to the two-year and four-year reorganized schools; they are unsuccessful, however, in achieving a consistency of organization comparable to that of the reorganized schools.[1]

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[1] Ibid., p. 119.

He adds,

> The mental and emotional outcomes of complex large-school groupings and schemes of organization by which relatively young pupils are thrown into contact with pupils who are relatively mature have not been given any immediate consideration.[1]

In 1935 Smith studied four groups of pupils to determine the efficiency of the junior high school compared with schools organized in other patterns.[2] Four groups of pupils were studied: pupils from a junior high school (grades seven, eight and nine), pupils from four nine-year elementary schools, pupils from eleven eight-year elementary schools and pupils from three six-year secondary schools. Smith concluded, on the basis of the results of the Stanford Advanced Examination (an achievement test), that the six-year secondary school was the most efficient and that the eight-year elementary schools were the least efficient. His conclusion, however, is open to criticism since I. Q.'s were known to be higher in the reorganized schools which were included in the study than in the traditionally organized schools.

An additional feature of Smith's study was the attempt to assess differences in character traits between high

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[1] Ibid., p. 248.

[2] H. P. Smith, "The Relative Efficiency of Junior High School vs. the Conventional 8-Grade Type of School," Journal of Educational Research, Volume 29 (1935), pp. 276-280.

school pupils who had attended either an eight-grade elementary or a junior high school.[1] To do so, teachers were asked to rate pupils on selected character traits. High school youngsters who had attended junior high schools were found to rate higher in industry, initiative, reliability, cooperation and leadership than did youngsters who had attended eight-year elementary schools.

Farris, in a 1941 issue of the California Journal of Education, promoted a seven-year elementary school and a five-year high school.[2] It was stated that ninety per cent of the valid objections to the six-year secondary school are removed when the seventh grade is not included, since most objections are related to associating immature seventh graders with older youngsters.

A study published by Koos in 1943 judged the four-year junior high school to be superior to the three-year junior high school.[3] Controlling the size of schools, Koos compared the quality of seventeen four-year junior high schools and thirty-four three-year schools. Information was was obtained from interviews and questionnaires.

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[1] Ibid.

[2] L. P. Farris, "Compensating Values of a Five-Year School," California Journal of Secondary Education, Volume 16 (December, 1941), pp. 470-472.

[3] Leonard V. Koos, "The Superiority of the Four-Year Junior High School," The School Review, Volume 51 (September, 1943), pp. 397-407.

He concluded that four-year schools were better in terms of; broader programs of studies, more extensive extra-curricular programs, better class schedules based upon "current theory and practice," better prepared teaching staff, and better housing and facilities. A comprehensive second study by Koos, published in 1946, judged the 6-4-4 plan to be superior to the 8-4 plan from the standpoint of curriculum, leadership and quality of teaching staff.[1]

In 1953 the Michigan Secondary School Principals Association became concerned with the problems of growing school populations, stretched financial budgets and crowded buildings.[2] Anticipating an increase in the amount of school construction, the association set out to determine what organizational structure was best. After a review of the information that was available, the group recommended that schools be constructed to house the 6-3-3 organizational plan.

In 1954 Bonar and Huston claimed that the needs of adolescents were being neglected in many six-year secondary schools.[3]

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[1]Leonard V. Koos, Integrating High School and College: the Six-Four-Four Plan at Work (New York: Harper, 1946).

[2]"Meeting Adolescent Needs Through School Organization," NASSP Bulletin, Volume 37 (1953), pp. 53-56. (Reprinted from the Bulletin of the Michigan Secondary School Association)

[3]Carl F. Bonar and P. W. Huston, "Recognition of the Variation of Maturity of Pupils in Six Year High

In 1955 the Report of the National Conference on Junior High Schools claimed, "There will be modifications in the present educational plan [organizational plan] to meet future needs."[1] Some of these will be 6-4-2, 6-4-4 and 6-2-5.

Lentz points up the fact that little is known about what is the best plan for grouping grades.[2] Concerning the 6-3-3 plan, he states, "Research on a functional operational level is needed to determine whether there is any justification for a 6-3-3 organization other than to provide adequate housing."[3]

A study by Spivak in an underprivileged area of Newark, New Jersey, revealed that seventh and eighth graders did significantly better in self-contained classrooms than in departmentalized classrooms in regard to academic achievement, number of friends, number of problems and number of times sent to the office for advice and

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Schools," National Association of Secondary School Principals Bulletin, Volume 38 (October, 1954), pp. 108-116.

[1]Walter H. Gaumnitz, Strengths and Weaknesses of the Junior High School, Report of the National Conference on Junior High Schools, United States Office of Education Circular, Number 441 (Washington D. C.: U. S. Government Printing Office, February, 1955), p. 2.

[2]Donald W. Lentz, "History and Development of the Junior High," Teachers College Record, Volume 57 (May, 1956), pp. 522-530.

[3]Ibid.

correction.[1] The study seems to lend some support to the value of the traditionally organized 8-4 system.

Wattenberg claims that the traditionally organized four-year high school creates problems.[2] He states that, "The late-maturing boys may appear in the halls as bewildered children moving aimlessly among giants." He goes on to state that the social life and physical activities of the school are geared for youngsters who have reached adolescence; that class procedures and student-teacher relationships are designed for the mature pupils. Consequently, ". . . the immature minority may be allowed to stay lost."

The National Education Association reported in 1958 that,

> Too little research is available on adolescent psychology and junior high school education. Literature on the subject is based largely on opinion. . . .The junior high school has never been fully accepted, either in theory or in practice.[3]

Howard states, ". . . at this point [1959], there seems to be little, if any, evidence to prove that one type of organization is superior to another."[4] He

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[1]Monroe Spivak, "Departmental or Self-Contained Seventh and Eighth Grade Classes," NASSP Bulletin (February, 1962).

[2]William W. Wattenberg, "Preadolescents in the Junior High," Educational Leadership, Volume 14 (May, 1957), pp. 473-477.

[3]The Junior High School, NEA Research Memo (November, 1958).

[4]Alvin W. Howard, "Which Years in Junior High?" Clearing House, Volume 33 (March, 1959), pp. 405-408.

suggests that the reasons which gave rise to the 6-3-3 plan are no longer valid. In fact, increasing pressures and restrictions by states and colleges on grade nine are again making grade nine, in essence, a part of the senior high school. Some districts believe that the ninth grade belongs in the high school where the four-year course of study can be carried out. This and other factors "has caused many people to feel that more satisfying results might be obtained with an intermediate school composed of grades seven and eight or six, seven and eight." Howard concludes that the best plan appears to be the one which best suits the needs of the individual district.

In 1959 Rose studied 100 pupils attending two-year junior high schools and 100 pupils attending three-year schools in the state of Indiana to determine the relative effectiveness of the two types of schools.[1] His conclusions, based upon the administration of an evaluative instrument developed by himself, were that by-in-large, three-year schools were more effective than two-year schools. However, no significant differences were found between youngsters representing the two types of schools in regard to achievement in mathematics and reading (the

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[1]Lowell Curtis Rose, "An Appraisal and Comparison of the Educational Potential and Effectiveness of Two-Year and Three-Year Junior High Schools" (unpublished Doctoral dissertation, Purdue University, Lafayette, Indiana, 1959).

only part used) as measured by the sequential Tests of Educational Progress. Students from the two-year schools perceived more problems on the Mooney Problem Check List than did students from the three-year school.

Reece administered the Iowa Tests of Educational Development and the California Reading Achievement Tests to 1,010 ninth grade pupils in a single school system who attended either a three-year junior high school (grades seven, eight and nine) or a six-year secondary school.[1] In addition he submitted opinionnaires to selected pupils in grades seven, eight and nine and their parents and teachers. The following conclusions were drawn: (1) There were no significant differences between the two groups of pupils in regard to achievement on the Iowa Tests of Educational Development or the California Reading Achievement Tests. (2) Parents, pupils and teachers indicated that they preferred the 6-3-3 plan. (3) Ninth graders in the 6-3-3 plan felt that they were a more important part of the school than did ninth graders in the six-year secondary school. (4) Ninth graders in the six-year secondary school indicated more pride in their school than did ninth graders in the 6-3-3 plan. (5) There was greater participation and availability of activities

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[1]Leonard Jerald Reece, "An Evaluation of Two Types of Vertical School Organization in a Selected School System (unpublished Doctoral dissertation, University of Nebraska Teachers College, 1960).

for seventh, eighth and ninth graders in the separate junior high school than in the six-year secondary school.

A study by Shannon indicated that pupils have a greater opportunity to be accepting of themselves and to perceived othersin self-contained classrooms than in either departmental or block-of-time departmental organizations.[1]

Hull, in summarizing the available research claimed that seventh and eighth grades should be organized more like elementary schools than like departmentalized junior high schools. He concluded that seventh and eighth graders should be scheduled into large blocks of time under the direction of one teacher.[2]

In 1961 Crocker made a questionnaire study of the relationship of size and organizational type of junior high schools in Alabama to certain selected factors.[3] Three types of organizational plans were studied; two-year junior high schools, three-year junior high schools and the lower three grades of junior-senior high schools. The study revealed the following: (1) As enrollment

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[1]Robert L. Shannon,"A Study of the Relationships Between Selected Characteristics of Differently Organized Junior High Schools and Concepts of Self and Others of the Pupils and Teachers in These Schools"(unpublished Doctoral dissertation, Florida State University, 1960).

[2]J. H. Hull, "What Research Says About the Junior High School," Nation's Schools, Volume 65 (April, 1960), p. 81.

[3]Jack Wayne Crocker, "The Relationship of Size and Organizational Type to Certain Factors in Alabama White Public Junior High Schools" (unpublished Doctoral dissertation, University of Alabama, 1961).

increased, so did the level of preparation of teachers. (2) Junior high schools which were comprised of the lower three grades of junior-senior high had the highest percentage of students taking courses from teachers who had majors or minors in the subject being taught. (3) The breadth of the curriculum increased in relation to the size of the school; larger schools tended to have more extensive course offerings than small schools. (4) At corresponding grade levels, three-year schools tended to offer a wider variety of subjects more consistently than did either the two-year junior high school or the six-year secondary school.

Garner studied 180 eighth grade youngsters in nine schools in Northwestern Arkansas.[1] Using the Mooney Problem Checklist, he found no significant differences in the nature and prevalence of student adjustment problems in the three types of reorganized schools included in the study; the 6-3-3, 6-2-4, and 6-6 plans. Of the three organizational plans studied, the 6-3-3 plan appeared to make better provisions for articulation, Integration exploration, guidance, differentiation and socialization.

Buell contends than when school districts are confronted with the problem of how to house their youngsters,

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[1]Henry Thomas Garner, "A Comparison of the Nature and Prevalence of Student Adjustment Problems in Three Types of Reorganized Schools for Young Adolescents" (unpublished Doctoral dissertation, University of Arkansas, 1962).

many factors are considered: expense of various plans, number of pupils to accommodate, athletic teams, tradition, college entrance or Carnegie unit requirements, availability of buildings, characteristics of pupils, needs of pupils, patterns of nearby school districts, etc.[1] Buell suggests that the characteristics of pupils should be the most important item in deciding how to house pupils. If this were not so, all pupils from kindergarten through grade twelve could just as well be housed in the same building. This is not wise, however, since pupils at different age levels are not alike, this being most noticeable at the onset of puberty.

After reviewing the characteristic needs of early adolescents, Buell suggests that grouping grades seven, eight and nine together best meets the needs of early adolescents. To support this grade grouping, Buell contends that one-half of the entering seventh graders are adolescents (i.e., They have reached puberty.) Two-thirds of those that have reached puberty are girls, and one-third are boys. As the year progresses, more and more seventh graders become adolescents, until at the end of the year considerably more than fifty per cent have reached puberty. At the end of the sixth grade, less than fifty per cent of

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[1]Clayton E. Buell, "What Grades in the Junior High School?" NASSP Bulletin, Volume 46 (February, 1962), pp. 14-22.

the pupils have reached puberty. Consequently, Buell contends, it makes sense to include grade seven in the junior high school, but not to include grade six. Buell also argues that the ninth grade should not be part of the senior high school since a significant number of ninth graders are still preadolescent. Buell feels that a two-year junior high school is too short a period of time for youngsters to develop leadership qualities and too short a period of time for the transition from a child centered elementary school to a subject centered high school. Thus, he feels, the three-year junior high school, housing grades seven, eight and nine, presents the best answer for accommodating early adolescents. This position is similarly supported by Maybee.[1]

A study which somewhat refutes the arguments presented by Buell was undertaken by Dacus.[2] Dacus attempted to determine the degree of variability within selected combinations of two grades in regard to social maturity, emotional maturity, physical maturity and "opposite sex" maturity. The combinations of grades studied were: grades

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[1]Gene D. Maybee, "What Do We Believe About Grades to be Included, Desirable Size, Appropriate Locations, and the Facilities for Junior High Schools?" NASSP Bulletin, Volume 46 (October, 1962), pp. 5-7.

[2]Wilfred Pence Dacus, "A Study of the Grade Organizational Structure of the Junior High School as Measured by Social Maturity, Emotional Maturity, Physical Maturity and Opposite Sex Characteristics," (unpublished Doctoral dissertation, University of Houston, Houston, Texas, 1963).

eight and nine and grades nine and ten. It was concluded that in regard to the characteristics studied, youngsters in grades six and seven were more alike than youngsters in grades five and six; youngsters in grades nine and ten were more alike than youngsters in grades eight and nine. Consequently, a grade organizational plan allowing the sixth and seventh graders and the ninth and tenth graders to be combined was deemed desirable.

Rice contends that the needs of teenagers require an entirely new approach in school organization.[1] He maintains that grade levels should be done away with and that junior high schools should proceed on a non-graded plan.

Summary

Many studies have been conducted to determine the relative effectiveness of various organizational plans. Most of the studies are quite old and have focused upon only two areas of effectiveness; namely, retention of pupils and levels of academic achievement. In regard to these two areas, it appears that retention rates are significantly higher in reorganized schools than they are in traditionally organized schools. Pupil achievement appears to have no relation to organizational structure.

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[1]Arthur H. Rice, "What's Wrong with Junior Highs? Nearly Everything," Nation's Schools, Volume 74 (November, 1964), pp. 30-32.

Most of the literature directed toward assessing the relative values of various organizational plans in relation to personality development is of the "opinion" variety rather than the presentation of objective data. Most of such writers favor the 6-3-3 plan of organization. Few studies of import have been conducted to ascertain the relative effect of the variously organized schools on the personality development of pupils, and of the studies conducted, the picture is far from clear.

CHAPTER III

METHODS AND PROCEDURES

Introduction

A review of the literature reveals that many factors appear to be related to the personal-social adjustment of pupils. Among these factors are:

1. Sex
2. Socio-economic status
3. Place of residence
4. Frequency of family moves
5. General teaching practices
6. Various life circumstances.

In addition, it would seem, from an intuitive point of view at least, that many other factors might influence the personal-social adjustment of pupils. For example, one could assume that students attending schools where teachers are well trained, where teaching loads are reasonable and where buildings and sites are adequate would have a better chance of making acceptable adjustments than would pupils attending schools where these conditions are absent.

Similarly, pupils attending small schools might adjust differently to their school experiences than pupils attending large schools; pupils from rural areas might adjust

differently than pupils from densely populated urban areas; pupils where large sums of money are spent on instructional budget might adjust differently than pupils in areas where meager amounts are provided.

One must realize that in the type of study undertaken, the number of variables which exist among pupils in the four types of schools under consideration is no doubt limitless. The problem then becomes one of attempting to control those factors which have been demonstrated to have an effect upon personal-social adjustment and also those factors which intuitively might be related to the personal-social adjustment of seventh graders. Basically, these factors are those mentioned in the preceding paragraphs.

To control these factors, pupils were selected in a manner approaching a true random sample from schools which were purposely chosen to insure comparability of schools among the four types of organizational structure under consideration.

Selection of Schools

In an attempt to control the wide range of differences which typically occur among schools, it was decided that only those school systems whose high schools were accredited by the North Central Association of Colleges and Secondary Schools would be used. In this way, one could be reasonably sure that all pupils included in the

study attended schools where certain minimum standards were being met. Schools accredited by the North Central Association of Colleges and Secondary Schools are required, among other things, to meet certain standards regarding:

1. Number and kind of courses offered.
2. Adequacy of school buildings and grounds.
3. A balanced program of extra-curricular activities.
4. Guidance and counseling services.
5. Health and safety services.
6. Professional preparation of the administrative and advisory staff.
7. Professional preparation of teachers and special professional service personnel (librarians, counselors, nurses, speech correctionists, psychologists, etc.).
8. Adequacy of clerical and custodial staff.
9. Library and instructional material and equipment.
10. Classroom instructional materials and equipment.
11. Length of class periods, the school day and the school year.
12. Teaching loads (the ratio of pupils to teachers), and the number of teaching assignments.

Using the Michigan Education Directory and Buyer's Guide, 1964-1965,[1] as a source, a compilation was made

[1]Michigan Education Directory and Buyer's Guide, 1964-1965, Michigan Education Directory, Box 2194, Lansing, Michigan.

of all Michigan schools representing the 8-4, 6-6, 6-3-3 and 5-3-4 organizational plans whose high schools were accredited by the North Central Association of Colleges and Secondary Schools. It was found that in Michigan there were 33 such schools embracing the 8-4 organizational plan 42 the 6-6 plan, 135 the 6-3-3 plan and 28 the 5-3-4 plan.

From the group of schools representing the 5-3-4 plan, 20 schools were selected in an attempt to include a cross-section representation on the basis of number of pupils attending the building which contained grade seven, the yearly expenditure per child, and the size and type of community. From each of the other three groups, 20 schools with comparable characteristics were selected. In other words, 20 schools were selected from each of the four organizational plans so that schools in one group would be reasonably similar to schools in the other three groups, and so that all groups would contain a cross-section representation on the basis of size of student body, expenditure per child and the size and type of the community within which the school was located.

Each of the 80 schools thus selected was contacted by letter to ascertain its willingness to participate in the study (see Appendix A). Each letter contained a pre-addressed post card for a reply (see Appendix B).

From the 80 schools contacted, 59 schools responded indicating a willingness to participate in the study. Each

of the 59 schools was then sent a packet of tests together with directions for administering the tests, the procedure for identifying the pupils to be tested, a form for reporting any unusual conditions which may have influenced the results of the test during the testing period and a final check on the organizational plan of the school (see Appendices C and D).

Of the 59 schools to which testing materials were sent, 44 schools returned data which were ultimately used. Six of the 59 schools reported organizational plans other than that which had been supposed and, as a result, were not included in the study. Five schools failed to return the data. Two schools chose not to participate after discovering that the instrument to be used was a standardized test of personality. One school returned its data after the study had already been prepared for the computer analysis and could not be used. Another school failed to return its data because its school had been damaged by a tornado, and the test forms had been destroyed.

Forty-four schools were finally used in the study: ten schools representing the 8-4 plan, nine schools representing the 6-6 plan, twelve schools representing the 6-3-3 plan and thirteen schools representing the 5-3-4 plan. These schools are listed in Appendix E.

Selection of the Subjects

Early in the planning stages of the study it was decided that, rather than test a large number of pupils from one or two schools from each of the four types of organizational structure, a large number of schools would be used. From each of the schools, a representative sample of pupils would be identified for testing. It was felt that in this way the effects of any unusual differences which might exist in a single school would be minimized.

Since many schools and many people were going to be involved in the administration of the tests, it was important that a simple, yet objective, procedure be developed to select a representative sample from each of the schools. The method decided upon was to fill a hat with slips of paper on each of which was written one of the letters of the alphabet. Prior to mailing the tests and the instructions to participating schools, the investigator drew from the hat ten letters; five for five girls to be tested and five for five boys to be tested. After each drawing the letter was returned to the hat, and all the letters were thoroughly mixed.

Each participating school was then instructed to administer the tests to the first boy and the first girl in grade seven falling alphabetically after each of the letters indicated. For example, a school may have been

provided the letters R, S, A, C and T for the five boys to be tested and another set of letters for the five girls to be tested. They were then instructed to test the first boy alphabetically in grade seven whose last name began with R, the first boy alphabetically whose last name began with S., etc. The same procedure was followed for the letters given for girls. A set of procedural steps was provided to insure conformity to the selection procedure from school to school (see Appendix C).

It was assumed that the sampling procedure would produce four groups of seventh graders comparable in all respects, except for differences which might be attributable to attendance in schools organized under the four different organizational plans. Nonetheless, since previous studies demonstrated socio-economic status to be related to personal-social adjustment, it was decided to ascertain what differences, if any, existed among the four groups of pupils in regard to socio-economic status.

To provide a check on this variable, all subjects were asked to list their fathers' occupations in a space provided on the cover of the test booklet. Using the socio-economic scale reported by Reiss which incorporates educational level and level of income as factors in socio-economic status, the stated occupations were converted

to index values (see Appendix F).[1] This allowed the investigator to test the significance of differences which existed among the groups in regard to this factor.

Instrumentation

The California Test of Personality (see Appendix G) is organized around the idea that life adjustment is a balance between feelings of personal security (personal adjustment) and feelings of social security (social adjustment). The test provides data on six areas of personal adjustment together with a total personal adjustment score; data on six areas of social adjustment and a total social adjustment score; an overall total personal-social adjustment score. A description of the areas included in the test is presented in Chapter I on pages 5-8.

A review of the literature reveals that the California Test of Personality is an exceedingly popular test for investigation of the effects of various factors on pupil adjustment. Numerous studies are reported in which the California Test of Personality is used for assessing the personal-social adjustment of school children. Computing

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[1]Albert J. Reiss, Occupations and Social Status (New York, New York: The Free Press of Glencoe, Inc., 1961).

reliability coefficients with the use of the Kuder-Richardson formula, the California Test Bureau reports the reliability coefficients based upon 648 cases (see Table 4).

The California Test Bureau provides considerable evidence supporting the validity of the tests.[1] Some of the more convincing evidence of validity is provided in a study by Jackson in which the California Test of Personality was shown to be a more valid assessor of personal-social adjustment than four other methods of evaluation, including the interview method.[2]

Treatment of the Data

Prior to submitting the testing materials to the selected schools, it was decided that fewer errors would occur if students would mark their answers in the test booklets rather than on a separate answer sheet. Consequently, in order for the tests to be machine scored, it was necessary to transfer the data from the test booklets to answer sheets adaptable to machine scoring.

After the data was transferred to answer sheets, the answer sheets were scored by an IBM optical scanner and the data was again transferred to IBM punched cards. The data, then on punched cards, was prepared for several analyses which were run on Michigan State University's CDC 3600 computer. The experimental design chosen for the analysis of the data was a one-way analysis of

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[1] Ibid., pp. 7-8. [2] Ibid., p. 8.

TABLE 4.--Reliability coefficients California Test of Personality[1]

Elementary	
Components	r
1. Personal Adjustment	.93
A. Self-reliance	.64
B. Sense of Personal Worth	.79
C. Sense of Personal Freedom	.79
D. Feeling of Belonging	.77
E. Withdrawing Tendencies (Fdm.)	.83
F. Nervous Symptoms (Fdm.)	.82
2. Social Adjustment	.92
A. Social Standards	.59
B. Social Skills	.73
C. Anti-social Tendencies (Fdm.)	.77
D. Family Relations	.77
E. School Relations	.78
F. Community Relations	.79
Total Adjustment	.94
Number of cases	648

[1]California Test Bureau, Manual, California Test of Personality (Monterey, California: Del Monte Research Park, 1953), p. 4.

variance with an unequal number of observations in sub-classes.[1]

Sixteen separate analyses of variance were run against the data obtained from students representing the four types of school organizational structures. The scores on the California Test of Personality which were analyzed are as follows:

1. Total Adjustment
2. Personal Adjustment
3. Social Adjustment
4. Self-Reliance
5. Sense of Personal Worth
6. Sense of Personal Freedom
7. Feeling of Belonging
8. Withdrawing Tendencies
9. Nervous Symptoms
10. Social Standards
11. Social Skills
12. Anti-Social Tendencies
13. Family Relations
14. School Relations
15. Community Relations

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[1]D. F. Kiel, A. L. Kenworthy and W. L. Ruble, "Program Description 2, Use of Analysis of Variance Routines on the CDC 3600"(unpublished material, Computer Center, Michigan State University, East Lansing, Michigan).

In addition, an analysis of variance was computed among the four groups of students to determine what, if any, differences existed among the groups in regard to socio-economic status.

The results of the sixteen analyses of variance are reported in the following chapter.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The significance of difference among means on each of the sixteen variables under consideration was tested by analysis of variance. The following sections attempt to present in an understandable and meaningful way the results of the study. The reader should note that in some tables the totals do not seem to agree with the supporting data. This apparent inconsistency is due to the fact that all computations were carried out to eight places, yet were rounded to three places for presentation in the tables.

Socio-Economic Status

A comparison among the means obtained in regard to socio-economic status revealed that there were no significant differences among the groups in this respect. These data are presented in Table 5. Table 6 presents a summary of the analysis of variance.

TABLE 5.--Means and standard deviations obtained on socio-economic index.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	3567.000	100	35.670	3.151	21.916
6-6	2555.000	90	28.389	-4.130	19.522
6-3-3	3873.000	120	32.275	- .244	22.502
5-3-4	4281.000	129	33.186	.667	24.861
Total	14276.000	439	32.519		22.586

TABLE 6.--Differences among means on socio-economic index.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	2592.627	3	864.209	1.702	Not sig.
Within Groups	220838.959	435	507.676		
Total (after mean)	223431.585	438			
Mean Effect	464246.415				
Total	687678.000				

Self-Reliance

A comparison of the mean scores earned by the four groups on the Self-Reliance section of the test revealed no significant differences among the groups. These data are presented in Tables 7 and 8.

TABLE 7.--Means and standard deviations earned on Self-Reliance.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	747.000	100	7.470	.049	1.845
6-6	654.000	90	7.267	-.155	1.791
6-3-3	897.000	120	7.475	.054	1.624
5-3-4	960.000	129	7.442	.020	1.634
Total	3258.000	439	7.421		1.710

TABLE 8.--Differences among means on self-reliance.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	2.790	3	.930	.316	Not Sig.
Within Groups	1278.249	435	2.939		
Total (after mean)	1281.039	438			
Mean Effect	24178.961				
Total	25460.000				

Sense of Personal Worth

A comparison of the mean scores earned by the four groups on the Sense of Personal Worth section of the test revealed no significant differences among the groups. These data are presented in Tables 9 and 10.

TABLE 9.--Means and standard deviations earned on sense of personal worth.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	870.000	100	8.700	.206	2.303
6-6	782.000	90	8.689	.195	2.212
6-3-3	994.000	120	8.283	-.211	2.454
5-3-4	1083.000	129	8.395	-.099	2.360
Total	3729.000	439	8.494		2.343

TABLE 10.--Differences among means on sense of personal worth.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	14.143	3	4.748	.864	Not Sig.
Within Groups	2389.493	435	5.493		
Total (after mean)	2403.736	438			
Mean Effect	31675.264				
Total	34079.000				

Sense of Personal Freedom

A comparison of the mean scores earned by the four groups on the Sense of Personal Freedom section of the test revealed no significant differences among the groups. These data are presented in Tables 11 and 12.

TABLE 11.--Means and standard deviations earned on sense of personal freedom.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	930.000	100	9.300	-.026	1.812
6-6	863.000	90	9.589	.263	1.702
6-3-3	1095.000	120	9.125	-.201	2.555
5-3-4	1206.000	129	9.349	.023	2.618
Total	4094.000	439	9.326		2.266

TABLE 12.--Differences among means on sense of personal freedom.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	11.203	3	3.734	.726	Not Sig.
Within Groups	2237.216	435	5.143		
Total (after mean)	2248.419	438			
Mean Effect	38179.581				
Total	40428.000				

Feeling of Belonging

A comparison of the mean scores earned by the four groups on the Feeling of Belonging section of the test revealed no significant differences among the groups. These data are presented in Tables 13 and 14.

TABLE 13.--Means and standard deviations earned on feelings of belonging.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	995.000	100	9.950	.103	1.789
6-6	907.000	90	10.078	.230	1.691
6-3-3	1164.000	120	9.700	-.147	2.140
5-3-4	1257.000	129	9.744	-.103	2.376
Total	4323.000	439	9.847		2.054

TABLE 14.--Differences among means on feeling of belonging.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	9.811	3	3.270	.774	Not Sig.
Within Groups	1838.964	435	4.228		
Total (after mean)	1848.774	438			
Mean Effect	42570.226				
Total	44419.000				

Withdrawing Tendencies

A comparison of the mean scores obtained by the four groups on the Withdrawing Tendencies section of the test revealed no significant differences among the groups. These data are presented in Tables 15 and 16.

TABLE 15.--Means and standard deviations earned on withdrawing tendencies.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	798.000	100	7.980	.385	2.738
6-6	714.000	90	7.933	.339	2.569
6-3-3	854.000	120	7.117	-.478	3.030
5-3-4	968.000	129	7.504	-.091	3.037
Total	3334.000	439	7.595		2.889

TABLE 16.--Differences among means on withdrawing tendencies.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	53.652	3	17.884	2.160	Not Sig.
Within Groups	3602.175	435	8.281		
Total (after mean)	3655.827	438			
Mean Effect	25320.173				
Total	28976.000				

Nervous Symptoms

A comparison of the mean scores obtained by the four groups on the Nervous Symptoms section of the test revealed no significant differences among the groups. These data are presented in Tables 17 and 18.

TABLE 17.--Means and standard deviations earned on nervous symptoms.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	922.000	100	9.220	.161	2.245
6-6	836.000	90	9.289	.230	2.095
6-3-3	1073.000	120	8.942	-.118	2.491
5-3-4	1146.000	129	8.884	-.176	2.609
Total	3977.000	439	9.059		2.395

TABLE 18.--Differences among means on nervous symptoms.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	12.964	3	4.321	.752	Not Sig.
Within Groups	2499.496	435	5.746		
Total (after mean)	2512.460	438			
Mean Effect	36028.540				
Total	38541.000				

Social Standards

A comparison of the mean scores obtained by the four groups on the Social Standards section of the test revealed no significant differences among the groups. These data are presented in Tables 19 and 20.

TABLE 19.--Means and standard deviations earned on social standards.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	1035.000	100	10.350	-.005	1.566
6-6	926.000	90	10.289	-.066	1.471
6-3-3	1255.000	120	10.458	.103	1.283
5-3-4	1330.000	129	10.310	-.045	1.525
Total	4546.000	439	10.355		1.458

TABLE 20.--Differences among means on social standards.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	1.937	3	.646	.303	Not Sig.
Within Groups	928.627	435	2.135		
Total (after mean)	930.565	438			
Mean Effect	47075.435				
Total	48006.000				

Social Skills

A comparison of the mean scores obtained by the four groups on the Social Skills section of the test revealed no significant differences among the groups. These data are presented in Tables 21 and 22.

TABLE 21.--Means and standard deviations earned on social skills.

Group	Sum	Freq.	Mean	Overall Mean	SD
8-4	862.000	100	8.620	-.159	2.140
6-6	776.000	90	8.622	-.157	2.368
6-3-3	1072.000	120	8.933	.154	1.965
5-3-4	1144.000	129	8.868	.089	2.086
Total	3854.000	439	8.779		2.125

TABLE 22.--Differences among means on social skills.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	8.625	3	2.875	.635	Not Sig.
Within Groups	1968.942	435	4.526		
Total (after mean)	1977.567	438			
Mean Effect	33834.433				
Total	35812.000				

Anti-Social Tendencies

A comparison of the mean scores obtained by the four groups on the Anti-Social Tendencies section of the test revealed no significant differences among the groups. These data are presented in Tables 23 and 24.

TABLE 23.--Means and standard deviations earned on Anti-social tendencies.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	888.000	100	8.880	.039	2.244
6-6	801.000	90	8.900	.059	2.337
6-3-3	1038.000	120	8.650	-.191	2.410
5-3-4	1154.000	129	8.946	.105	2.431
Total	3881.000	439	8.841		2.360

TABLE 24.--Differences among means on Anti-social tendencies.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	6.258	3	2.086	.373	Not Sig.
Within Groups	2432.580	435	5.592		
Total		438			
(after mean)	2438.838	438			
Mean Effect	34310.162				
Total	36749.000				

Family Relations

A comparison of the mean scores obtained by the four groups on the Family Relations section of the test revealed no significant differences among the groups. These data are presented in Tables 25 and 26.

TABLE 25.--Means and standard deviations earned on family relations.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	937.000	100	9.370	.181	2.545
6-6	857.000	90	9.522	.333	2.451
6-3-3	1055.000	120	8.792	-.397	2.916
5-3-4	1185.000	129	9.186	-.003	2.811
Total	4034.000	439	9.189		2.716

TABLE 26.--Differences among means on family relations.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	32.215	3	10.738	1.460	Not Sig.
Within Groups	3199.092	435	7.354		
Total (after mean)	3231.308	438			
Mean Effect	37068.692				
Total	40300.000				

School Relations

A comparison of the mean scores obtained by the four groups on the School Relations section of the test revealed a significant difference among the groups. Since a significant F value does not tell which means differ significantly, the separate differences were tested by the t test. Only two

means were found to be significantly different; the mean score obtained by the 8-4 group being significantly higher in regard to school relations than the mean score obtained by youngsters in the 6-3-3 group.

TABLE 27.--Means and standard deviations earned on school relations.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	899.000	100	8.990	.477	2.186
6-6	782.000	90	8.689	.176	2.452
6-3-3	973.000	120	8.108	-.404	2.386
5-3-4	1083.000	129	8.395	-.117	2.551
Total	3737.000	439	8.513		2.420

TABLE 28.--Differences among means on school relations.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	46.973	3	15.658	2.704	Sig. at .05 Level
Within Groups	2518.708	435	5.790		
Total (after mean)	2565.681	438			
Mean Effect	31811.319				
Total	34377.000				

Community Relations

A comparison of the mean scores obtained by the four groups on the Community Relations section of the test revealed no significant differences among the groups. These data are presented in Tables 29 and 30.

TABLE 29.--Means and standard deviations earned on community relations.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	944.000	100	9.440	-.175	2.095
6-6	869.000	90	9.656	.041	1.781
6-3-3	1167.000	120	9.725	.110	1.489
5-3-4	1241.000	129	9.620	.005	2.016
Total	4221.000	439	9.615		1.854

TABLE 30.--Differences among means on community relations.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	4.666	3	1.555	.451	Not Sig.
Within Groups	1501.275	435	3.451		
Total (after mean)		438			
Mean Effect	40585.059				
Total	42091.000				

Total Personal Adjustment

The first six tests: Self-Reliance, Sense of Personal Worth, Sense of Personal Freedom, Feeling of Belonging, Withdrawing Tendencies, and Nervous Symptoms are elements of personal adjustment. These tests are combined to give a total estimate of Personal Adjustment. A comparison of the mean scores obtained by the four groups on the total estimate of Personal Adjustment indicated no significant differences among the groups. These data are presented in Tables 31 and 32.

Total Social Adjustment

The last six tests of the California Test of Personality deal with elements of social adjustment. These tests are combined to yield a total estimate of social adjustment. A comparison of mean scores obtained by the four groups on Total Social Adjustment reveals no significant differences among the groups. These data are presented in Tables 33 and 34.

Total Personal-Social Adjustment

All of the twelve sub-tests of the California Test of Personality are combined to yield a Total Personal-Social Adjustment score. A comparison of mean scores obtained on the Total Personal-Social Adjustment section

TABLE 31.--Means and standard deviations earned on total personal adjustment.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	5262.000	100	52.620	.877	8.738
6-6	4756.000	90	52.844	1.102	8.211
6-3-3	6077.000	120	50.642	-1.101	10.786
5-3-4	6620.000	129	51.318	- .425	11.399
Total	22715.000	439	51.743		10.067

TABLE 32.--Differences among means on total personal adjustment.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	354.971	3	118.324	1.169	Not Sig.
Within Groups	44034.943	435	101.230		
Total (after mean)	44389.913	438			
Mean Effect	1175333.087				
Total	1219723.000				

TABLE 33.--Means and standard deviations earned on total social adjustment.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	5565.000	100	55.650	.358	8.784
6-6	5011.000	90	55.678	.386	9.349
6-3-3	6560.000	120	54.667	-.625	9.121
5-3-4	7137.000	129	55.326	.034	9.233
Total	24273.000	439	55.292		9.104

TABLE 34.--Differences among means on total social adjustment.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	73.281	3	24.427	.293	Not Sig.
Within Groups	36231.398	435	83.291		
Total (after mean)	36304.679	438			
Mean Effect	1342092.321				
Total	1378397.000				

revealed no significant differences among the groups. These data are presented in Tables 35 and 36.

TABLE 35.--Means and standard deviations earned on total personal-social adjustment.

Group	Sum	Freq.	Mean	Dev. from Overall Mean	SD
8-4	10827.000	100	108.270	1.236	15.927
6-6	9767.000	90	108.522	1.488	16.294
6-3-3	12637.000	120	105.308	-1.726	18.906
5-3-4	13757.000	129	106.643	- .391	19.393
Total	46988.000	439	107.034		17.887

TABLE 36.--Differences among means on total personal-social adjustment.

Source of Variance	Sum Of Squares	Degrees of Freedom	Mean Square	F	Level of Significance
Between Groups	729.133	3	243.044	.758	Not Sig.
Within Groups	139411.354	435	320.486		
Total (after mean)	140140.487	438			
Mean Effect	5029321.513				
Total	5169462.000				

Summary

The significance of differences among means obtained by the four groups on each of the sixteen variables was tested by an analysis of variance technique.

1. No significant differences were found among the four groups in regard to Socio-Economic Status. Thus, one could be reasonably sure that any significant differences found among the groups on various aspects of the California Test of Personality could not be attributed to this cause.

2. No significant differences were found among the four groups in regard to Self-Reliance.

3. No significant differences were found among the four groups in regard to Sense of Personal Worth.

4. No significant differences were found among the four groups in regard to Sense of Personal Freedom.

5. No significant differences were found among the four groups in regard to Feeling of Belonging.

6. No significant differences were found among the four groups in regard to Withdrawing Tendencies.

7. No significant differences were found among the four groups in regard to Nervous Symptoms.

8. No significant differences were found among the four groups in regard to Social Standards.

9. No significant differences were found among the four groups in regard to Social Skills.

10. No significant differences were found among the four groups in regard to Anti-Social Tendencies.

11. No significant differences were found among the four groups in regard to Family Relations.

12. On the School Relations section of the test a significant difference was found between the 8-4 group and the 6-3-3 group. Youngsters attending schools organized on the 8-4 plan scored significantly higher on this test than did youngsters attending the 6-3-3 plan. No significant differences were found in regard to the 6-6 group and the 5-3-4 group.

13. No significant differences were found among the groups in regard to Community Relations.

14. No significant differences were found among the groups in regard to Total Personal Adjustment.

15. No significant differences were found among the groups in regard to Total Social Adjustment.

16. No significant differences were found among the groups in regard to Total Personal-Social Adjustment.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Throughout America educators are faced with a perplexing problem; what grades should be housed within school buildings for maximum educational benefit to children? Since little objective data is available regarding the advantages of various organizational plans, economic practicality, tradition and opinion generally form the basis for such decisions.

The purpose of this study was to compare the relative effects of four organizational plans upon the personal-social adjustment of seventh grade pupils. The four plans under investigation were the 8-4, 6-6, 6-3-3 and 5-3-4 plans. The California Test of Personality was employed as the instrument for obtaining measures of personal-social adjustment.

To implement the study, all Michigan school systems accredited by the North Central Association of Colleges and Secondary Schools representing the 8-4, 6-6, 6-3-3 and 5-3-4 organizational plans were identified. From each of the four plans, a representative group of schools was selected for study. Ten schools represented the

8-4 plan; nine schools the 6-6 plan, twelve schools the 6-3-3 plan; and thirteen schools the 5-3-4 plan. From each school ten seventh grade pupils, five boys and five girls, were selected for testing. Ultimately, 439 pupils were tested.

Analysis of variance procedures were employed to assess the significance of differences found among the four groups of pupils in regard to scores on the various parts of the California Test of Personality. No significant differences were found among the four groups on the following parts of the test:

1. Self-Reliance
2. Sense of Personal Worth
3. Sense of Personal Freedom
4. Feeling of Belonging
5. Withdrawing Tendencies
6. Nervous Symptoms
7. Social Standards
8. Social Skills
9. Anti-Social Tendencies
10. Family Relations
11. Community Relations
12. Total Personal Adjustment
13. Total Social Adjustment
14. Total Personal-Social Adjustment

A significant difference was found between the 8-4 group and the 6-3-3 group in regard to the School Relations section of the test, the 8-4 group scoring significantly higher than the 6-3-3 group.

Conclusions

The basic assumption of this study was that pupil adjustment, as measured by the California Test of Personality, is significantly influenced by the organizational structure of the school attended. Since eleven of the twelve sub-tests revealed no significant differences among the groups, it is concluded that organizational structure has little effect upon the overall personal-social adjustment of seventh grade pupils. The fact remains, however, that a significant difference was found between two of the groups of students on the School Relations section of the test, a section which probes perhaps more closely to the core of the problem under consideration than do any of the other parts of the test. With this in mind, it is concluded that organizational structure does affect a limited aspect of personal-social adjustment.

This fact should cause educators to become increasingly more concerned with obtaining additional data regarding the effects of organizational structure on the personal-social adjustment of pupils. The findings of this study should cause educators to question, or discard,

the commonly held notion that the 6-3-3 plan accommodates more desirably the personal-social needs of early adolescents than does the traditionally organized 8-4 school.

Inasmuch as the results of this study are based upon a parent population of all pupils attending Michigan school systems accredited by the North Central Association of Colleges and Secondary Schools, the above conclusions should not be generalized to other school populations.

Recommendations

1. It is recommended that the present study be replicated in other areas of the country to ascertain whether or not the findings are universally true.

2. It is recommended that similar studies be conducted to determine whether or not similar results would be found using different instruments for the assessment of personal-social adjustment.

3. It is recommended that similar studies be conducted at other grade levels.

4. It is recommended that similar studies be conducted using different methods of controlling extraneous variables.

5. It is recommended that similar studies be conducted to determine the effects of various organizational structures on other aspects of pupil behavior. A limited number of such studies have been conducted, but most are several decades old. A comparison of retention rates, academic achievement, self-concept, attitude, conduct, creativity, etc., among schools organized under different plans is needed.

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APPENDICES

APPENDIX A

MICHIGAN STATE UNIVERSITY EAST LANSING

COLLEGE OF EDUCATION

April 19, 1965

Dear Principal:

We would like to ask your cooperation in helping to unravel one aspect of a perplexing educational problem: What grades should be housed together for maximum benefits to pupils?

During the year 1960, American school districts invested an estimated 3.2 billion dollars in school construction. This amount is more than the assets of the country's richest railroad, the Pennsylvania. In the same year, the city of Los Angeles constructed schools at the rate of a million dollars a week. In Michigan, the mushrooming population and school district reorganization has caused school districts to construct schools at a phenomenal rate.

What does all this mean? It means that school districts are forced, not only to construct buildings, but also to decide what grades to house in the buildings. In so doing, school officials often ask which of the many organizational plans, 6-3-3, 5-3-4, 6-6, etc., is best? In our consultative work with school districts, it has become increasingly evident that little objective information is available to guide districts in making such decisions. Generally, economic practicality, tradition, and opinion form the basis for these decisions.

In an attempt to unravel one part of this dilemma, we have selected sixty comparable Michigan school districts, representing various organizational plans, for study. It is our assumption, holding other factors constant, that seventh graders demonstrate varying personal-social adjustments solely on the basis of the grades that are housed in their building. We would appreciate your willingness to have ten of your seventh graders complete a "yes-no" type inventory. Students will not sign their names to the inventories, nor will they be personally identified in any way. The attached sheet explains the work that would be involved. Please indicate your willingness by returning the enclosed postcard.

The fall issue of the Michigan Journal of Secondary Education carried an article by Dr. Ray Budde in which he addressed himself to one facet of the problem. Our present project has been endorsed by Dr. William H. Roe, editor of the Journal. If we are successful in obtaining your cooperation as well as that of other selected principals, an article summarizing the findings will appear in a future edition of the Journal.

Hopeful for your assistance,

John J. McNicholas
Director of Field Studies
Michigan State University

Thomas F. Stark
Consultant in Field Studies
Michigan State University

BASIC PROCEDURE FOR PARTICIPANTS

1. Within the next two weeks, you will receive a packet of ten inventories and answer sheets, together with directions for administration and a return envelope.

2. Each of the ten seventh grade pupils who are to be tested will be designated for you in the following way: The first boy falling alphabetically after the letter "D", etc.

3. Since the inventory is basically self-administering (no time limits, right or wrong answers, etc.), you, or someone designated by you, could give the basic directions and the pupils could proceed on their own; perhaps during one of their study periods. Ordinarily it takes about a half-hour to complete the test.

APPENDIX B

Participant Reply Card

☐ Yes, we will participate in the study.

☐ No, we will not participate in the study.

Signed: _____

Stambaugh Elementary
Washington Avenue
Stambaugh, Michigan

APPENDIX C

MICHIGAN STATE UNIVERSITY EAST LANSING

COLLEGE OF EDUCATION

May 13, 1965

Dear Principal:

Thank you for your willingness to participate in our study.

As mentioned previously, we would like to obtain data from ten of your seventh grade pupils. The pupils whom we would like to test are as follows:

Boys	Girls
The first boy alphabetically in grade seven whose last name begins with:	The first girl alphabetically in grade seven whose last name begins with:
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Procedure:

1. Please include all the seventh graders in your building as possible subjects. Do not refuse to use a designated pupil because he or she happens to be unusual in some respect. This would invalidate our sampling procedure.

2. If you do not have a pupil whose last name begins with the designated letter, go on to the next letter. For example, if the letter Q is designated and you do not have a student whose last name begins with Q, move on to the next letter (letter R). If Z is designated and you have no Z's, move on to letter A, etc. If the student designated is absent, please take the next student.

3. The pupils may complete the test individually (in a study hall, etc.) or together in a group.

4. The only directions necessary to students are as follows:

    a. Pupils are completing the test for Michigan State University along with about 600 other pupils from various Michigan schools. The purpose is to determine how pupils from different kinds of schools respond to the questions.

b. Pupils are to complete the information requested on the front of the test booklet.

c. Pupils are to read the directions on the outside cover and on page 2 before beginning the test.

d. It is important that pupils be truthful and that they not talk with other pupils while taking the test. It should take about a half-hour to complete the test, although there is no time limit.

e. After the pupils have completed the tests, please scan each booklet to be sure that all parts have been answered.

f. Complete the enclosed card. Return the card and the booklets in the enclosed envelope.

Thanks again for your assistance.

Sincerely,

Thomas F. Stark
Consultant in Field Studies
Michigan State University

TFS:skb

APPENDIX D

Second Participant Reply Card

Code_____

As a check against the information which we already have, please indicate the grades which are housed in your building.

_____
(grades in building)

Were there any unusual circumstances during the test administration which might affect the results? If so, what?_____

_____

_____

APPENDIX E

APPENDIX E

Schools Included in the Study and Descriptive Data
(All Schools Accredited by NCACSS)

Name of School	No. of Pupils	Expenditure/ Pupil	Type of Community
8-4 Plan			
Garfield Elem., Port Huron	1177	$411	City 36,084
Frankfort Elem., Frankfort	490	$316	Small Town 1,620
McKinley Elem., Sault St. Marie	325	$352	City 18,722
North Elem., Waterviet	450	$379	Small Town 1,818
Northwest Elem., Howell	670	$354	Small Town 4,861
Rosebush Elem., Rosebush	300	$411	Small Town 400
Seminole Elem., Mount Clemens	760	$415	Suburban Detroit
South Elem., Waterviet	475	$379	Small Town 1,818
Stambaugh Elem., Stambaugh	575	$431	Small Town 1,876
Southwest Elem., Howell	670	$354	Small Town 4,861
6-6 Plan			
Bad Axe High School, Bad Axe	686	$366	Small Town 2,998
East Jordan H. S., East Jordan	393	$357	Small Town 1,919
Ecorse High School, Ecorse	1730	$632	Suburban Detroit
Hancock Central H. S., Hancock	435	$313	Small Town 5,022
Harbor Beach Comm. H. S., Harbor Beach	462	$450	Small Town 2,282
Lawton High School, Lawton	340	$381	Small Town 1,402
Negaunee High School, Negaunee	876	$451	Small Town 6,126
Orchard View H. S., Muskegon P. O.	1300	$375	Suburban Muskegon
Wakefield High School, Wakefield	470	$419	Small Town 3,231

APPENDIX E--continued

Name of School	No. of Pupils	Expenditure/ Pupil	Type of Community
6-3-3 Plan			
Allegan Junior High School, Allegan	500	$396	Small Town 4,822
Dye J. H. S., Carman Dist., Flint P. O.	552	$384	Suburban Flint
East Jackson J. H. S. (East Jackson Pub. Schools) Jackson P. O.	375	$379	Suburban Jackson
Farmington J. H. S., Farmington	934	$433	Suburban Detroit
Lake Orion J. H. S., Lake Orion	800	$357	Small Town 2,698
Laketon J. H. S., Muskegon P. O. (Reeths-Puffer Sch. Dist.)	540	$379	Suburban Muskegon
Rockford J. H. S., Rockford	651	$338	Small Town 2,074
Romeo J. H. S., Romeo	600	$452	Small Town 3,327
South J. H. S., Allen Park	794	$453	Suburban Detroit
Southeastern J. H. S., Battle Creek	437	$446	City 44,169
Southwestern J. H. S., Battle Creek	424	$446	City 44,169
Stilwell J. H. S., Alma	660	$370	Small Town 8,978
5-4-3 Plan			
Big Rapids Inter., Big Rapids	386	$399	Small Town 8,686
Central J. H. S., Okemos	698	$500	Suburban Lansing
Central J. H. S., Sturgis	725	$375	Small Town 8,915
Charlotte J. H. S., Charlotte 526	526	$370	Small Town 7,657
Chesaning J. H. S., Chesaning 573	573	$303	Small Town 2,770
Chippewa Inter., Port Huron	674	$411	City 36,084
Davis Inter., Hillsdale	604	$381	Small Town 7,629
Ford Middle School, Highland Park	794	$649	Suburban Detroit
Gilbert J. H. S., Algonac	400	$400	Small Town 3,190
Hartsig J. H. S., Warren	832	$468	Suburban Detroit

APPENDIX E--continued

Name of School	No. of Pupils	Expenditure/ Pupil	Type of Community
Highland J. H. S. (Lakeview Sch. Dist.) Battle Creek P. O.	663	$446	Suburban Battle Creek
C. L. Phelps Inter., Ishpeming	485	$402	Small Town 8,857
Washington Inter., Port Huron	674	$411	City 36,084

APPENDIX F

APPENDIX F

SOCIO-ECONOMIC INDEX AND EQUIVALENT WORK PRESTIGE SCORE FOR OCCUPATIONS IN THE DETAILED CLASSIFICATION OF THE BUREAU OF THE CENSUS, 1950

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes[1]
Accountants and auditors	78	80	a
Actors and actresses	60	74	
Airplane pilots and navigators	79	81	a
Architects	90	86	a
Artists and art teachers	67	76	b
Athletes	52	71	
Authors	76	80	a
Chemists	79	81	a
Chiropractors	75	79	
Clergymen	52	71	a
College presidents, professors, and instructors (n.e.c.)	84	83	a
Dancers and dancing teachers	45	69	
Dentists	96	93	a
Designers	73	79	
Dietitians and nutritionists	39	67	d
Draftsmen	67	76	
Editors and reporters	82	82	a

[1]See end of table for explanation of Notes.

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Engineers, technical	85	83	c
Aeronautical	87	85	
Chemical	90	87	
Civil	84	83	a
Electrical	84	83	
Industrial	86	84	
Mechanical	82	83	
Metallurgical, and metallurgists	82	83	
Mining	85	83	
Not elsewhere classified	87	85	
Entertainers (n.e.c.)	31	64	
Farm and home management advisors	83	83	b
Foresters and conservationists	48	70	
Funeral directors and embalmers	59	74	a
Lawyers and judges	93	89	a
Librarians	60	74	
Musicians and music teachers	52	71	b
Natural scientists (n.e.c.)	80	81	b
Nurses, professional	46	70	
Nurses, student professional	51	71	d
Optometrists	79	81	
Osteopaths	96	93	
Personnel and labor relations workers	84	83	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Pharmacists	82	82	
Photographers	50	71	
Physicians and surgeons	92	89	a
Radio operators	69	77	
Recreation and group workers	67	76	b
Religious workers	56	72	
Social and welfare workers, except group	64	75	a
Social scientists	81	82	b
Sports instructors and officials	64	65	
Surveyors	48	70	
Teachers (n.e.c.)	72	78	a
Technicians, medical and dental	42	70	
Technicians, testing	53	72	
Technicians (n.e.c.)	62	74	
Therapists and healers (n.e.c.)	58	73	
Veterinarians	78	81	
Professional, technical, and kindred workers (n.e.c.)	65	75	
Farmers and Farm Managers			
Farmers (owners and tenants)	14	53	b
Farm managers	36	66	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Managers, Officials, and Proprietors, Ore, Farm			
Buyers and department heads, store	72	78	
Buyers and shippers, farm products	33	65	
Conductors, railroad	58	73	a
Credit men	74	79	
Floormen and floor managers, store	50	71	
Inspectors, public administration	63	75	c
Federal public administration and postal service	72	78	
State public administration	54	72	
Local public administration	56	72	
Managers and superintendents, building	32	65	
Officers, pilots, pursers, and engineers, ship	54	72	
Officials & administrators (n.e.c.) public adminst'n.	66	76	c
Federal public administration and postal service	84	83	
State public administration	66	76	
Local public administration	54	72	
Officials, lodge, society, union, etc.	58	73	b
Postmasters	60	74	
Purchasing agents and buyers (n.e.c.)	77	80	
Managers, officials, & proprietors (n.e.c.) salaried	68	77	c
Construction	60	74	
Manufacturing	79	81	
Transportation	71	78	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Telecommunications, & sanitary services	76	80	
Wholesale trade	70	77	
Retail trade	56	72	c
Food and dairy products/stores, & milk retailing	50	70	
General merchandise & five & ten cent stores	68	77	
Apparel and accessories stores	69	77	
Furniture, home furnishings, & equipment stores	68	77	
Motor vehicles and accessories retailing	65	75	
Gasoline service stations	31	65	
Eating and drinking places	39	68	
Hardware, farm implement, & bldg. material retail	64	75	
Other retail trade	59	74	
Banking and other finance	85	84	
Insurance and real estate	84	83	
Business services	80	81	
Automobile repair services and garages	47	70	
Miscellaneous repair services	53	71	
Personal services	50	71	
All other industries (incl. not reported)	62	74	
Manager, officials, & propr's (n.e.c.) self employed	48	70	c
Construction	51	71	a
Manufacturing	61	74	a

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Transportation	43	69	
Telecommunications, utilities, & sanitary services	44	69	
Wholesale trade	59	74	
Retail trade	43	69	a, c
Food & dairy products stores, & milk retailing	33	65	
General merchandise and five & ten cent stores	47	70	
Apparel & accessories stores	65	75	
Furniture, home furnishings, & equipment stores	59	73	
Motor vehicles & accessories retailing	70	77	
Gasoline service stations	33	65	
Eating and drinking places	37	67	b
Hardware, farm implement, & bldg. material retail	61	74	
Other retail trade	49	70	
Banking and other finance	85	84	a
Insurance and real estate	76	80	
Business services	67	76	
Automobile repair services and garages	36	66	
Miscellaneous repair services	34	65	
Personal services	41	68	
All other industries (incl. not reported)	49	70	
Clerical and Kindred Workers			
Agents (n.e.c.)	68	77	
Attendants and assistants, library	44	69	d

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Attendants, physician's and dentist's office	38	67	d
Baggagemen, transportation	25	61	
Bank tellers	52	71	
Bookkeepers	51	71	a
Cashiers	44	69	
Collectors, bill and account	39	68	
Dispatchers and starters, vehicle	40	68	
Express messengers and railway mail clerks	67	76	
Mail carriers	53	71	a
Messengers and office boys	28	63	
Office machine operators	45	69	
Shipping and receiving clerks	22	60	
Stenographers, typists, and secretaries	61	74	
Telegraph messengers	22	59	
Telegraph operators	47	70	
Telephone operators	45	69	
Ticket, station, and express agents	60	74	
Clerical and kindred workers (n.e.c.)	44	69	
Sales Workers			
Advertising agents and salesmen	66	76	
Auctioneers	40	68	
Demonstrators	35	66	
Hucksters and peddlers	8	46	
Insurance agents and brokers	66	76	a

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Newsboys	27	63	
Real estate agents and brokers	62	74	
Stock and bond salesmen	73	79	
Salesmen and sales clerks (n.e.c.)	47	70	c
Manufacturing	65	75	
Wholesale trade	61	74	b
Retail trade	39	67	a
Other industries (incl. not reported)	50	71	
Craftsmen, Foremen, and Kindred Workers			
Bakers	22	60	
Blacksmiths	16	55	
Boilermakers	33	65	
Bookbinders	39	67	
Brickmasons, stonemasons, and tile setters	27	62	
Cabinetmakers	23	60	
Carpenters	19	58	a
Cement and concrete finishers	19	58	
Compositors and typesetters	52	71	
Cranemen, derrickmen, and hoistmen	21	59	
Decorators and window dressers	40	68	
Electricians	44	69	a

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Electrotypers and stereotypers	55	72	
Engravers, except photoengravers	47	70	
Excavating, grading, and road machinery operators	24	61	
Foremen (n.e.c.)	49	70	c
Construction	40	68	
Manufacturing	53	71	c
Metal industries	54	72	
Machinery, including electrical	60	74	
Transportation equipment	66	76	
Other durable goods	41	68	
Textiles, textile products, & apparel	39	68	
Other nondurable goods (incl. not specified mfg.)	53	72	
Railroads and railway express service	36	66	
Transportation, except railroad	45	69	
Telecommunications, & utilities & sanitary services	56	73	
Other industries (incl. not reported)	44	69	
Forgemen and hammermen	23	60	
Furriers	39	67	
Glaziers	26	62	
Heat treaters, annealers, and temperers	22	60	
Inspectors, scalers, & graders, log & lumber	23	60	
Inspectors (n.e.c.)	41	68	c
Construction	46	70	
Railroads and railway express service	41	68	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Transport, exc. r. r., communin's, & other public ut.	45	69	
Other industries (incl. not reported)	38	67	
Jewelers, watchmakers, goldsmiths, & silversmiths	36	66	
Job setters, metal	28	63	
Linemen & servicemen, telegraph, telephone, & power	49	70	
Locomotive engineers	58	73	a
Locomotive firemen	45	69	
Loom fixers	10	49	
Machinists	33	65	a
Mechanics and repairmen	25	61	c
Airplane	48	70	
Automobile	19	58	a
Office machine	36	66	
Radio and television	36	66	
Railroad and car shop	23	60	
Not elsewhere classified	27	62	
Millers, grain, flour, feed, etc.	19	58	
Millwrights	31	65	
Molders, metal	12	51	
Motion picture projectionists	43	69	
Opticians, and lens grinders and polishers	39	67	
Painters, construction and maintenance	16	56	
Paperhangers	10	48	
Pattern and model makers, except paper	44	69	
Photoengravers and lithographers	64	75	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Piano & organ tuners & repairmen	38	67	
Plasterers	25	61	
Plumbers and pipe fitters	34	66	a
Pressmen and plate printers, printing	49	70	
Rollers and roll hands, metal	22	60	
Roofers and slaters	15	54	
Shoemakers and repairers, except factory	12	51	
Stationary engineers	47	70	
Stone cutters and stone carvers	25	61	
Structural metal workers	34	66	
Tailors and tailoresses	23	60	
Tinsmiths, coppersmiths, & sheet metal workers	33	65	
Toolmakers, & die makers & setters	50	71	
Upholsterers	22	60	
Craftsmen and kindred workers (n.e.c.)	32	65	
Members of the armed forces	18	56	e
Operatives and Kindred Workers			
Apprentices	35	66	c
Auto mechanics	25	61	
Bricklayers and masons	32	65	
Carpenters	31	64	
Electricians	37	67	
Machinists and toolmakers	41	68	
Mechanics, except auto	34	66	
Plumbers and pipe fitters	33	65	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Building trades (n.e.c.)	29	63	
Metalworking trades (n.e.c.)	33	65	
Printing trades	40	68	
Other specified trades	31	64	
Trade not specified	39	67	
Asbestos and insulation workers	32	65	
Attendants, auto service and parking	19	58	a
Blasters and powdermen	11	50	
Boatmen, canalmen, and lock keepers	24	61	
Brakemen, railroad	42	69	
Bus drivers	24	61	
Chairmen, rodmen, and axmen			
Conductors, bus and street railway	30	64	
Deliverymen and routemen	32	65	
Dressmakers and seamstresses, except factory	23	60	
Dyers	12	51	
Filers, grinders, and polishers, metal	22	59	
Fruit, nut, & vegt. graders & packers, exs. factory	10	48	
Furnacemen, smeltermen, and pourers	18	57	
Heaters, metal	29	64	
Laundry and dry cleaning operatives	15	54	b
Meat cutters, except slaughter and packing house	29	63	
Milliners	46	70	d
Mine operatives and laborers (n.e.c.)	10	49	c

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Coal mining	2	25	a
Grade petroleum and natural gas extraction	38	67	
Mining and quarrying, except fuel	12	51	
Motormen, mine, factory, logging camp, etc.	3	28	
Motormen, street, subway, and elevated railway	34	65	a
Oilers and greasers, except auto	15	54	
Painters, except construction and maintenance	18	57	
Photographic process workers	42	68	
Power station operators	50	71	
Sailors and deck hands	16	55	
Sawyers	5	39	
Spinners, textile	5	39	
Stationary firemen	17	56	
Switchmen, railroad	44	69	
Taxicab drivers and chauffeurs	10	49	a
Truck and tractor drivers	15	54	a
Weavers, textile	6	42	
Welders and flame-cutters	24	61	
Operatives and kindred workers (n.e.c.)	18	57	c
Manufacturing	17	56	a, c
Durable goods			
Sawmills, planing mills, & misc. wood products	7	44	c
Sawmills, planing mills, and mill work	7	44	
Miscellaneous wood products	9	46	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Furniture and fixtures	9	48	
Stone, clay, and glass products	17	56	c
Glass and glass products	23	60	
Cement, & concrete, gypsum, & plaster prod.	10	48	
Structural clay products	10	48	
Pottery and related products	21	59	
Misc. nonmetallic mineral & stone products	15	54	
Metal industries	16	55	c
Primary metal industries	15	54	c
Blast furnaces steel works & rolling mills	17	56	
Other primary iron and steel industries	12	51	
Primary nonferrous industries	15	54	
Fabricated metal ind. (incl. not spec. metal)	16	55	c
Fabricated metal--steel products	16	55	
Fabricated nonferrous metal products	15	54	
Not specified metal industries	14	53	d
Machinery, except electrical	22	60	c
Agricultural machinery and tractors	21	59	
Office and store machines and devices	31	64	
Miscellaneous machinery	22	59	
Electrical machinery, equipment, and suppl.	26	62	
Transportation equipment	23	60	c
Motor vehicles and motor vehicle equip.	21	59	
Aircraft and parts	34	65	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Prestige Score	Notes
Ship and boat building and repairing	16	55	
Professional & photographic equip., & watches	29	63	c
Professional equipment and supplies	23	60	
Photographic equip. and supplies	40	68	
Watches, clocks, & clockwork-oper. devices	28	63	
Miscellaneous manufacturing industries	16	55	
Non-durable goods			
Food and kindred products	16	55	c
Meat products	16	55	
Dairy products	22	59	
Can. & preserv. fruits, vegt. & sea foods	9	47	
Grain-mill products	14	53	
Bakery products	15	54	
Confectionery & related products	12	51	
Beverage industries	19	58	
Misc. food preparations & kindred prod.	11	50	
Not specified food industries	19	57	
Tobacco manufactures	2	26	
Textile mill products	6	42	c
Knitting mills	21	59	
Dyeing & finishing text. exc. knit goods	8	45	
Carpets, rugs, & other floor coverings	14	53	
Yarn, thread, & fabric mills	2	26	
Misc. textile mill products	10	49	
Apparel & other fabricated text. products	21	59	c

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Previous Score	Notes
Apparel & accessories	22	60	
Misc. fabricated text. prod.	17	56	
Paper & allied products	19	57	c
Pulp paper & paperboard mills	19	58	
Paperboard containers & boxes	17	56	
Misc. paper & pulp products	19	58	
Printing, publishing & allied industries	31	64	
Chemicals & allied products	20	59	c
Synthetic fibers	9	47	
Drugs & medicines	26	62	
Paints, varnishes, & related products	15	54	
Misc. chemicals & allied products	23	60	
Petroleum & coal products	51	71	c
Petroleum refining	56	72	
Misc. petroleum & coal products	14	53	
Rubber products	22	60	
Leather & leather products	16	55	c
Leather: tanned, curried, & finished	10	49	
Footwear, except rubber	9	47	
Leather products, except footwear	14	53	
Not specified manufacturing industries	16	55	
Non-Manufacturing industries (ins). not reported	18	57	c

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Previous Score	Notes
Construction	18	57	
Railroads & railway express service	15	54	
Transportation, except railroad	23	60	
Telecommunications, utilities, & sanitary services	21	59	
Wholesale & retail trade	17	56	
Business & repair services	19	57	
Personal services	11	50	
Public administration	17	56	
All other industries (incl. not reported)	20	59	
Private Household Workers			
Housekeepers, private household	19	58	c
Living in	10	49	d
Living out	21	59	
Laundresses, private household	12	51	d
Living in	-	-	d
Living out	12	51	d
Private household workers (n.e.c.)	7	44	
Living in	12	51	
Living out	6	42	
Service Workers, Except Private Household			
Attendants, hospital & other institution	13	52	
Attendants, professional & personal service (n.e.c.)	26	62	
Attendants, recreation & amusement	19	58	
Barbers, beauticians, and manicurists	17	56	a

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Previous Score	Notes
Bartenders	19	58	a
Boarding & lodging housekeepers	30	64	
Bootblacks	8	46	a
Charwomen & cleaners	10	48	
Cooks, except private household	15	54	a
Counter & fountain workers	17	56	a
Elevator operators	10	48	
Firemen, fire protection	37	67	
Guards, watchmen, & doorkeepers	18	57	a
Housekeepers & stewards, except private household	31	65	
Janitors & sextons	9	47	a
Marshals and constables	21	59	
Midwives	37	67	d
Policemen and detectives	39	68	c
Government	40	68	a
Private	36	66	
Porters	4	36	
Practical nurses	22	59	
Sheriffs and bailiffs	34	66	
Ushers, recreation and amusement	25	61	
Waiters and waitresses	16	55	a
Watchmen (crossing) & bridge tenders	17	56	
Service workers, except private household (n.e.c.)	11	50	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Previous Score	Notes
Farm Laborers and Foremen			
Farm foremen	20	59	
Farm laborers, wage workers	6	42	b
Farm laborers, unpaid family workers	17	56	
Farm service laborers, self-employed	22	60	
Laborers, Except Farm and Mine			
Fisherman and oystermen	10	49	b
Garage laborers, and car washers and greasers	8	46	
Gardeners, except farm and groundskeepers	11	50	
Longshoremen and stevedores	11	50	b
Lumbermen, raftsmen, and wood choppers	4	36	b
Teamsters	8	46	
Laborers (n.e.c.)			
Manufacturing	8	45	c
Durable goods			
Sawmills, planing mills, & misc. wood products	3	33	c
Sawmills, planing mills, and mill work	3	34	
Misc. wood products	2	23	
Furniture and fixtures	5	40	
Stone, clay, and glass products	7	43	c
Glass & glass products	14	53	
Cement, concrete, gypsum, & plaster prod.	5	39	
Structural clay products	5	39	
Pottery and related products	7	44	
Misc. nonmetallic mineral & stone products	5	38	

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Previous Score	Notes
Metal industries	7	44	c
Primary metal industries	7	44	c
Blast furnaces, steel works, & rolling mills	9	46	
Other primary iron & steel industries	4	37	
Primary nonferrous industries	6	42	
Fabricated metal ind. (incl. not spec. metal)	7	44	c
Fabricated steel products	7	44	
Fabricated nonferrous metal products	10	49	
Not specified metal industries	9	46	d
Machinery, except electrical	11	50	c
Agricultural machinery and tractors	14	53	
Office and store machines and devices	17	56	d
Misc. machinery	10	48	
Electrical machinery, equipment, & supplies	14	53	
Transportation equipment	11	49	c
Motor vehicles & motor vehicle equip.	13	52	
Aircraft & parts	15	54	
Ship & boat bldg. and repairing	2	28	
Railroad & misc. trans. equip.	8	45	
Professional & photographic equip. & watches	11	50	
Professional equip. & supplies	10	49	d
Photographic equip. & supplies	16	55	d
Watches, Clocks, & clockwork-oper. devices	-	-	
Miscellaneous manufacturing industries	12	50	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Previous Score	Notes
Nondurable goods			
Food & kindred Products	9	47	c
Meat products	8	45	
Dairy products	13	52	
Can. & fruits, vegt. & sea foods	6	42	
Grain-mill products	6	42	
Bakery products	10	48	
Confectionery and related products	10	48	
Beverage industries	16	55	
Misc. food preparations & kindred	5	40	
Not specified food industries	14	53	
Tobacco manufactures	0	20	f
Textile mill products	3	33	c
Knitting mills	4	36	d
Dyeing & finishing text. exc. knit goods	9	46	d
Carpets, rugs, & other floor coverings	14	53	
Yarn, thread, & fabric mills	1	22	
Misc. textile mill products	6	41	d
Apparel & other fabricated textile products	9	47	c
Apparel & accessories	11	49	
Misc. fabricated textile products	6	42	d
Paper & allied products	7	43	c
Pulp, paper, & paperboard mills	6	41	
Paperboard containers & boxes	10	48	
Misc. paper & pulp products	8	45	

APPENDIX F--continued

Occupations by Major Occupation Group	Socio-Economic Index	Equivalent NORC Previous Score	Notes
Printing, publ. & allied industries	23	60	
Chemicals and allied products	8	45	c
Synthetic fibers	4	37	
Drugs and medicines	22	60	d
Paints, varnishes, & related products	8	46	
Misc. chemicals & allied products	8	45	
Petroleum & coal products	22	60	c
Petroleum refining	26	62	
Misc. petroleum & coal products	3	28	
Rubber products	12	51	
Leather and leather products	6	43	c
Leather: tanned, curried, & finished	2	28	
Footwear, except rubber	10	49	
Leather products, except footwear	12	51	d
Not specified manufacturing industries	8	45	
Non-manufacturing industries (incl. not reported)	7	44	b, c,
Construction	7	43	
Railroads & railway express service	3	34	
Transportation, except railroad	9	47	
Telecommunications, utilities & sanitary serv.	6	43	
Wholesale & retail trade	12	51	
Business & repair services	9	47	
Personal services	5	39	
Public administration	7	43	
All other industries (incl. not reported)	6	41	
Occupation not reported	19	57	

Explanation of Notes:

a. One of 45 occupations used in deriving socio-economic index from predictors of NORC prestige ratings.

b. One of 16 occupations poorly or partially matched to NORC titles.

c. Occupation omitted from statistical analysis of 425 detailed occupations, because it is a grouping of specific titles listed below it.

d. Occupation omitted from statistical analysis of 425 detailed occupations, because census data are based on fewer than 100 sample cases (corresponding to an estimated population of fewer than 3,000 males).

e. Occupation omitted from statistical analysis. The census data do not pertain to current members of the armed forces, but to currently unemployed civilians whose last occupational experience was in the armed forces. The data for this occupation do not, therefore, describe soldiers, sailors, and related occupations.

f. The computed value of the socio-economic index for this occupation was -3. To avoid the inconvenience of having an index value with a negative sign, this index value was arbitrarily changed to zero, which remains the lowest value in the table.

APPENDIX G

Elementary • GRADES 4-5-6-7-8 • form AA

California Test of Personality

1953 Revision

Devised by

LOUIS P. THORPE, WILLIS W. CLARK, AND ERNEST W. TIEGS

PUPILS: PLEASE COMPLETE THE FOLLOWING INFORMATION:

1. I am a _____boy _____girl.

2. The person responsible for supporting me is:

   _____my mother _____my father _____other

3. The person responsible for supporting me works as a _____

   _____(name of occupation).

4. The highest grade completed by the person who supports me:
   (circle the one which applies)

   Grade: 1 2 3 4 5 6 7 8 9 10 11 12

   College: 1 year, 2 years, 3 years, 4 years, over 4 years.

INSTRUCTIONS TO PUPILS:

This booklet contains some questions which can be answered YES or NO. Your answers will show what you usually think, how you usually feel, or what you usually do about things. Work as fast as you can without making mistakes.

DO NOT TURN THIS PAGE UNTIL TOLD TO DO SO.

PUBLISHED BY CALIFORNIA TEST BUREAU, DEL MONTE RESEARCH PARK, MONTEREY, CALIFORNIA
BRANCH OFFICES: NEW CUMBERLAND, PA.; MADISON, WIS.; DALLAS, TEXAS
9 8 7 6 5 4 3 2 1

INSTRUCTIONS TO PUPILS

DO NOT WRITE OR MARK ON THIS TEST BOOKLET UNLESS TOLD TO DO SO BY THE EXAMINER.

You are to decide for each question whether the answer is YES or NO and mark it as you are told. The following are two sample questions:

SAMPLES

A. Do you have a dog at home? **YES NO**

B. Can you ride a bicycle? **YES NO**

DIRECTIONS FOR MARKING ANSWERS

ON ANSWER SHEETS

Make a heavy black mark under the word YES or NO to show your answer. If you have a dog at home, you would mark under the YES for question A as shown below. If you cannot ride a bicycle, you would mark under the NO for question B as shown below.

Remember, you mark under the word that shows your answer. Now find Samples A and B on your answer sheet and show your answer for each by marking YES or NO. Do it now. Find answer row number 1 on your answer sheet. Now wait until the examiner tells you to begin.

ON TEST BOOKLETS

Draw a circle around the word YES or NO, whichever shows your answer. If you have a dog at home, draw a circle around the word YES in Sample A above; if not, draw a circle around the word NO. Do it now.

If you can ride a bicycle, draw a circle around the word YES in Sample B above; if not, draw a circle around the word NO. Do it now.

Now wait until the examiner tells you to begin.

After the examiner tells you to begin, go right on from one page to another until you have finished the test or are told to stop. Work as fast as you can without making mistakes. Now look at item 1 on page 3. Ready, begin.

SECTION 1 A

1. Do you usually keep at your work until it is done? YES NO
2. Do you usually apologize when you are wrong? YES NO
3. Do you help other boys and girls have a good time at parties? YES NO
4. Do you usually believe what other boys or girls tell you? YES NO
5. Is it easy for you to recite or talk in class? YES NO
6. When you have some free time, do you usually ask your parents or teacher what to do? YES NO
7. Do you usually go to bed on time, even when you wish to stay up? YES NO
8. Is it hard to do your work when someone blames you for something? YES NO
9. Can you often get boys and girls to do what you want them to? YES NO
10. Do your parents or teachers usually need to tell you to do your work? YES NO
11. If you are a boy, do you talk to new girls? If you are a girl, do you talk to new boys ? YES NO
12. Would you rather plan your own work than to have someone else plan it for you? YES NO

GO RIGHT ON TO THE NEXT COLUMN

Section 1 A
(number right) .....

SECTION 1 B

13. Do your friends generally think that your ideas are good? YES NO
14. Do people often do nice things for you? YES NO
15. Do you wish that your father (or mother) had a better job? YES NO
16. Are your friends and classmates usually interested in the things you do? YES NO
17. Do your classmates seem to think that you are not a good friend? YES NO
18. Do your friends and classmates often want to help you? YES NO
19. Are you sometimes cheated when you trade things? YES NO
20. Do your classmates and friends usually feel that they know more than you do? YES NO
21. Do your folks seem to think that you are doing well? YES NO
22. Can you do most of the things you try? YES NO
23. Do people often think that you cannot do things very well? YES NO
24. Do most of your friends and classmates think you are bright? YES NO

GO RIGHT ON TO THE NEXT PAGE

Section 1 B
(number right) .....

SECTION 1 C

25. Do you feel that your folks boss you too much? YES NO

26. Are you allowed enough time to play? YES NO

27. May you usually bring your friends home when you want to? YES NO

28. Do others usually decide to which parties you may go? YES NO

29. May you usually do what you want to during your spare time? YES NO

30. Are you prevented from doing most of the things you want to? YES NO

31. Do your folks often stop you from going around with your friends? YES NO

32. Do you have a chance to see many new things? YES NO

33. Are you given some spending money? YES NO

34. Do your folks stop you from taking short walks with your friends? YES NO

35. Are you punished for lots of little things? YES NO

36. Do some people try to rule you so much that you don't like it? YES NO

GO RIGHT ON TO THE NEXT COLUMN

Section 1 C
(number right) .....

SECTION 1 D

37. Do pets and animals make friends with you easily? YES NO

38. Are you proud of your school? YES NO

39. Do your classmates think you cannot do well in school? YES NO

40. Are you as well and strong as most boys and girls? YES NO

41. Are your cousins, aunts, uncles, or grandparents as nice as those of most of your friends? YES NO

42. Are the members of your family usually good to you? YES NO

43. Do you often think that nobody likes you? YES NO

44. Do you feel that most of your classmates are glad that you are a member of the class? YES NO

45. Do you have just a few friends? YES NO

46. Do you often wish you had some other parents? YES NO

47. Is it hard to find friends who will keep your secrets? YES NO

48. Do the boys and girls usually invite you to their parties? YES NO

GO RIGHT ON TO THE NEXT PAGE

Section 1 D
(number right) .....

SECTION 1 E

49. Have people often been so unfair that you gave up? YES NO

50. Would you rather stay away from most parties? YES NO

51. Does it make you shy to have everyone look at you when you enter a room? YES NO

52. Are you often greatly discouraged about many things that are important to you? YES NO

53. Do your friends or your work often make you worry? YES NO

54. Is your work often so hard that you stop trying? YES NO

55. Are people often so unkind or unfair that it makes you feel bad? YES NO

56. Do your friends or classmates often say or do things that hurt your feelings? YES NO

57. Do people often try to cheat you or do mean things to you? YES NO

58. Are you often with people who have so little interest in you that you feel lonesome? YES NO

59. Are your studies or your life so dull that you often think about many other things? YES NO

60. Are people often mean or unfair to you? YES NO

GO RIGHT ON TO THE NEXT COLUMN

Section 1 E
(number right) .....

SECTION 1 F

61. Do you often have dizzy spells? YES NO

62. Do you often have bad dreams? YES NO

63. Do you often bite your fingernails? YES NO

64. Do you seem to have more headaches than most children? YES NO

65. Is it hard for you to keep from being restless much of the time? YES NO

66. Do you often find you are not hungry at meal time? YES NO

67. Do you catch cold easily? YES NO

68. Do you often feel tired before noon? YES NO

69. Do you believe that you have more bad dreams than most of the boys and girls? YES NO

70. Do you often feel sick to your stomach? YES NO

71. Do you often have sneezing spells? YES NO

72. Do your eyes hurt often? YES NO

GO

Section 1 F
(number right) .....

SECTION 2 A

73. Is it all right to cheat in a game when the umpire is not looking? YES NO

74. Is it all right to disobey teachers if you think they are not fair to you? YES NO

75. Should one return things to people who won't return things they borrow? YES NO

76. Is it all right to take things you need if you have no money? YES NO

77. Is it necessary to thank those who have helped you? YES NO

78. Do children need to obey their fathers or mothers even when their friends tell them not to? YES NO

79. If a person finds something, does he have a right to keep it or sell it? YES NO

80. Do boys and girls need to do what their teachers say is right? YES NO

81. Should boys and girls ask their parents for permission to do things? YES NO

82. Should children be nice to people they don't like? YES NO

83. Is it all right for children to cry or whine when their parents keep them home from a show? YES NO

84. When people get sick or are in trouble, is it usually their own fault? YES NO

GO RIGHT ON TO THE NEXT COLUMN

Section 2 A
(number right) .....

SECTION 2 B

85. Do you let people know you are right no matter what they say? YES NO

86. Do you try games at parties even if you haven't played them before? YES NO

87. Do you help new pupils to talk to other children? YES NO

88. Does it make you feel angry when you lose in games at parties? YES NO

89. Do you usually help other boys and girls have a good time? YES NO

90. Is it hard for you to talk to people as soon as you meet them? YES NO

91. Do you usually act friendly to people you do not like? YES NO

92. Do you often change your plans in order to help people? YES NO

93. Do you usually forget the names of people you meet? YES NO

94. Do the boys and girls seem to think you are nice to them? YES NO

95. Do you usually keep from showing your temper when you are angry? YES NO

96. Do you talk to new children at school? YES NO

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Section 2 B
(number right) .....

SECTION 2 C

97. Do you like to scare or push smaller boys and girls? YES NO

98. Have unfair people often said that you made trouble for them? YES NO

99. Do you often make friends or classmates do things they don't want to? YES NO

100. Is it hard to make people remember how well you can do things? YES NO

101. Do people often act so mean that you have to be nasty to them? YES NO

102. Do you often have to make a "fuss" or "act up" to get what you deserve? YES NO

103. Is anyone at school so mean that you tear, or cut, or break things? YES NO

104. Are people often so unfair that you lose your temper? YES NO

105. Is someone at home so mean that you often have to quarrel? YES NO

106. Do you sometimes need something so much that it is all right to take it? YES NO

107. Do classmates often quarrel with you? YES NO

108. Do people often ask you to do such hard or foolish things that you won't do them? YES NO

GO RIGHT ON TO THE NEXT COLUMN

Section 2 C
(number right) .....

SECTION 2 D

109. Do your folks seem to think that you are just as good as they are? YES NO

110. Do you have a hard time because it seems that your folks hardly ever have enough money? YES NO

111. Are you unhappy because your folks do not care about the things you like? YES NO

112. When your folks make you mind are they usually nice to you about it? YES NO

113. Do your folks often claim that you are not as nice to them as you should be? YES NO

114. Do you like both of your parents about the same? YES NO

115. Do you feel that your folks fuss at you instead of helping you? YES NO

116. Do you sometimes feel like running away from home? YES NO

117. Do you try to keep boys and girls away from your home because it isn't as nice as theirs? YES NO

118. Does it seem to you that your folks at home often treat you mean? YES NO

119. Do you feel that no one at home loves you? YES NO

120. Do you feel that too many people at home try to boss you? YES NO

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Section 2 D
(number right) .....

SECTION 2 E

121. Do you think that the boys and girls at school like you as well as they should? YES NO

122. Do you think that the children would be happier if the teacher were not so strict? YES NO

123. Is it fun to do nice things for some of the other boys or girls? YES NO

124. Is school work so hard that you are afraid you will fail? YES NO

125. Do your schoolmates seem to think that you are nice to them? YES NO

126. Does it seem to you that some of the teachers "have it in for" pupils? YES NO

127. Do many of the children get along with the teacher much better than you do? YES NO

128. Would you like to stay home from school a lot if it were right to do so? YES NO

129. Are most of the boys and girls at school so bad that you try to stay away from them? YES NO

130. Have you found that some of the teachers do not like to be with the boys and girls? YES NO

131. Do many of the other boys or girls claim that they play games more fairly than you do? YES NO

132. Are the boys and girls at school usually nice to you? YES NO

GO RIGHT ON TO THE NEXT COLUMN

Section 2 E (number right) .....

SECTION 2 F

133. Do you visit many of the interesting places near where you live? YES NO

134. Do you think there are too few interesting places near your home? YES NO

135. Do you sometimes do things to make the place in which you live look nicer? YES NO

136. Do you ever help clean up things near your home? YES NO

137. Do you take good care of your own pets or help with other people's pets? YES NO

138. Do you sometimes help other people? YES NO

139. Do you try to get your friends to obey the laws? YES NO

140. Do you help children keep away from places where they might get sick? YES NO

141. Do you dislike many of the people who live near your home? YES NO

142. Is it all right to do what you please if the police are not around? YES NO

143. Does it make you glad to see the people living near you get along fine? YES NO

144. Would you like to have things look better around your home? YES NO

STOP NOW WAIT FOR FURTHER INSTRUCTIONS

Section 2 F (number right) .....