6-1-1948

An investigation of some factors requiring greater stress on guidance

Harry E. Kramer
Indiana State University

AN INVESTIGATION OF SOME FACTORS REQUIRING GREATER STRESS ON GUIDANCE

A Thesis

Presented to

the Faculty of the Department of Education

Indiana State Teachers College

In Partial Fulfillment

of the Requirements for the Degree

Master of Science in Education

---

by

Harry E. Kramer

June, 1948

The thesis of Harry E. Kramer,
Contribution of the Graduate School, Indiana State
Teachers College, Number 588, under the title

AN INVESTIGATION OF SOME FACTORS
REQUIRING GREATER STRESS ON GUIDANCE

is hereby approved as counting toward the completion
of the Master's degree in the amount of 8 hours'
credit.

Committee on thesis:

Chas H Jamison
Lloyd N Smith
Helen Edeler, Chairman

Representative of English Department:

George Fo Dweck

Date of Acceptance June 5, 1948

ACKNOWLEDGMENTS

The writer is indebted to Mr. Sheldon Bross, Principal, and Mr. William Campbell, Miss Genevieve Meers, and Miss Miriam Taylor of the John Greer High School faculty of Hoopeston, Illinois, for their assistance in the administration of the tests.

TABLE OF CONTENTS

CHAPTER

LIST OF TABLES

TABLE PAGE

CHAPTER I

THE PROBLEM AND DEFINITION OF THE TERM USED

For many years most educators failed to see the need for guidance, or at least failed to comprehend its importance. While generally thought of as something akin to recent times, recognition of the need of guidance goes back many centuries. Cicero, in his essay "On Duties" (Book I, Chapters 32-33) in the first century B.C., states that "We must decide what manner of men we wish to be and what calling in life we would follow; and this is the most difficult problem in the world".[1]

Our changing complex society makes urgent a program of guidance designed to aid the individual not only in his vocational pursuits, but in all phases of desirable living.

I. THE PROBLEM

Statement of the problem. It was the purpose of this study (1) to show present day patterns of American life making guidance necessary; (2) to disclose factors creating necessity for greater stress on guidance, especially in the secondary school; and (3) to show why guidance programs are necessary, as revealed through a comparative

---

[1] John M. Brewer, History of Vocational Guidance (New York: Harper and Brothers, 1942), p. 13.

questionnaire and standardized test study.

Method. In showing present day patterns of American life making guidance necessary, and in attempting to disclose some of the important factors creating a necessity for greater stress on guidance, the writer used library procedure by drawing on the writings of recognized educators and professional writers to substantiate his own observations in both industry and education over a period of nearly twenty years.

In the third and final phase of the study a group of students was selected and given a questionnaire and two standardized tests. The first, the Initial Occupational Inquiry, was devised by the writer to secure data concerning the students' unguided occupational choices and their future educational plans.

The second step of the third phase was the administration of the Kuder Preference Record to determine by a standardized test the occupational interests of the students, and to compare the results of this preference record with those of the questionnaire.

The third step was the administration of aptitude tests. These were given the individual students in the areas indicated by their occupational choice on the Initial Occupational Inquiry with the results of the three steps being used to prove or disprove the imperative need for guidance.

Importance of the study. The school of today is not only an institution providing instruction in languages, science, literature, history, fine arts, and vocational subjects, but it must also be, equally as much, an agency for helping students to study themselves, to understand their interests, needs, and capacities, and the educational and vocational opportunities open to them that they may adapt themselves to pursuits most likely to lead to success and happiness.

In contributing to Erickson and Happ[2], F. N. Johnston states that the ultimate objective of guidance as a function of the modern school is:

> To equip students with an outlook on life which will enable them to become socially, mentally, and vocationally well-adjusted citizens of our modern society.

The purpose of this study is to show the need for comprehensive guidance in our secondary schools and at the same time suggest the loss of use of potential abilities and talent through lack of proper guidance of the youth of today.

II. Definitions of Guidance

Guidance. Before any attempt is made to outline the responsibilities for guidance of pupils in our schools, some

---

[2] Clifford E. Erickson and Marion C. Happ, Guidance Practices at Work (New York: McGraw-Hill Company, 1946), p. 8.

definition of guidance should be accepted as a basis upon which a guidance program might be built.

There have been almost as many different definitions of guidance as there have been writers on the subject. Some few differ radically from others as to what constitutes good guidance; however, it will be found that most guidance-minded educators agree, at least fundamentally, on what guidance is and upon its implications and functions.

Typical of the definitions of guidance is that given by Carl M. Horn[3] who says:

> Guidance is the process of assisting the individual in determining, analyzing, and understanding his interests, aptitudes, abilities, limitations, opportunities, problems, and needs, and in the light of this knowledge to make wise choices and adjustments in order that he may better serve society and live more happily.

Throughout the report of this investigation, the term "guidance" shall be interpreted on the basis of the definigiven above.

Limitations. All the testing was done in a single school. However, students from two different grades, and both sexes took part. Also, the writer had to interpret some answers given on the Initial Occupational Inquiry and personally select the aptitude tests which, in his judgment, best fitted the occupations chosen by the subjects.

---

[3] Carl M. Horn, Wartime Guidance in Vocational Education (Chicago: American Technical Society, 1943), p. 2.

CHAPTER II

REVIEW OF THE LITERATURE EMPHASIZING THE NEED FOR GUIDANCE

I. RESPONSIBILITIES FOR GUIDANCE OF PUPILS

One of the more recent listings of the functions of guidance is the following by Hamrin and Erickson.[1]

I. Guidance attempts to help the individual students learn more of their present educational opportunities.

II. It strives to help them become adjusted to their present educational situation.

III. It endeavors to help them learn more of themselves, their interests, abilities, possibilities, and limitations.

IV. It aids them to learn of possible future educational and vocational opportunities.

V. It assists them to plan wisely, both for the immediate present and for the future, by stimulating them to relate themselves in their thinking to possible educational and vocational opportunities.

VI. It tries to help them to become adjusted to their new environment whether it be in school or at work after they have left the educational unit with which they have been connected.

If a guidance program is to be developed in our schools that will adequately meet its responsibilities to pupils it must contain certain activities which are characteristic of efficient guidance. These are:

I. Study of the individual through observation, interviewing, and testing to determine:

A. Intellectual capacity

---

[1] Shirley A. Hamrin and Clifford E. Erickson, Guidance in the Secondary School (New York: D. Appleton-Century Company, 1939), p. 67.

B. Achievement
C. Personal characteristics
D. Interests and aptitudes
E. Social adjustments
F. Home environment

II. Cumulative recording of pertinent data about the individual.

III. Maintenance of adequate health facilities.

IV. Orienting the student to the activities and policies of the school.

V. Adequate educational and vocational guidance.

VI. Opportunity for help and advice on personal problems, particularly clinical.

VII. Instruction in occupational information.[2]

Today's modern secondary school must face demands which a few years ago were either the responsibility of the home, the church, or some other agency, or were completely unrecognized.

If the secondary school of today is to meet these demands, our conception of education and the philosophy in support of it must change. Along with, and partly created by, the increased demands made upon the modern secondary school there has grown an ever increasing need for guidance. Recent changes in America have developed the present day complex pattern of life which clearly shows the imperative

---

[2] New York State Counselors Association, Practical Handbook for Counselors (Chicago: Science Research Associates, 1945), p. 16.

need for greater stress on guidance.

The school of today must concern itself not only with educational and vocational guidance, but with guidance for living in the political, social, and religious world of today, as well as guidance in health, morals, and civic responsibility and leadership.

In the present era changes occur so rapidly that we have scarcely adjusted ourselves to one custom of life when that becomes outmoded. Because of this situation the school is faced with the responsibility of guiding youth so that each immature and bewildered adolescent may make appropriate individual adjustments to the changed social and economic conditions.

Many of the trends and conditions of our present day society make mandatory the responsibility of the school for guidance of pupils.

II. CHANGES CREATING A GREATER NEED FOR GUIDANCE

Changes in the home. All recent sociologies have emphasized the changes in the general character of family life produced by modern conditions. The home, which was once a self-sufficient unit, had in previous generations furnished the child with the rich experiences of sharing occupational tasks with parents. Today young people seldom have many chores or family tasks and responsibilities, and have as a result lost certain values which were a natural part of the earlier patterns of family life.

True, some gain is linked with the loss. Americans point with pride to the commercial and social agencies which have taken over some of the responsibilities of the home. They buy things which were formerly made with much difficulty by the members of the family, but too readily forget that the making of these things created a common core of shared and essential experiences. Where modern conditions, especially in urban life, have deprived the child of these experiences, the school must supply others, such as constructive activities, and training in individual responsibility and social cooperation.

While the home may, either consciously or unconsciously, evade its responsibility, the school as a "delegated" agency cannot escape its task of guidance.

Recognizing that modern life calls for specific and general training, and realizing that in a great many instances the home fails to do, or is incapable of doing, its share, the modern school must fulfill its obligation by providing a definite program of guidance.

The duties of the guidance program imposed by the vast change in the character of family life are not confined wholly to youth. Not only is the school responsible for the guidance of pupils, but it must also help parents to realize and understand the changes which are taking place in the modern social order and undertake their training in understanding the demands which society makes on all of the agencies which act on pupils.

Changed conditions of industry and labor. Industry and commerce have made, and are still making, vast changes. American industrial expansion has been marked not only by a tremendous increase in the amount of production, but also in the number of its different products.

Steel production in the United States, which has for years been called "the barometer of American industry", increased from 6,500 tons yearly in 1950 to 188,325 tons yearly in 1900 and is now in excess of 25,000,000 tons annually.[3]

---

[3] Joseph T. Ryerson, 100 Years of Peace and War (Chicago: The Ryerson Steel Company, 1942), p. 12.

While industry in general has experienced this same phenomenal growth, many newer industries have been created and added to the amazing industrial expansion of America, creating new occupations, causing abandonment of many older ones, and having a far-reaching effect upon our socio-economic order.

The creation of new industries has accelerated the demand for workers in certain occupations and at the same time brought about a decline in the need for workers in other occupations. The automobile industry has, for instance, had a marked effect upon the labor market. It has tremendously increased the need for skilled workers, especially in the fields of skilled metal work, but has, at the same time, virtually made non-existent the skilled occupations of harness maker, carriage fitter, wagon builder, and similar trades.

Another of the newer industries that is rapidly changing our occupational make-up is the plastics industry, which has already heavily invaded the area of the woodworker and certain types of metal and glass work.

Mass production has had a marked effect on occupations. Many occupations once classed as skilled work, and highly desirable as such, have been reduced to a status of semi-skilled occupations or in many instances even less than semi-skilled.

The physical state of most industries has changed tremendously in the last century. Fifty to one hundred years ago small family units were the rule rather than the exception, with only a few employees and manufacturing their products by direct methods, largely handwork. The Crane Company[4] is a good example of typical American industrial expansion.

In July 1855 the R. T. Crane Brass and Bell Foundry began operation in Chicago. The business was housed in a small one room wooden building, staffed by the owner and three employees, and equipped with crude and meager equipment. Progress and modernization have developed this simple hand-operated factory to the present Crane Company, world's largest manufacturers of valves and fittings. The original one room building has grown to an array of forty seven buildings covering 160 acres of ground, with more than 3½ million square feet of floor space. The original force composed of the owner and three employees has grown to 20,000 employees, representing hundreds of different occupations in place of the single original occupation of brass casting.

Supply and demand have caused an expansion of our economic system making possible the growth of industry in

---

[4] H. A. Countryman, Valve World (Chicago: Crane Company, 1944), p. 9.

such measure as shown by the Crane Company. However, such industrial growth would have been impossible without mass production, new machines, improved techniques, and continually expanded knowledge.

For example, consider the iron industry one hundred years ago (1848). Few men in those early days knew that iron is a metallic element which crystallizes in the isometric system, usually in the form of cubes, sometimes as octahedra. Few of them knew that iron is chemically a dyad or a triad, that its symbol is F_e, that it combines with oxygen to form F_eO, Fe_2O_3, and Fe_3O_4. For the most part all they knew was that if they heated it right and hammered it long enough they would get something they could work with. So they began investigating, experimenting, and trying the results of their experiments. New occupations were created in the iron industry. Chemists, metallurgists, and heat-treaters were added to the list of occupations, and they in turn developed new and different kinds of iron and steel. As new types of iron and steel appeared many new uses were found for them and many occupations were either created or expanded, thus adding to the growing list of established occupations.

Industrial modernization and expansion has not been solely confined to its effects upon the occupational adjustment of America. It shows vividly in every phase of

our modern social and economic order. It is reflected in our higher standard of living, increased leisure time, and in countless other ways.

All of this industrial growth and expansion bears tremendous implications for guidance. Not only must the youth be directed into occupational fields best suited to his needs and natural qualifications, but he must be given as much information as possible concerning the establishment of new occupations, the stability or lack of stability and future prospects of others, and whether or not his chosen field of work is in demand or in decline. He must be made aware of the possibilities of other fields of endeavor if his first choice is unstable or unsuited to his abilities.

Another important function of the guidance program is that of directing the youth into the proper attitude of social relationship and cooperation. The time when individuals worked alone or with only a few associates is gone. Success in almost any endeavor depends upon the ability of the individual to understand and exercise fundamental relationships.

It has been estimated[5] that sixty percent or over.

---

[5] John M. Brewer, "Causes of Discharge," Personnel Journal, 9:63 October, 1929.

of the discharges from business and industry are caused, not from lack of skill or technical knowledge, but from lack of right attitudes and of the understanding of fundamental relationships.

To attempt to list all of the major industrial developments of the last one hundred years would be a voluminous task and certainly too great a list for a study of this type. However, the writer felt that some attention should be called to at least a part of the developments that have had a telling effect on industry and labor in the last century.

The list on page 15, Table I,[6] shows a few of the major developments in industry that have affected not only our occupational interests, but in many instances other phases of American life.

Changes in transportation. New and expanded means of transportation have had a marked effect upon modern life in nearly all countries of the world and especially in America. The United States contains less than seven percent of the world's population, but this seven percent possesses and uses thirty five percent of all the world's railroads and seventy percent of all the automobiles. In the

---

[6] Joseph T. Ryerson, 100 Years of Peace and War (Chicago: The Ryerson Steel Company, 1942), pp. 10-24.

TABLE I

AMERICAN INDUSTRIAL DEVELOPMENTS

1840	John Roebling manufactured the first iron rope.
1841	The first fire brick was developed.
1844	Goodyear first vulcanized rubber.
1845	Fitch developed the turret lathe.
1850	William Kelly developed the pneumatic process of steel manufacture.
1851	Brass and copper seamless tubing first manufactured.
1852	Otis developed the elevator.
1856	Bessemer steel process developed.
1858	Atlantic cable completed.
1859	Pullman built the first sleeping car.
1859	Edwin Drake drilled the first oil well.
1860	Zinc produced commercially for the first time in America.
1862	The first steel analysis laboratory established.
1866	Nobel invented dynamite.
1867	Open hearth steel process developed.
1867	Brown and Sharpe brought out the micrometer caliper.
1869	Westinghouse patented the air brake.
1871	Sand blasting was invented.
1873	Janney developed the automatic car coupler.
1876	Alexander Bell's first telephone was completed.
1878	The first moving picture shown in public.
1878	The first phonograph invented.
1879	James Ritty built the first cash register.
1880	Edison patented the first incandescent electric light.
1883	Page started the woven wire fence industry.
1884	Merganthaler invented the first linotype.
1886	Hall developed the electrolytic production of aluminum.
1892	The addressograph was invented.
1895	Gillette introduced thin flexible razor blades.
1898	One cylinder automobiles placed on the market.
1898	Radium was discovered.
1903	The Wright brothers first flew at Kitty Hawk.
1907	DeForrest invented the audion tube.
1908	Carbon tetrachloride first manufactured.
1909	Bakelite opened the field of plastics.
1920	The first radio broadcast for public use.
1928	The first autogyro was successfully flown.
1930	First experimental television transmitter developed.
1930	Birdseye invented quick freezing.
1940	America contained 50 million radios, 32 million motor vehicles, 23 million homes with electricity, over half of the world's telephones, and half of the world's iron.

United States there is an automobile for every five persons.

There can be no question but that transportation by auto and bus have had a tremendous effect for good in our educational scheme. It has made possible the abandonment of small inefficient schools, and the transportation of pupils to larger, more effective, and efficient schools with far broader and richer educational programs. But the common and casual use of automobiles has added to the demands on the school for an adequate guidance program.

Automobiles have in a great many instances removed social contact between boys and girls from the home and church to the seclusion of side roads and similar places. The school cannot fully complete its function if it fails to compensate for this educationally, and it is in the area of social, ethical, and moral guidance that the school can do much for the young people in this particular phase of modern life.

Aviation is another field wherein the potentials of expansion are so clear that even the least imaginative persons are stirred by the perspective. The pressures of the recent war served to crowd decades of aeronautical improvement into a few years. Many of the inventions and developments wrought for destructive purposes are being adapted to constructive peacetime purposes. Electronic devices designed to direct deadly fire, to detect approach-

ing planes, and to locate invisible targets are being used to make ocean and aerial travel safer and easier, and to make accidents less likely.

Great systems of passenger and freight service through the skies now girdle the globe. One may now go to a local airport one day, board an airliner, and arrive the next day at destinations almost on the other side of the world.

> There is little question but that it will be only a short time until India, China, Australia, Africa, or any point on the face of the earth will be a little more than an overnight trip.[7]

Air transportation is not limited to commercial airlines alone; the growing thousands of privately owned small planes are altering the quality of modern life, much as it was revolutionized by the automobile a generation ago. New industries are emerging from aviation, as well as an array of new trades, professions, and industries servicing aviation.

World War II served to bring into wider use the principle of "reactive propulsion" commonly called rocket propulsion. It was used to fire guns, propel gliders, and made possible the anti-tank "bazooka". Jet propelled airplanes are already in production and use, bringing the

---

[7] Major Alexander P. DeSeversky, "Air Age," The American Weekly, 37:11 August 29, 1943.

speed of planes up to where they now travel faster than the speed of a bullet.

> On August 20, 1947 Commander Turner F. Caldwell U.S.N. flying a Navy jet-propelled D-558 Douglass Skystreak set a new speed mark of 640.7 miles per hour.[8]

The speed of a bullet fired from a large caliber automatic army pistol has been measured at approximately 574 miles per hour.

Science and modern life. Of all the factors contributing to the changes affecting modern life the advancement of science is outstanding. New scientific discoveries have affected practically every phase of living in modern America.

Scientists inform us that there has been only a beginning in the exploration of new frontiers, not only of chemistry but of medicine, light metals, and synthetics.

Materials for new varieties of textiles drawn from coal, air, natural gas, cellulose, casein, glass, soybeans, potato starch, and milk are already available.[9]

Fats and oils for commercial use have already been made from coal and petroleum, and scientists have indicated the almost certain use of edible fats to be made from these base materials.

---

[8] Colonel Albert Boyd, U.S.A.A.F. "I Flew Faster Than a Bullet," Coronet 23:11 December, 1947.

[9] Eric Johnston, America Unlimited (New York: Doubleday, Doran and Company, 1944), p. 128.

A new branch of science called chemurgy is converting familiar farm products into industrial materials. This conversion is now providing the raw materials for dozens of manufactured items. Farm products such as the peanut, which has found use as the base material for over fifty manufactured products, both edible and industrial, have added a new dimension to the opportunities of farming occupations.

The extension of the miracles of radio and television, the science of electronics, offers almost inexhaustible possibilities for business and occupational ventures.

Devices are already in use for measuring speed, matching colors, measuring and controlling temperatures and humidity, detecting flaws in metal of almost unlimited thickness, detecting gas and smoke, sorting and grading various objects, providing burglar alarms and signal systems, opening doors, automatic calculations, and fulfilling a long array of medical and diagnostic purposes. A single idea or invention may double the nation's sources of wealth, bringing abundance and occupational opportunity to many people.

Research chemists have proved the practicability of the use of vitamins, hormones, and other ingredients and powers that will extend and enlarge immeasurably the health and vitality of the human body, and their use in the productivity of livestock is now being explored.

Few people, today, have not heard of the splitting of the atom. Accomplished after years of trial and error, the splitting of the atom has brought into view of all people the terrific force of the atomic bomb. The science of atomic energy, however, is still in its infancy. The mind of mankind is staggered by contemplation of the unknown power still locked away in the atom and the endless and amazing uses to which it may be put as a peacetime source of energy, power, and heat. Electric power has already revolutionized existence for millions of people, and properly used, there is every reason to believe that atomic power may well complete the process.

One of the best summaries of the change and effect in transportation has been made by William Fielding Ogburn[10] when he wrote:

> The railroads made possible the growth of cities and increased our urban population from fifteen to sixty percent. We called it the railroad era. Then came the automobile which dispersed our population into the suburbs and created the metropolitan era.
> Now comes the airplane, with its possibility of creating "one world".

---

[10] William Fielding Ogburn, "Air Age Transportation," Survey Graphic, 34:55 February, 1945.

III. EDUCATIONAL EXPANSION

Increase in school enrollment. Table II shows the increase in enrollment in the elementary and secondary schools of the United States as compared to the general increase in the population of the nation.

TABLE II

POPULATION AND SCHOOL ENROLLMENT 1890-1940[11]

School year	High school enrollment	Elementary school enrollment	United States population
1889-90	202,963	12,519,668	62,947,714
1895-96	380,493	13,998,585	
1899-1900	519,251	14,983,859	75,994,575
1905-06	722,692	15,919,378	
1909-10	915,061	16,898,791	91,973,266
1915-16	1,456,113	18,895,626	
1919-20	2,200,389	19,277,927	105,710,620
1925-26	3,757,468	20,984,002	
1929-30	4,399,422	21,278,593	122,775,046
1935-36	5,974,537	20,392,561	
1939-40	6,601,444	18,832,098	131,669,275

[11] Leslie L. Chisholm, Guiding Youth in the Secondary School (New York: American Book Company, 1945), p.16.

While the total population of the United States has increased 209.1 percent in the fifty year period 1890-1940 the secondary school enrollment in the United States has increased 3,257.00 percent.

TABLE III

INCREASE IN SCHOOL ENROLLMENT IN THE FIFTY YEAR PERIOD 1890-1940

	1889-90	1939-40	Increase	Percent
High school enrollment	202,963	6,601,444	6,398,581	3,257.0%
Elementary enrollment	12,519,668	18,832,098	6,312,430	150.4%
U.S. population	62,947,714	131,669,275	68,721,561	209.1%

It has been estimated that nearly seventy percent[12] of the youth of high school age are attending our secondary schools. This approach to universal education of young people is of tremendous significance in studying the problem of guidance and the factors making it so necessary in our secondary schools today.

> Whatever one may believe should be done, it seems inevitable that the school will accept the responsibilities for a greatly expanded constituency.[13]

There is no doubt that much of the responsibility for this "greatly expanded constituency" lies with the educators of America, who have in conjunction with our legislators created compulsory attendance laws in most states. However, there have been pressure groups working toward compulsory attendance which have not always had the best interests of the youth in mind. Chief among these groups have been some labor organizations who were interested in keeping down the flow of workers to the labor markets. Whatever reason, either constructive or selfish, the individuals or groups may have had, there is no doubt but that these laws have been a large factor in the increase in secondary enrollment.

Although the compulsory attendance laws in effect at the present time, in most states, require attendance at

---

[12] Harl R. Douglass, Secondary Education for Youth (Washington, D.C.: American Council on Education, 1937), p. 30.

[13] Ibid., p. 30.

school up to sixteen years of age, there has been an increasing exertion of influence to raise the compulsory attendance age to eighteen years, which if, and when, put into effect will make secondary education practically universal.

Socio-economic changes have also had a marked effect on the increase in secondary school enrollment. The shift from an agrarian to an urban nation and the shift from small family businesses to giant corporations and "big business" demanding experienced workers has made it difficult for the immature youth to secure employment.

Expanded curriculum. Most high schools have looked upon multiplication of courses as a means of program modernization, and few people would contest this as a step forward. However, without proper guidance, this becomes at best a confusing array of subject matter to many students entering, and even completing, high school.

Leonard[14] states that in 1890 the average public high school offered twenty or less subjects, those subjects being designed almost exclusively for students preparing to attend college. While today the average public high school offers forty six separate subjects, and these are subdivided into a multitudinous array of subject courses.

---

[14] J. Paul Leonard, Developing the Secondary Curriculum (New York: Rinehart and Company, 1946), p. 45.

> Los Angeles affords a good illustration of the large number of separate subject courses offered in a metropolitan high school system. The high schools of that city in 1931 offered a total of 469 separate subject courses.[15]

With an even smaller number of subjects and subject courses the average high school student is likely to find himself at a loss in selecting the proper subjects and courses adapted to his needs, interests, and abilities.

> To turn a pupil loose, unguided, with a modern curriculum of a hundred courses, or even twenty-five and expect him to get what is best for him is like turning a child loose in a modern delicatessen. He is apt to die of indigestion before he discovers or even stops to consider what constitutes a balanced meal.[16]

Vocational and professional schools. Various types of vocational and professional schools and institutions have arisen and multiplied in such tremendous numbers that it is now possible to find some kind of formal preparation offered for nearly every form of vocational and avocational activity.

More often than not the unguided youth is bewildered with the extent and array of the selection and fails to make any selection at all, or, if he does, his selection may often result in wasted effort. The inevitable result is that many of these undecided young people drift aimlessly along in spite of unusual abilities that many of them possess for certain occupations or activities.

---

[15] Ibid., p. 48.

[16] Leslie L. Chisholm, Guiding Youth in the Secondary School (New York: American Book Company, 1945), p. 19.

Properly guided, these young people could be directed to an activity or an occupation in which they might use their talents to best advantage, both to themselves and to society.

Parental attitudes and the school. Although most high schools may justly boast of the increased opportunities they offer, there still has been no system devised whereby the student may be completely educated without some influence on the part of parents. The average student is under the direct influence of his instructors six hours a day for 180 days per year, which means that much more than one-half of the child's time is spent outside and away from the direct influence of the school. This fact alone should place upon the parents or guardians some responsibilities for carrying on the educational processes being attempted by the school. Some of the more important responsibilities of parents and mature individuals close to the students should be the development of proper attitudes, responsibility, cooperation, and seriousness of purpose in life within the student.

Many parents of today, through lack of understanding of the aims of the school or through either lack of interest or neglect, have entirely shunned this responsibility which older generations were more willing to assume.

> Our forefathers did not expect education to make up, at public expense, for their private deficiencies. They expected it to strengthen and broaden the . . . training which they, at home, were giving their children.[17]

The changes which have occurred in the home have eliminated many of the opportunities for guidance, and the changed attitude of many parents, who expect the school to do its job of training and theirs as well, places a greater stress on the need for organized guidance in the school.

This need is clearly shown by the findings of the New York State Board of Regents. In 1939, after three years' study, the Regents' Inquiry into secondary school education in New York State[18] concluded that:

> In spite of the fact that New York's schools are as good as those in other states, we are turning out a vast number of boys and girls each year who are not ready for adult life. They have no idea what work means, what sorts of opportunities there are, how to look for work, or how to work when they get a job. They are not prepared to be useful citizens or to enter community or home life. They do not know how to take care of their own bodies or minds. Few have implanted in them any seeds of individual inner life and growth, or any skill in working with others.

There is no reason to believe this statement would be less true in any other state or community whose schools have failed to provide an adequate guidance program.

One of the most prevalent attitudes among pupils and parents alike is the aspiration of young people to "white

---

[17] Stanley High, "Our Schools Need More Than Our Money," Readers Digest, 51:16 December, 1947.

[18] Ibid., p. 16.

collar" jobs, without consideration either to the numbers of such jobs available or to the qualifications of the youth for those jobs.

> When parents arbitrarily decide for their offspring that they are going to be teachers, doctors, or ministers, they are forgetting to consider the following things: (1) whether the child's own interests and desires lean toward these professions, (2) whether the child's personality and abilities lie in those directions, and (3) whether the child's progress in school, as determined by the school, is sufficiently rapid to justify his continuing in the field for which his parents have chosen.[19]

This prejudice against working with one's hands and the indiscriminate glorification of clerical and professional work is entirely out of balance with the occupational opportunities of our nation.

The November 1946 issue of Fortune Magazine[20] contains a series of charts compiled by its editorial staff which show that three fifths of all civilians employed in July 1946 worked in manufacturing, trade, or agriculture--twenty seven percent in manufacturing alone. Even more significant, these charts show that most Americans work with their hands. At this date the manual group --skilled, unskilled, and semi-skilled made up sixty percent of the labor force.

As citizens of a free thinking nation based on individual opportunity for all people, every individual is free

---

[19] J. K. Stoner, "Vocation or Vacation (without pay)," Educational Forum, 12:161 January, 1948.

[20] Editorial Staff, "Where People Work," Fortune Magazine, 34:129 November, 1946.

to choose his own life work and to foster ambition for his children, but for parents to unduly influence their children's choice of a career without consideration for the child's own interests and abilities is an injustice to the child and to the society in which it must live.

> If we are to achieve anything like efficient management of human resources in relation to the jobs to be done and if we are to achieve it within the framework of democratic procedures, not an inconsiderable part of a plan of action must include an informative program looking to the education of both youth and adults in the realities of the occupational world.[21]

---

[21] A. M. Turrel, "Vocational Guidance and Education," American Assn. of College Registrars Journal, 21:212 January, 1946.

CHAPTER III

PRESENTATION OF DATA

I. THE SURVEY

Since the purpose of this survey was to show the need for guidance in the public schools it was necessary to conduct this type of survey in a school whose students had not been offered the benefits of a guidance program.

John Greer High School of Hoopeston, Illinois, was selected for several reasons.

I. It is a first class commissioned high school in the state of Illinois.

II. In the annual statewide testing program for scholastic achievement, conducted by the University of Illinois in all public high schools in the state, this school ranked in the upper half in the 1946-47 school year.

III. With a faculty of twenty teachers there has been in the last five years an average of less than ten percent turnover.

IV. This school offers curricula in the areas of college preparation, commerce, and vocational education.

V. This school is organizing a comprehensive guidance program, but the students participating in this survey had, at the time the survey was conducted, no contact with any formal organized guidance program.

It was the intention of the writer to have not less than one hundred students of the original group participating when the final tests were given. To insure this 142 pupils were given the Initial Occupational Inquiry shown on page 34.

Although this survey is largely concerned with occupational guidance the need for educational guidance is also clear since the accepted procedure in guidance is to attempt to isolate each student's interests, needs, and abilities, and having in so far as is possible, determined his occupational interests and abilities, give him the educational and curricular guidance necessary for the fullest realization of his interests and the most profitable use of his abilities.

The Initial Occupational Inquiry. This questionnaire was devised by the writer of the study in an attempt to learn the limits of the students' knowledge concerning their occupational choices and the educational requirements necessary to those choices. It was necessary, also, to learn the sources from which the students received their occupational information in order to determine the validity of such sources.

Of the original 142 answering the Inquiry, seven had given no consideration to their future occupation, and as a result stated no choice of occupation for pursuit after leaving school. This group of approximately five percent were dropped after the Initial Occupational Inquiry was

INITIAL OCCUPATIONAL INQUIRY

1. Do you intend to finish high school?

2. Are you going to college?

3. What occupation do you intend to follow after finishing school?

   1. First Choice:

   2. Second Choice:

4. What do you know about this occupation?

5. Where did you learn about this occupation?

checked. However, they constitute the first definite problem in attempting to show the need for guidance.

These students were accepted by the school, their attendance being either voluntary or required by law. In either case there is a definite need for guidance shown. Without some definite direction being given them there is little chance that their abilities will be put to the best use and advantage possible or that their interests will be satisfied sufficiently.

Without some method being used to determine their possibilities, the most effective educational program for them cannot be applied. The implication in the case of these students is for a guidance program that will offer them occupational information, help them in selecting a possible future occupation in keeping with their needs and abilities, and direct their educational program in the light of their interests and potentialities.

Future educational plans. There were 135 students who replied to the questions concerning their future educational plans. In this group 93.33 percent were planning to finish high school. However, investigation of permanent records in this high school reveals that the graduating class of June 1946 represented only 51.11 percent of the ninth grade class entering this same high school four years previously in 1942. Some slight exception must be considered in using

this 1942-1946 class for comparative purposes because of the fact that three students entered the military service in 1945 and a few others were attracted to jobs in war plants.

The fact remains, however, that many entering high school with the intention of graduating fail to complete the required four years' attendance. Many of these drop-outs may leave school because they have achieved little or no success in studies in which they have insufficient interest.

TABLE IV

FUTURE EDUCATIONAL PLANS OF 135 NINTH AND TENTH GRADE STUDENTS IN REGARD TO HIGH SCHOOL

	Number	Percent
Planning to finish high school	126	93.33
Uncertain about finishing high school	4	2.96
Not intending to finish high school	5	3.71
Total	135	100.00

Some students feel that they are misfits and leave school because they believe they "just don't belong". These young people are in need of a comprehensive guidance program, not only to help them in to the right educational and vocational path but to help them adjust socially lest they become misfits in society after their formal education is ended.

The 2.96 percent who were uncertain about finishing high school comprise a comparatively small group, and home conditions, especially financial, could easily affect this small percentage of the original 135 students. However, since it is always possible that some students may be uncertain about their future occupation, and as a result be likewise uncertain about any educational plans, need of a guidance program is indicated that will give more value to the sense of direction of these students.

Five students, or 3.71 percent of the entire group, expressed themselves as definitely not intending to finish high school. Home, financial, or other conditions beyond the control of the school may have influenced these individuals in their decision to leave school at the minimum legal age. The need for guidance is not lessened in these cases, but is possibly even greater. Since the students in this group will be in school a shorter length of time they will have less opportunity to discover their potentialities themselves, and will need immediate guidance to avail them-

selves of the educational opportunities possible, as well as to discover their occupational abilities even though there may be little time for training in the line of these abilities.

Although the figures pertaining to college attendance are in themselves not striking, and probably above average so far as college attendance is concerned, there is a definite implication for guidance shown in Table VI.

TABLE V

FUTURE EDUCATIONAL PLANS OF 135 NINTH AND TENTH GRADE STUDENTS IN REGARD TO COLLEGE

	Number	Percent
Planning to attend college	31	22.96
Uncertain about attending college	44	32.59
Not planning to attend college	60	44.45
Total	135	100.00

TABLE VI

PUPILS SELECTING OCCUPATIONS REQUIRING COLLEGE ATTENDANCE

	Number	Percent
Planning to attend college	25	42.37
Uncertain about attending college	23	38.98
Not planning to attend college	11	18.65
Total	59	100.00

Fifty nine pupils expressed themselves as desiring to follow occupations which require college training, yet eleven of the fifty nine had not planned to attend a college or university. This group shows a lack of occupational information as well as educational information concerning the occupations they desire to follow. If there are valid reasons why these pupils, and those in the uncertain group, cannot attend college, the guidance program must attempt to seek out some other abilities in the individuals and help them direct their efforts toward other lines of endeavor.

TABLE VII

SOURCES OF INFORMATION ABOUT OCCUPATIONS CHOSEN BY 135 NINTH AND TENTH GRADE STUDENTS

	Number	Percent
Members of the family	17	12.59
Occupation pursued by a member of the family	12	8.89
Observation of persons engaged in the occupation	13	9.63
Limited experience in the occupation, vacation, after school work, etc.	14	10.37
Information secured at school	11	8.15
Talking to persons engaged in the occupation	6	4.44
Reading books and periodicals	25	18.52
Movies and theatres	3	2.22
Complete absence of information	34	25.19
Total	135	100.00

Students' sources of occupational information. It is significant that the largest of the nine groups listed under sources of occupational information, Table VII, admitted a complete lack of information concerning the occupation they selected. The figures in Table VII show that 25.19 percent of the subjects in this survey selected and expressed a desire to follow occupations about which they had no real information. The school, which unquestionably must accept the responsibility for the guidance of its pupils, was the source of occupational information for only 8.15 percent of the students in this survey.

The figures in Table VII also show that the largest single source of occupational information was books and periodicals. Of the entire group, 18.52 percent secured information from this source. Increased amount and broadened scope of reading material on occupations, plus group oral presentation of occupational information would reduce materially the 25.19 percent who select occupations without real information concerning them, and may well replace some other sources of occupational information which will, later in this study, be shown to be invalid or at least ill-advised.

Students' knowledge of chosen occupations. There will be a seeming conflict noted between the figures given in Table VII and those given in Table VIII. In Table VII the

figures were compiled from direct statements made by the subjects in answer to question Number 5 of the Initial Occupational Inquiry. In the compilation of Table VIII it was necessary to interpret and evaluate the answers given to question Number 4. The apparent conflict arises from the fact that in Table VII a total of thirty four subjects directly stated a complete absence of information regarding their chosen occupation, while in Table VIII eighty one subjects are indicated as having no real knowledge of their chosen occupation. Examination of the Initial Occupational Inquiry reveals many completely filled in Inquiry blanks in which the student had made a choice of occupations and stated that he had learned about the occupation from observation of someone pursuing it, or from a relative, or some rather vague and uncertain source and although they had selected the occupation on this basis they still knew nothing about it.

A good example of this occurs in the case of John B., who is one of the tenth grade subjects of this study. This boy has expressed a desire to become a draftsman. In answer to question Number 5 he states that he learned about the occupation in the mechanical drawing class in which he is now enrolled, but in answer to question Number 4 he states that he knows nothing about drafting as an occupation but he would like to learn more about it.

In this case the writer checked on this boy before making an evaluation of the answer to question Number 4 and found him to be an "A" student in mechanical drawing. The interpretation was made in the following manner. The subject finds mechanical drawing interesting, he is learning the mechanics of it and some of the theory and related information, but he does not know the occupational factors of drafting such as salary, demand for draftsmen, hours of work, classifications of skill, types of draftsmen, etc.

This student was placed in the category of having learned about his chosen occupation at school, but listed as having no real knowledge of the occupation.

Personal investigation similar to that mentioned above was not made in all of the eighty one cases of individual subjects who had no real knowledge of their chosen occupation, but in all cases concerning question Number 4 the writer interpreted the answers in a similar manner.

TABLE VIII

KNOWLEDGE OF OCCUPATIONS CHOSEN BY 135 NINTH AND TENTH GRADE STUDENTS

	Number	Percent
Pupils having no real knowledge of their chosen occupations	81	60.00
Pupils having extremely limited knowledge of chosen occupation	31	22.96
Pupils having limited knowledge of their chosen occupations	21	15.56
Pupils indicating definite knowledge of their chosen occupations	2	1.48
Total	135	100.00

The following, Table IX, compiled solely from the information given on the Initial Occupational Inquiry shows the number of students who voluntarily expressed a desire to learn more about the occupation they had chosen.

Although the number of these students is relatively small, it is significant that even fourteen percent of them should voluntarily state a desire for additional information concerning the occupations they have selected.

TABLE IX

NUMBER OF STUDENTS DESIRING ADDITIONAL OCCUPATIONAL INFORMATION

	Number	Percent
Students selecting a certain occupation	135	100.00
Students expressing a desire for additional information	19	14.00

II. COMPARISON OF OCCUPATIONAL CHOICE AND INTEREST

The second step in the survey consisted of the administration of the Kuder Preference Record, the scores of which were used in making a comparison of the students' choice of occupations as stated in the Initial Occupational Inquiry and their occupational interests as shown by the Preference Record.

Between the time of the administration of the Occupational Inquiry and that of the Preference Record one subject was lost to the survey because of withdrawal from school and two were eliminated because of extremely low scores on the interest profile. These low scores may have been caused by error or lack of interest on the part of the subjects. In either case the writer did not consider them valid information in compiling the results of the comparison. Consequently 132 subjects were used.

The decision to use some standard interest inventory was made by the writer because it was felt that quite often young people choose occupations as a result of some chance influence. Chapter VI of this study is based upon a desire to determine the relationship of occupational choice made by students who have had no contact with formal guidance, and their interest as shown by a standardized interest profile.

It was the intention of the writer to show the variance, if any, between the subjects' casual choice of occupations and the occupational areas which appear to be particularly promising in the light of their interests.

At the present time there is to the best of the writer's knowledge, no method of proving or disproving the validity of the several interest inventories available. The Kuder Preference Record was chosen because it is the most widely used interest inventory, being used by all three branches of military service, schools, business, and industry.

Upon completion of the profile sheets, comparison of areas of interest and occupational choice was made and an attempt was made to show those sources of occupational information which appear to be valid and those which appear to be invalid or ill-advised.

Three degrees of comparison are shown in Table X (1) Complete agreement, whereby the Preference Record shows the subject's interests completely, or sufficiently, in accord with his expressed occupational choice as given on his Initial Occupational Inquiry sheet. (2) Borderline cases where the student's interests show sufficiently high in one of the seven areas of the Kuder Preference Record but not sufficiently high in another area necessary to success in the chosen occupation. For example, one student may express a desire to become an electrical engineer, and show by his

preference record an interest in the mechanical area of 85 percentile, but his interest in computation, which is a necessary part of successful engineering, scores only to the 45th percentile.

Another example of borderline cases is the student who expresses a desire for a certain occupation on his inquiry sheet but shows only a fair degree of interest in all the areas of the interest profile. The writer placed those students whose interests all fell in the 60th to 75th percentiles in this borderline group. In this same group, where all the scores of a student's preference record profile are near the medians, it is possible that the student has no really well-developed interests or that his interests are so evenly balanced among all nine areas that no one area stands out. Scores in the 60th to 75th percentiles, according to Kuder, have some significance but cannot be regarded with as much confidence as higher scores. Careful and personal counseling is indicated as necessary in these cases, along with added occupational information. (3) The third degree of comparison is that in which there is total disagreement between the interest shown on the student's Preference Record and his choice of occupations as given on his Initial Occupational Inquiry.

There might have been one other degree of comparison used, that in which the scores of the Preference Record

were extremely low. However, since there were only two cases of this kind appearing in the entire group and since Kuder gives little value to these scores, along with the fact that it is quite possible they were in error, the writer decided to discard them from the survey.

The division of borderline, agreement, and disagreement cases was so nearly even as to cause suspicion of error; however, they were re-checked by the writer and found to be correct.

TABLE X

COMPARISON OF INTERESTS AND OF OCCUPATIONS SELECTED BY 132 NINTH AND TENTH GRADE PUPILS

	Number	Percent
Complete agreement	38	28.79
Borderline cases	40	30.30
Complete disagreement	54	40.91
Total	132	100.00

Those of the group whose Initial Occupational Inquiry and Kuder Preference Record are in accord are probably the least in need of guidance. However, even in their case two important steps remain. Aptitude tests would be highly desirable, in so far as they are procurable for the occupations indicated, and there remains a definite need for educational or curricular guidance.

For those students who have definitely established the coordination of their interests and occupational desires, some occupational information is still necessary. They should be given access to facts that will indicate whether or not their chosen occupation is stable, growing in demand, or receding. They should be given opportunity to learn what they may expect of it socially and financially, and what demands it will make upon them. And finally, they should be guided into the curriculum most advantageous to the promotion of their interests and the establishment of their chosen occupation.

Those students whose cases fall into the borderline group present a larger problem for the counselor and accentuate the need for a comprehensive program of guidance.

These, for the most part, were students who expressed a desire to follow some occupation which required a combination of interests, generally two, such as the case of one subject, Fred G., who indicated on his Initial Occupational

Inquiry an intention of being a mechanical engineer. His Preference Record shows his mechanical interest score at the 94th percentile, which is very high, but mechanical engineering requires a mechanical-computational combination and this student's interest score in computation is below the 50th percentile. This does not necessarily mean the student is unable to carry the mathematics necessary to prepare for an engineering career, but it indicates a need for more information concerning the boy's ability in mathematics. This might be secured by examination of past grades in the subject, from present mathematics teachers, or by mathematical aptitude tests. In any event it seems certain that this student should have a thorough study made of his case, including the acquisition of additional information, and possibly he should be given more occupational information, for in the event it becomes reasonably certain that he has insufficient ability in mathematics, or that his scholarship index indicates he is not college material, he should be guided into the selection of some other field of endeavor.

The third group, those in which the Occupational Inquiry and the Preference Record are in complete disagreement presents the greatest challenge to guidance and accentuates to the largest extent the need for counseling.

These students have indicated a desire to pursue a chosen occupation as shown by their Occupational Inquiry, but the scores of their Kuder Preference Records show that their interests in the areas pertaining to these chosen occupations is too low to be valid while those interests scoring high on the Preference Record are not related to the chosen occupations.

This group constitutes, largely, those bewildered students who do not seem to know where they are going and what they wish to do in life, and who probably account for a large percentage of the failures and consequent drop-outs in the secondary school.

Also, it is unfortunately true that many young people are unduly influenced in the selection of occupations and school subjects by well-meaning parents and relatives although the young people themselves may have little interest in these pursuits. This is shown later in Table XI.

There are many other reasons for unwise selection of occupational pursuits. The glamour attendant upon certain occupations is accentuated by movies, books of fiction, and other forms of commercial entertainment. Some pupils in answer to question Number 5 on the Occupational Inquiry indicated that their selection was made after a single contact with, or observation of, the occupation.

Over-zealous church workers have sometimes attempted to influence the choice of young people in the selection of careers. In the case of Guinivere S., a tenth grade student and one of the subjects of this survey, influence came from her Sunday school teacher and from information gained at church. She had indicated a desire to become a missionary. To be valid her interest score should be high in the literary-social service area, but her score shows a literary interest to the 60th percentile, which is low, while her interest score in social service is at the 40th percentile, which is much too low to be valid in determining interests. At the same time this student made a score up to the 93rd percentile in mechanical interest and the 75th percentile in music. Without proper guidance and additional occupational information this student might attempt preparation for a career in which her interests were definitely not considered.

Validity of sources of information on occupations.

Table XI shows that in the case of students who selected occupations upon information gained from members of the family only three showed agreement between their choice as given on the Initial Occupational Inquiry and their interests as indicated by their score on the Kuder Preference Record.

Of the borderline cases, those in which there was neither complete agreement or complete disagreement as to the occupations selected and the interest shown, five students had gained their information from some member of the family.

The most pertinent figure in the category of those students whose occupational information was secured from members of the family is shown in the column under complete disagreement between choice of occupation and indicated interest. Nine students show a high degree of interest in areas of activity entirely unrelated to the occupations chosen.

TABLE XI

COMPARISON OF INTERESTS AND OCCUPATIONS SELECTED AFTER ACCESS TO CERTAIN OCCUPATIONAL INFORMATION

Sources of information for occupations selected	Complete agreement		Borderline cases		Disagree-ment		Total cases
	No.	%	No.	%	No.	%	No.
Members of the family	3	7.89	5	12.50	9	16.67	17
Occupation pursued by a member of the family	3	7.89	4	10.00	5	9.26	12
Observation of persons engaged in the occupation	3	7.89	2	5.00	7	12.96	12
Limited experience in the occupation	2	5.26	2	5.00	10	18.52	14
Information secured at school	6	15.79	1	2.50	4	7.41	11
Talking to persons engaged in the occupation	2	5.26	2	5.00	2	3.70	6
Reading books and periodicals	10	26.32	9	22.50	5	9.26	24
Movies and theatres	0	0.00	2	5.00	1	1.85	3
Complete absence of occupational information	9	23.70	13	32.50	11	20.37	33
Total	38	100.00	40	100.00	54	100.00	132

Table XI is a composite of Tables VII and X and is intended to show the validity of sources of information. In compiling this table two subjects, whose interest scores were so low as to be questionable, were dropped from Table VII and Table XI was compiled from the records of 132 students.

Educators have for years had to reckon with the well-intentioned but too often ill-advised desires of parents who want something better for their children than their own opportunities had afforded.

> The tendency is for parents to encourage their children to choose occupations requiring more education and training than their own, and leading to supposedly higher social status. Such tendency indicates the inability of the majority of parents to give the unbiased information to guide children wisely.[1]

It is not uncommon for fathers, especially among the professions, to express a desire or even demand that their sons follow their same profession without regard to the interests and abilities of the youth.

Whatever the reason for influencing the youth in his decision concerning the selection of an occupation may be, it is clear that members of the family are not a valid source of occupational information and guidance. This study shows that, of those subjects who received their occupational information from members of the family, three times as many subjects failed to agree on their chosen occupations and indicated interests as the number of those who did agree.

---

[1] Mildred E. Lincoln, Teaching About Vocational Life (Scranton, Pa.: International Text Book Company, 1937), p. 5.

Of the subjects whose occupational information was gained from a member of the family engaged in the occupation, three were in complete agreement in choice and interests. Only four were borderline cases, and those in complete disagreement had dropped to five. While only one fourth of the subjects fall into the agreement column, the percentages are better than those of the pupils who were influenced by members of the family not engaged in the selected occupation. There is a natural tendency to increase the interest of the subject if the person giving the information is engaged in the occupation and knows both its advantages and limitations. However, no matter how well such information about a single occupation may be presented it cannot begin to fill the need for a complete comprehensive guidance program. The youth should have access to information concerning other occupations, he should have the benefit of standardized interest inventories and, if possible, aptitude tests.

The number of subjects whose choice of occupation was made upon information gained through observation of persons engaged in the occupation shows a decided drop in the borderline cases, but again indicates a better than two to one ratio of disagreement over agreement in relation of choice to indicated interest.

The most striking figures in Table XI are those relative to the subjects who gained their occupational

information from part-time work experience in the occupation. Of the fourteen subjects in this group only two indicated a complete agreement of interests and occupational choice, while ten chose occupations at which they had had some limited experience in the occupation but indicated by the score of their Preference Record that their interests were in some other area of work than that of their chosen field.

> When young people are faced with the problem of choosing a vocation, they quite naturally turn first to the familiar occupations with which they have had some contact and about which they do possess some sort of information.[2]

The first apparently valid source of information on occupations is indicated on Table XI as being the school[3] since the greater number of students who gained occupational information at school were in accord in their choice of occupations and their indicated interests.

In the category of those subjects who gained their information by talking to persons engaged in that occupation, the small numbers and equal division of subjects reduces any great significance attached to this source of occupational information so far as this survey is concerned. However, it has occurred to the writer that this source of occupational information might well furnish a wealth of

---

[2] Ibid., p. 2.

[3] At the time of this survey organized guidance had not influenced these participants.

material if presented to young people under the direction of a competent guidance organization in the school.

Books and periodicals are also shown in Table XI as apparently valid sources of occupational information since the subjects who obtained their occupational information from this source, and are in complete agreement as to occupational choice and indicated interest, outnumber those of disagreement ten to five. Since the school and books and periodicals seem to be the most reliable sources of occupational information, it seems imperative that the school assume a positive role in presenting occupational information to all students.

In the group of 132 students only three stated that they had received occupational information or influence from movies or theatres. One was a borderline case and two were disagreement cases. The significant aspect of this category is that not one constructive or agreement case is shown for movies or theatres. Even those boys who desired to become airplane pilots had received their information from other sources.

In the last category, that of complete absence of any occupational information, there is, of course, no question of reliability or validity since there was no source of information given; however, there is strong indication for the need of guidance in the secondary school.

Of the group of 132 subjects, twenty five percent have selected occupations without any apparent access to some type of occupational information, and as a result only nine out of thirty three in the group have elected to follow occupations in keeping with their indicated interests as shown on the Kuder Preference Record scores.

The over-all figures in Table XI show that out of a group of 132 unguided students only thirty eight, or approximately twenty nine percent, could be expected to find themselves following the occupational career of their own choosing which would be in harmony with their interests. Approximately thirty percent would flounder between a chosen career and interests which, though partly, were not entirely in harmony. And forty percent would attempt to pursue vocations entirely outside the scope of their indicated interests.[4]

---

[4] Note: See also Table X.

III. COMPARISON OF OCCUPATIONAL CHOICE AND PREDETERMINED APTITUDES

Selection of aptitude tests. In the third and final step of the survey standardized aptitude tests were given each of the participating students, and the scores of these aptitude tests were compared with the original occupational choice made by each participating student. The comparison of chosen occupations and indicated interests as shown in the previous chapter reveals a decidedly low correlation.

In view of these results and feeling that this study would be incomplete and inclusive without a similar comparison of occupational choice and predetermined aptitude, the writer examined several well known aptitude tests.

After careful consideration the Differential Aptitude Tests published by The Psychological Corporation of New York City were selected. These tests seemed to provide an integrated, scientific, and well-standardized procedure for measuring the abilities of both boys and girls for purposes of educational and vocational guidance.

By the use of combinations of the seven areas in the complete tests it was possible to secure pertinent information covering a greater number of different occupations than most other measures of ability afforded. The tests provide for measuring aptitude in seven areas, which in some cases were used singly and in other cases used in combination. For example, a boy choosing to be a machinist was given only the mechanical reasoning test, while the several who chose

mechanical engineering were given tests in mechanical reasoning, numerical ability, and space relations. Those who elected to follow occupations of a scientific nature were given a combination of verbal reasoning, numerical ability, and abstract reasoning. Girls who expressed a desire to become secretaries were given the combination of clerical speed and accuracy and language usage. Upon the recommendation of the authors of these tests two students who chose to become newspaper writers were given only the language usage tests.

The seven following areas are included in the complete tests from which the administrator may form a great many combinations covering many occupations:

Verbal Reasoning	Mechanical Reasoning
Numerical Ability	Clerical Speed and Accuracy
Abstract Reasoning	Language Usage, including
Space Relations	Spelling and Sentences

Administration of the aptitude tests. In the administration of the aptitude tests several of the original participants were dropped from the survey. The writer could find no aptitude tests which would serve satisfactorily to measure aptitude in the area of general farming, and since it was highly desirable to obtain, as nearly as possible, a valid contrast between the subject's chosen occupations and their aptitudes in those occupations, those students

who had specifically chosen farming were not included in Part Three of the survey. Two of the original group had moved to other cities, three had dropped out of school, and one student failed to participate in the final tests because of prolonged absence from school. Of the original group 105 students participated in the last part of the survey.

The figures on those students who were intentionally dropped or lost to the final part of the survey for other reasons were not removed from the tables derived from the interest inventory since it seemed wasteful to exclude cases which were valid so far as they had participated. In the case of those who were purposely discarded it was felt that their removal from Part Three of the survey would add to rather than detract from its accuracy; consequently they were retained up to the point of the administration of the aptitude tests.

Results of the aptitude tests. The scores of the Differential Aptitude Tests were compared to the original occupational choices of the subjects and each individual case placed in one of three categories. The first category was that in which there was a definite correlation between the student's original occupational choice and his predetermined aptitude in that occupation. In the second category correlation between occupational choice and aptitude was questionable. Most of these cases occurred where several

areas of aptitude were necessary to success in the occupation and where the student showed a sufficiently high percentile in only part of them. An example of this category is shown in the case of Michael S., a tenth grade student who chose mechanical engineering as his desired occupation. The three principal areas of aptitude for this type of work are indicated as being numerical ability, space relations, and mechanical reasoning. This boy made a score of percentile 70 in numerical ability, percentile 83 in space relations, but only percentile 17 in mechanical reasoning. It is not possible, therefore, to conclude definitely that he has or has not chosen the right occupation in the light of his abilities.

There is a definite implication in these cases for a guidance program that is extensive enough to be sure as to whether or not these young people have chosen the best occupation for themselves and if not to help them to more occupational information and other interests whereby they may select an occupation more in keeping with their abilities and more likely to bring them success.

The writer does not wish to convey the impression that all of the doubtful cases were the cases of students who needed aptitude in several areas. Many of those students who showed good correlation between choice and aptitude were required to show ability in several areas.

The third category was that in which there was complete disagreement, or total lack of correlation, between occupational choice and predetermined aptitude.

TABLE XII

COMPARISON OF OCCUPATIONAL CHOICE AND PREDETERMINED APTITUDES OF 105 NINTH AND TENTH GRADE STUDENTS

	Number	Percent
Cases of complete agreement	47	44.76
Cases of questionable agreement	27	25.72
Cases of complete disagreement	31	29.52
Total	105	100.00

On the basis of the figures shown in Table XII only 44.76 percent, or less than one-half, of the participating students have, without the aid of some formal guidance, selected occupations in which their test scores indicate a sufficiently high aptitude for success in the occupation chosen.

One-fourth, or 25.72 percent, may or may not have the necessary abilities. These young people need the benefit of more and extensive counseling after further investigation and individual study has been made of each case.

There may be extenuating circumstances which have affected, in part, the abilities necessary for success in their chosen occupation. In view of this and other possible unknown factors, it would be deemed unwise for them to attempt the pursuit of these occupations, and at the same time it might be altogether unfair to offer them discouragement in attempting these chosen vocations until more facts concerning their cases have been established.

The remaining 29.52 percent have chosen occupations for which they clearly have no aptitude. The pursuit of such occupations could only result in little or no measure of success, dissatisfaction, and wasted time and effort.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary. Much has already been written in regard to the need for guidance in the public schools. Most educators have recognized this growing need for many years, but have in too many instances found themselves handicapped by disinterested parents and unsympathetic public authorities who either willfully or ignorantly failed to recognize the value of scientific counseling for the youth of today.

This study was made in an effort to isolate and emphasize some of the changes in modern American life which have placed new and additional obligations upon the school.

The approach to universal secondary education has resulted in multiplication of the subjects and courses offered in the secondary schools. Since the tremendously increased enrollment has changed the student bodies of our high schools from a select few students, most of whom were preparing for college, to youth of all ranges of abilities and needs, this increase in the number and types of subjects and courses is necessary. However, unless the individual students are directed into the educational and vocational channels best suited to their needs, interests, and abilities this extended range of subject matter will not have served its purpose.

It was the further purpose of this study to determine by scientific methods of testing, the probable extent of the loss of potential success and satisfaction in the future vocational pursuits of students who do not have the benefit of an adequate guidance program.

In the last phase of the study, the figures derived from the Initial Occupational Inquiry and the Kuder Preference Record strongly indicate the lack of reliability of most of the sources of occupational information which influence young people in the selection of vocations and educational courses.

On the Initial Occupational Inquiry each student was asked what occupation he intended to follow after leaving school and where he received the information that influenced his decision. All the sources of information were compiled and it was found that there were eight different sources named. This occupational questionnaire also revealed the fact that out of a total of 132 students thirty three had expressed a definite desire to follow occupations about which they had no occupational information whatever.

The questionnaire also reveals the misapprehension of many students regarding the educational preparation necessary for certain occupations. Fifty nine students selected occupations which definitely required college training, yet eleven of this group had not planned on doing any college or university work after leaving high school.

The questionnaire was followed by the administration of the Kuder Preference Record to determine the students' interests. Comparison of the questionnaire answers and the interest scores show that out of the group of 132 unguided high school students only thirty eight had selected occupations that were fully in harmony with their interests.

The last part of the survey was given over to establishing the correlation between the students' occupational choices and their predetermined aptitudes in the vocations chosen. On the basis of the figures shown in Table XII only 44.76 percent of the group tested have the necessary aptitude for success in the particular vocations chosen, when the choice was made without the benefit of counseling and guidance.

Conclusions. The figures in Table XI definitely show that most of the prevailing sources of occupational information are not valid or desirable and that the dissemination of occupational information as well as the determination of each individual student's interests and aptitudes must become a function of the school if there is to be any sort of efficiency achieved in the use of human resources.

Parents, relatives, and friends are both unjustified and unsafe as influential factors in furnishing young people with occupational information because in too many cases they are prompted solely by ambition for the

young people without proper regard for the interests and abilities which would qualify these young people for success in the areas of endeavor chosen.

Observation of people engaged in an occupation and talking to people who are following a certain occupation would seem to be a good source of occupational information, yet it again fails to qualify as reliable, or at least as complete, since these sources can only influence choice but cannot determine either interests or abilities. This is true also of experience in an occupation where the person receives insufficient experience to determine his aptitude for the job and his interest in it to the extent of making it his life's work.

Movies and theaters are not acceptable as sources of occupational information because they are too often intentionally glamourized and colored for entertainment purposes.

In view of the facts brought out in this study, the author arrived at the conclusion that the school must become the influencing factor in helping youth to select occupations. The school is the only institution which can present occupational information and also determine the extent of the young peoples' interests and aptitudes which are vital to success in any chosen occupation.

It was not the intention of the author to disqualify all sources of occupational information except the school,

but if other sources are an influencing factor in the selection of occupations the school must still attempt to relate these chosen occupations to the interests of the youth and correlate them with his or her abilities.

In the last analysis, a good guidance program in the school can furnish not only occupational information, but it can furnish it in far more areas than any other single source, thus helping the student to choose an occupation in the light of his interests, needs and abilities, and direct him to information in keeping with those interests and abilities.

Recommendations. The recommendations made by the writer are:

I. The educational systems of America should equalize their expanded curricula with competent programs of guidance in order that these expanded curricula may fully serve their purpose.

II. The school should supplement the home and other unjustifiable agencies as the source of occupational information for its students.

III. The school should make use of the best available standardized tests and other scientific means in an effort to correlate each student's occupational desires, interests, and aptitudes in order to insure, so far as is possible, his satisfaction and success in life both to him-

self and to the society in which he must live.

IV. The school should provide adequate occupational information in a number of areas in order that each student might be able to gain an understanding of several different vocational choices and in doing so select one in keeping with his interests and predetermined aptitudes, and within the limits of his educational possibilities.

The writer recognizes the limits of a study of this kind made within a single school. However, the results are believed to be at least indicative of those which similar studies would produce anywhere in America today.

The fullest realization of potential occupational efficiency cannot be achieved if one half of our young people attempt to enter occupational areas in which they have neither the interest nor ability necessary for success. Since this is the possibility indicated by lack of proper guidance, it seems imperative that the school assume the task of helping its students to enter the vocational paths most likely to lead to success and satisfaction.

BIBLIOGRAPHY

A. BOOKS

Brewer, John M., History of Vocational Guidance. New York: Harper and Brothers, 1942. 344 pp.

Chisholm, Leslie L., Guiding Youth in the Secondary School. New York: American Book Company, 1945. 432 pp.

Countryman, H. A., Valve World. Chicago: Crane Company, 1944. 112 pp.

Douglass, Harl R., Secondary Education for Youth. Washington, D.C.: American Council on Education, 1937. 137 pp.

Erickson, Clifford E. and Marion C. Happ, Guidance Practices at Work. New York: McGraw-Hill Company, 1946. 325 pp.

Hamrin, Shirley A. and Clifford E. Erickson, Guidance in the Secondary School. New York: D. Appleton Century Company, 1939. 465 pp.

Horn, Carl M., Wartime Guidance in Vocational Education. Chicago: American Technical Society, 1943. 312 pp.

Johnston, Eric, America Unlimited. New York: Doubleday, Doran and Company, 1944. 256 pp.

Leonard, J. Paul, Developing the Secondary Curriculum. New York: Rinehart and Company, 1946. 560 pp.

Lincoln, Mildred E., Teaching About Vocational Life. Scranton, Pa.: International Textbook Company, 1937. 617 pp.

New State Counselors Association, Practical Handbook for Counselors. Chicago: Science Research Associates, 1945. 165 pp.

Ryerson, Joseph T., 100 Years of Peace and War. Chicago: The Ryerson Steel Company, 1942. 19 pp.

B. PERIODICAL ARTICLES

Boyd, Colonel Albert, U.S.A.A.F., "I Flew Faster Than a Bullet," Coronet, 23:11, December, 1947.

Brewer, John M., "Causes of Discharge," Personnel Journal, 9:63, October, 1929.

DeSeversky, Major Alexander P., "Air Age," The American Weekly, 37:11, August 29, 1943.

Editorial Staff, "Where People Work," Fortune Magazine, 34:129, November, 1946.

High, Stanley, "Our Schools Need More Than Our Money," Readers Digest, 51:16, December, 1947.

Ogburn, William Fielding, "Air Age Transportation," Survey Graphic, 34:55, February, 1945.

Stoner, J. K., "Vocation or Vacation (without pay)," Educational Forum, 12:161, January, 1948.

Turrel, A. M., "Vocational Guidance and Education," American Association of College Registrars Journal, 21:212, January, 1946.