AN OCCUPATIONAL STUDY OF THE GRADUATES OF THE FORDSON HIGH SCHOOL DEARBORN, MICHIGAN

THESIS FOR THE DEGREE OF M. A.

STANLEY S. SMITH

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A THESIS

BASED UPON

AN OCCUPATIONAL STUDY OF THE GRADUATES

OF THE FORDSON HIGH SCHOOL

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THESIS

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INTRODUCTION

The Purpose and Nature of the Study.

The Fordson High School with which the writer has been associated as Head of the Commercial Department for the last three years and as a teacher in the Commercial Department for the four years preceding is located in an industrial community whose population showed the highest rate of growth of any city in the United States during the decade 1920-30.[1]

Due to the rapid growth of the C ity of Dearborn the Fordson Public Schools have had an equally phenomenal expansion.

The first graduating class of the Fordson High School was granted diplomas during June 1925 when two boys and three girls were graduated. Each year since then graduation exercises have been held until the total pupils graduating, including the June 1931 class, have reached the number of 173 boys and 171 girls, or a total of 344.

During recent years, much attention has been given to vocational training and guidance. In order to determine the success of the various types of training given in the Fordson High School, the writer has endeavored to gather the occupational history of the Fordson High School graduates with a view to discovering how far the training given in the various courses has been of service in preparing the graduates to obtain positions in their

[1] Federal Census, 1930. Population 1920 (2,470), 1930 (50,358) increase 1938 84

chosen fields and in furthering their progress along vocational and cultural lines.)

Although classes have been graduating for seven years, the majority of the graduates have only recently finished their courses. This means that the majority of the graduates have gone out from high school during the present economic depression, thus limiting the number of cases and period of time for which occupational records are available. While the scope and significance of the findings are thus restricted, it was considered that efforts to obtain and analyze information within these limits were warranted as a case study and as a partial guide to future administrative policy.

A questionnaire designed to furnish information regarding the factors that influenced the graduates' choice of an occupation, the occupational distribution of the graduates according to courses and the relation of school records and the occupational record of the graduates was prepared and mailed to the 344 graduates of the Fordson High School during August 1931. During the latter part of September, a follow-up postal card was sent to those who had failed to respond. Of the 344 questionnaires mailed, replies were received from 132 or 38.37%.

During the spring of 1931, the Student Council of the Fordson High School mailed a questionnaire to all

the graduates up to that time in an attempt to prepare an accurate alumni file. The information contained in this questionnaire was of no value to the writer and no doubt the nearness of the mailing of the two questionnaires lessened the response to the second one.

The only similar study that the writer was able to locate was a study made by Mr. Jeremiah A. Nudding of Frankton, Indiana. Mr. Nudding's research problem was entitled "The Geographical and Occupational Distribution of the Graduates of a Small High School." This was submitted to the University of Indiana as a Master's Thesis in 1927.

The graduates of the Frankton High School were studied. This is a small school located in a rural community. The period covered by the study extended more than ten years, with a total number of graduates slightly over 100. Due to the environment, many of these graduates followed agricultural positions.

Only a few points show a similarity between these two studies. One was in a small rural community, the other in a large, industrial center. In the one, the graduates either went to college, took up farming or entered business by means of some trade, generally some sort of merchandising. In this study, the graduates either went to college, entered business or became laborers in the industrial shops.

Through the courtesy of Mr. O. M. Marlott from the Office of Education, Department of the Interior, Washington, D. C. a list of all occupational studies was obtained. From this list it was possible to secure a copy of only one complete survey as listed above, and a limited amount of data from two other sources, neither of which proved directly serviceable to the conduct of the present study. The other two studies were:

Giles, J. T. "A Survey of Commercial Graduates in Wisconsin High Schools." Madison State Department of Public Instruction, 1926.

Katenkamp, Chester H. "A Study of the Commercial Graduates of Forest Park High School". Baltimore Bulletin of Education. September-October 1929.

In the following pages an attempt has been made to describe the community in which the Fordson High School is located, the Schools of the City of Dearborn including the Ford Trade School, the curriculum of the Fordson High School, the vocational guidance and placement service of the Fordson Public Schools, and to present an analysis of the replies with respect to the factors influencing the graduates choice of an occupation, the occupational distribution of the graduates according to courses, and the relation of school records and occupational records of the graduates.

The Method of the Study.

The administration of the Fordson High School kindly offered their records for use in this study. A list of all the graduates with their last known address was obtained and a questionnaire mailed to each.[1]

This questionnaire contained questions of two types: one of facts, the other of opinions or attitudes of the graduates. The fact questions sought to obtain such items as birthplace of parents and graduates, occupation of father as well as graduate, whether further education had been obtained and if so for how long, name and location of firm now employed at, type of position and monthly salary and length of time in present occupation.

In the other group, questions were asked dealing with approximate age life occupation was decided upon, the difficulties experienced in choosing this occupation, the extent to which the high school training aided in the occupational choice, the subjects and activities pursued in high school which have proved useful or not since graduation, employers' suggestions concerning high school training, and any suggestions concerning future training the graduates cared to offer.

About one month after mailing the questionnaire, a follow-up postal card was mailed. As the questionnaires

[1] See Appendix

were received, the replies were tabulated and sorted. The files of the Fordson High School were again used in order to obtain the I. Q. test ratings of the graduates and their average marks obtained while in school. From the information so gathered certain facts have been found and certain conclusions have been drawn concerning the training and preparation of the graduates of the Fordson High School.

THE COMMUNITY

The City of Dearborn.

Ten years ago a small, scattered community lay just west of the Detroit city limits. It was at that time known as S pringwells and could boast only a few hundred inhabitants. At the extreme south side of Springwells on the Rouge River was located the Ford Rouge Plant. About five miles further west from Springwells was the original City of Dearborn where the Ford Experimental Laboratories were located.

During the years 1925-26, Henry Ford completed plans for the transferring of his vast Highland Park operations to the Rouge plant, and with this transfer a great boom took place in and surrounding Springwells. In order to honor the Ford family, the City of Springwells in 1927 voted to change the name S pringwells to Fordson.

It was only a year later that Henry Ford sponsored the idea of uniting the City of Fordson, the City of Dearborn and certain unincorporated territory in the Township of Dearborn into one city to be called Dearborn. This project was approved in all three communities and on June 12, 1928 the new city of Dearborn became the home of the vast Ford enterprises and is now known the world over as such.

While Dearborn is primarily a one industry city, there are several other important industries that would stand out prominently if the Ford Industries did not so completely dominate local enterprises.

The Graham Paige Motors Corporation, employing upward of 3,000 men is located here, as are the following industries:

Ford Airport

Stout Metal Airplane Company

Universal Products Company

Bopp Steel Corporation

Detroit Seamless Steel Tubes Company

Peter Smith Stamping Company

Six large Brick Manufacturers

Detroit Water Supply, Springwells Station

Dearborn is one of the main centers for brick making in the United States, millions of bricks being manufactured each year. The total value of 14 clay products companies in the Detroit Industrial Area amounted to $1,971,184 for the year 1929.[1] Six of these 14 companies are located in Dearborn.

The Springwells station of the Detroit Water Supply covers several hundred acres and employes many men. In general, the combined industries of Dearborn will employ between 50,000 to 120,000 men, depending on the activity

[1] Biennial Census of Manufactures: 1929. Department of Commerce, Bureau of the Census, Washington, D. C.

at the Ford Plant.

When the Ford industries are at peak production, approximately 100,000 men are employed, while in periods of recession as during the winter of 1931-32, the number may decline to 40,000, generally on a three-day week.

The City of Detroit.

The City limits of Detroit bound the city limits of Dearborn on the South, East and North. So closely are the two municipalities located that they may well be considered as one. What affects one is bound to affect the other.

Detroit is known the world over as the "Automobile City". As automobiles increased in number and in world distribution, the reputation of Detroit spread to the four corners of the world.

The population of Metropolitan Detroit according to the 1930 census is 2,104,764 making it the sixth largest Metropolitan area in the United States. Although automobiles are mainly responsible, there are other industries that have aided greatly in building this large industrial area.

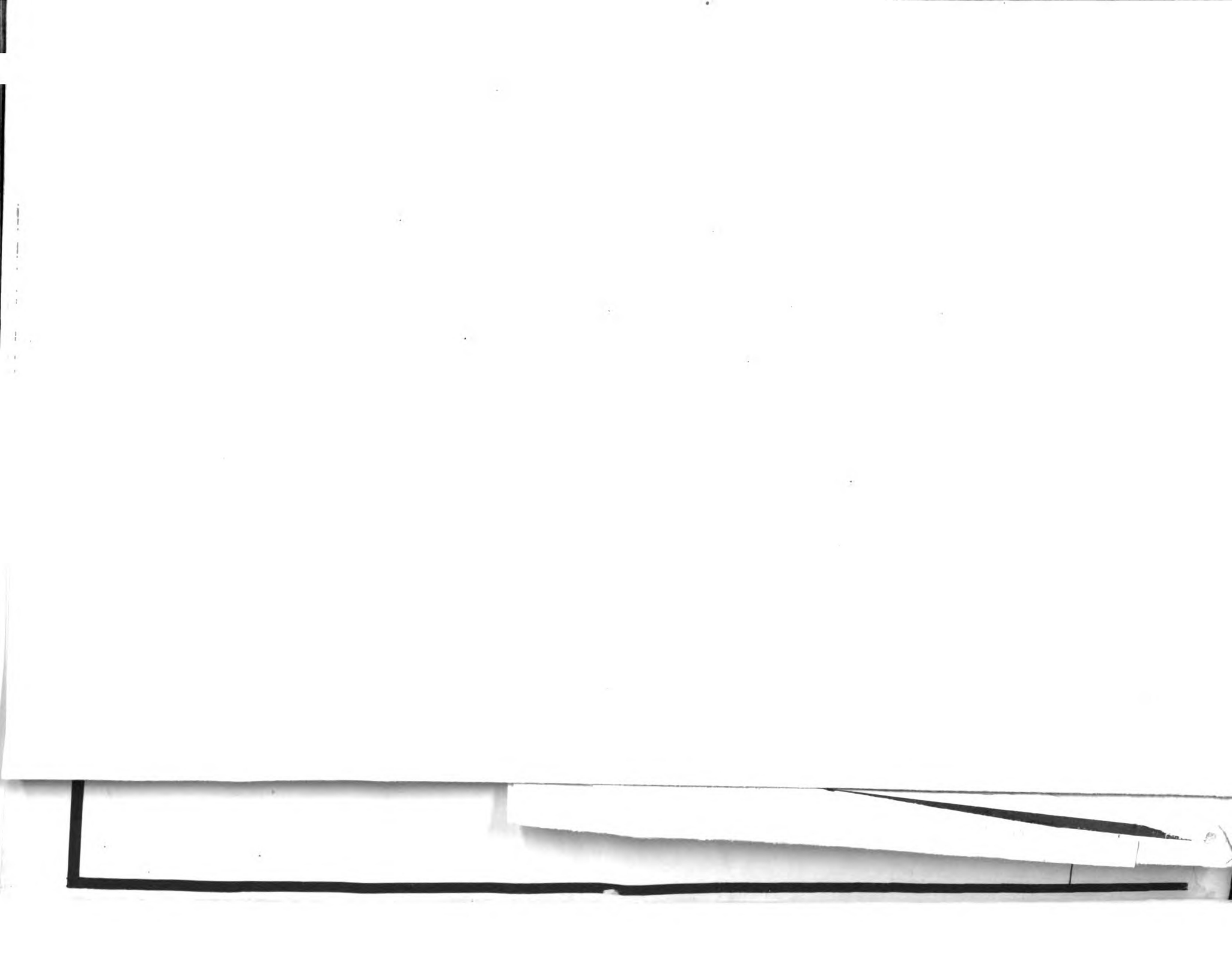
According to the Biennual Census of Manufactures: 1929 which was released February 27, 1932, there are 2,800 establishments producing products valued at $2,842,320,120 in the Detroit Industrial area. The major producers in this area are as follows: Motor

Vehicles $1,133,280,547, Motor-vehicle Bodies and Parts $538,528,508, Nonferrous-metal Alloys and Products $79,257,541, Foundry and Machine-shop Products $70,196,829, Meat Packing, Wholesale $58,384,293, Machine-tool Accessories and small Metal-working tools $53,682,037, and Iron and Steel: Steel works and rolling mills $52,890,329.

An "industrial area" as established for the census of manufactures is an area having as its nucleus an important manufacturing city and comprising the county in which the city is located, together with any adjoining counties in which there is a great development of manufacturing industry. It should not be confused with the "metropolitan district", which was established in connection with the census of population, and includes with the central city or cities all the adjacent and contiguous civil divisions having a density of at least 150 inhabitants per square mile.

It is in this area designated as the Detroit Industrial area that practically all of the Fordson High School graduates enter upon their life occupations. The majority will eventually make their own homes here.

"Draw a circle about Detroit, with a raduis of approximately 100 miles. This area, Detroit's shopping territory would include a population of 5,000,000 conservatively estimated. It would include Pontiac, Toledo, Jackson,



Flint, Lansing, Saginaw, Battle Creek and scores of smaller cities. Moreover, Detroit is midway between Chicago and Buffalo, with New York only 690 miles distant." [1]

Here, regardless of the rest of the world, is a great market, with Detroit close to the center of the area, and serving most of the important cities of the United States east of the Mississippi and north of the Ohio River by direct rail lines.

Employment Conditions in Detroit from 1925-31.

During the past seven years, in which period the graduates of the Fordson High School have attempted to take their place in business, the worlds activities have been distinctly above the average in only 1928 and 1929. These years shows employment 15 to 20 percent above normal (using the period from 1923 to 1925 as base) while two other years, 1925 and 1926 were just slightly above normal. On the other hand the years 1927, 1930 and 1931 have been decidedly below normal, with 1931 showing a decline of nearly 40 percent.

Table I presents figures on Detroit employment based on data issued by the Detroit Board of Commerce and covers about two-thirds of the working population in that city.

[1] Smith, A. M. Industrial Detroit. The Detroit News, 1930. Pp. 1-2.

While the figures in Table I are for Detroit, it is safe to assume that Dearborn employment would parallel Detroits. Dearborn and Detroit have merely a boundary line between them.

Although the table shows a decided decline in employment it fails to show the true extent of unemployment, since it does not take into account the marked growth in Detroits population since the base period.

It is very evident that the majority of the graduates of the Fordson High School were forced to seek an entrance into business at a time when competition for employment was very keen and positions extremely scarce. This fact greatly affects the employment records of the Fordson High School graduates as presented in this study.

TABLE I

EMPL OYMENT INDEX NUMBERS FOR DETROIT, YEARS 1925-1931.

EMPLOYEES ON PAY ROLL USING MONTHLY AVERAGE 1923-1925 AS 100.[1]

Month	1925	1926	1927	1928	1929	1930	1931
Jan.	93.7	118.2	97.	101.	131.	106.5	76.5
Feb.	94.6	122.4	100.7	105.5	135.	108.	81.2
Mar.	102.	122.	102.2	111.	136.	108.5	83.
April	107.	113.7	102.5	114.2	136.	110.	83.5
May	108.	111.	101.8	117.	131.	109.2	80.4
June	108.9	100.7	85.5	119.	128.	99.	73.2
July	109.8	105.2	91.	123.5	131.	48.	61.8
Aug.	106.5	108.1	92.7	132.7	127.	83.	50.
Sept.	116.5	106.	89.	134.	119.	74.8	51.
Oct.	120.5	99.8	88.3	129.	99.	79.	41.7
Nov.	120.4	93.5	88.	124.	93.	75.8	52.7
Dec.	58.5	39.4	84.5	111.	98.	40.	64.
Mthly Ave.	103.9	103.3	93.6	118.5	122.	86.9	66.6

[1]Survey of Current Business, 1931 Annual Supplement. Washington: United States Department of Commerce. Pp. 176-177.
Survey of Current Business, March and April 1932. Washington: United States Department of Commerce. Pp.48.

THE S CHOOLS OF DEARBORN

The Fordson Public Schools.

The Fordson Public Schools came into existence when it was voted to change the name of the City of Springwells to the City of Fordson. The name of the Fordson schools was retained however, when the City of Fordson united with the old City of Dearborn to be known as the new City of Dearborn, because the jurisdiction of the Fordson Public Schools lay only within the boundaries of the former City of Fordson.

When the new City of Dearborn was created, there were and still are five separate and distinct school districts, namely: the Fordson School District, the Henry Ford School District (formerly the unincorporated section of Dearborn Township which lay between Fordson and Dearborn) the Dearborn School District and two county school districts that now lie partially within the city limits.

The City of Dearborn according to the Federal Census of 1930 had a population of 50,358, of which number over 35,000 reside in the old Fordson District, from which district the Fordson Schools draw their pupils.

At the present time, the Fordson Public Schools

include the following:

1 Senior High School with Junior High

3 Junior High Schools with Elementary grades

7 Elementary grade schools

The total enrollment in October 1931 was 8,644 pupils.

The Fordson High S chool.

The Fordson High School building was completed and ready for pupils during the fall of 1927. This impressive building represents an expenditure of two million dollars and includes the most modern features in school construction. Since 1927 the building has housed both a Junior and a Senior High School, but due to the rapid growth of the Senior High School, it was necessary to begin elimination of the Junior High. Commencing in September 1931, the 7B group was discontinued and each succeeding semester will see another half grade transferred to other schools.

The Fordson High School has four distinct courses from which pupils may graduate. These are as follows:

1--College Preparatory 3--Industrial

2--Commercial 4--General

The College Preparatory course is the only one giving the pupils the training and requirements to enter college. The following subjects are required on this

course: English, 6 semesters; Geometry, 2 semesters; Language, 2 semesters; U. S. History, 2 semesters; Health, 4 semesters; College entrance electives, 11 semesters and Science, 2 semesters. English, Language and Algebra must also be taken in the 9th grade. The electives will depend upon what course the pupil intends to follow at college.

The Commercial course gives specialized and vocational training, along with certain required high school subjects which are as follows: English, 6 semesters; Biology, 2 semesters, U. S. History, 2 semesters; Health, 3 semesters; Shorthand, 4 semesters or Bookkeeping, 6 semesters; Typewriting, 4 or 6 semesters; Office Appliances, 2 semesters; Office Practice, 2 semesters; Penmanship and Spelling, Senior Business Training, Commercial Geography, Filing, Business Arithmetic, Merchandising, and Commercial Law, each 1 semester. There are three commercial courses, one for specialization in Stenography, one for Bookkeeping and Accounting, and the third which is more of a general commercial course called Business Administration and Selling.

The Industrial courses give technical training, along with certain required high school subjects which are as follows: English, 4 semesters; Mathematics,

2 semesters; Vocational Civics, 2 semesters; Science, 2 semesters; U. S. History, 2 semesters; and 14 semesters of specialization in one of the following Industrial units: Auto Mechanics, Building Trades, Drafting, Electricity, Machine Shop, Pattern Making, and Printing.

The General course is designed for pupils who do not wish to specialize or may lack the normal ability to complete any of the other three courses. The subjects required to complete this course are as follows: English, 6 semesters; World History, 2 semesters; U. S. History, 2 semesters; Biology, 2 semesters; Health, 4 semesters; Sociology and Economics, 1 semester each. All other subjects may be elected in one or more departments depending upon the pupils' wishes and abilities.

During the years 1925 to 1930 pupils were graduated from either of two courses:

1--College Preparatory

2--General

However, on the records of the school there was no distinction made as to which course the pupil completed.

The two graduating classes of 1930 were grouped according to the four courses as previously listed but again the records available for this study did not indicate which course was completed. Commencing with the Jan-

uary 1931 class, the graduates of the four courses have been recorded separately.

Vocational Guidance in the Fordson Public Schools.

Vocational guidance is taught to all pupils during the Social Science classes in 8A groups. Approximately ten weeks of five periods a week are devoted to a discussion of the various occupations.

Once a year the Fordson High School sets apart one day during National Education week as Opportunity Day. On this day, leading men and women of all professions are invited to come to the Fordson High School and counsel with a group of boys and girls who are interested in their particular occupations.

Preceding Opportunity Day a series of bulletins are given to the pupils endeavoring to awaken and prepare them for this day of counselling. After several weeks of this preliminary work, the pupils make a first and second choice of an occupation. These are tabulated and speakers or counsellors are invited for each group. This program has been a success so far as we can determine and men and women of recognized ability have given freely of their time to help make a success of this scheme of vocational guidance.

The Fordson Public Schools Placement Service.

During the school year of 1927-28, the Fordson Board of Education created the Placement Department. The fundamental aim was to offer placement and follow-up service to students of the Fordson schools. This includes all graduates irrespective of departments, industrial preparatory students, continuation school students, and any others forced to leave school due to poor financial or home conditions.

Part-time employment occupies a large part of the placement work and has a two-fold aim:

1--Through close cooperation and correlation with all departments of the schools and by means of the guidance and counseling program, it is possible to aid students who need part-time employment, whereby these students can earn small amounts of money which enable them to finish their school courses.

2--Placement offers first hand experience in making the changes and necessary adjustments between school and the industrial and business world.

During the year 1929-1930, the 630 pupils placed (table II) earned a total of $21,208.35 according to the placement office records, while for the last school year of 1930-1931 the 535 pupils placed earned $19,000.

TABLE II

STUDENTS PLACED SINCE THE ORGANIZATION OF THE PLACEMENT DEPARTMENT

Year	Number Pupils Placed
1927-1928	294
1928-1929	490
1929-1930	630
1930-1931	535
Four Year Total	1969

Graduates of the Fordson High School have been quite fortunate in being placed by the Placement Department as the following table shows.

TABLE III

PLACEMENT OF FORDSON HIGH SCHOOL GRADUATES

Year	No. of Graduates			Number Placed			No. Placed several times
	Boys	Girls	Total	Boys	Girls	Total	
1929	27	28	55	4	13	17	4
1930	26	33	59	5	7	12	2
1931	90	58	148	15	16	31	2
Total	143	119	262	24	36	60	8

Following is a list of active contacts for the Placement Department:

Aviation Radio Company
Bank of Dearborn
Brown's Pharmacy
Crowley, Milner & Company
Dearborn Furniture Company
Dearborn Press
Detroit Edison Company
Dun-Rite Cleaners
Devoe Reynolds Paint Company
Eastern Motorbus Company
Ehrlich's Jewelry Stores
General Cigar Company
Gerson Jewelry Company
Goodwin Pharmacy
Hamtramck Lumber Company
Henry Ford Trade School
Henry Stores
J. L. Hudson Company
Kresge Stores
Liggett's Drug Company
Lowrie-Webb Lumber Company
Mac's Drug Store
Manor Market
Michigan Terminal Warehouse
Morris Stores
Standard Electric Time Co.
Smiggen's Clothing Store
Union State Bank
Western Union Telegraph Co.
White Star Refining Co.
Woolworth Stores
Wayne Machine Company
Wash-rite Laundry
Housework 65 Homes

The Henry Ford Trade School.

Many of the younger boys attending the Fordson Junior and Senior High School are placed in the Henry Ford Trade School. Since September 1929, between 215 and 220 boys have gained admittance to the Trade School through the Placement Department of the Fordson Public Schools. Of this number, approximately 20 of the boys were 18 years of age and were admitted directly into the factory but attend the apprenticeship classes. Most of the boys are between the ages of 14 to 17 when placed directly in the Trade School.

The Henry Ford Trade School was founded by Henry Ford in October, 1916. From a beginning with six boys

and one instructor, it has grown to the present time to an enrollment of over 3,000 boys and approximately 200 instructors. True to the purpose of its origin, needy boys are given the preference. Orphan boys constitute approximately 10%, and widows' sons 45% of the enrollment. Fully 80% of the boys in attendance, due to home conditions, must support themselves. So strongly has the school appealed to boys that there is a constant waiting list of more than 6,000 local boys. For this reason applications are not accepted from other cities in the United States.

The school is incorporated under a Michigan statute to operate without profit. Boys between the ages of twelve and eighteen are admitted. The academic requirement is that the candidate shall be in the school grade for boys of his own age.

Upon entering, a cash scholarship amounting to $7.20 per week is awarded to each boy. This is paid him on the fifth and twentieth of each month throughout the entire year, including a vacation of three weeks in the summer and one week at Christmas.

The school work is divided into two departments. For one week the boy attends academic work only and during the following two weeks he works in the school shop.

During the academic week the boy attends class work only. The entire course includes:

English
Mechanical Drawing
Civics
Auto Mechanics
Commercial Geography
Arithmetic
Algebra
Geometry
Physics
Chemistry
Qualitative Analysis
Quantitative Analysis
Metallurgy
Metallography
S hop Theory
Trigonometry

Boys under sixteen receive their mechanical training in the school shop which is separate from the Ford Motor Company and covers three acres of floor space. On one flocr is a series of rooms totaling a length of 1400 feet with an average width of 70 feet. In this shop are hundreds of the finest machines of many types. The total equipment is valued at over a million dollars. In this shop there are 18 departments and two men spend their entire time moving boys from one department to another as fast as they have completed the requirement.

In order to give them a better appreciation of actual shop conditions, boys who have had sufficient training are placed in departments of the Ford Motor Company when they reach the age of sixteen. They continue their class work every third week and are at all times under the jurisdiction of the school.

As far as possible boys are given an opportunity to work in the following departments:

Forge	Hardening	Nickel Plating	Wood and Metal Pattern
Die	Foundry	Valve Repair	Carpentry
Guage	Sheet Metal	Car Repair	Tool Repair

In the shop each job is done on a work order. An expert estimates how many hours it would take a skilled mechanic to complete the work. An accurate record is kept and boys and instructors try to come within the estimate. Over a period of years the percent of excess time required has varied greatly, rising to 60% and sinking to 13%. The average is about 25% more than the time required by skilled men.

The spoilage averages 4%, which is about equal that of the average tool room. No work is done merely for practice. Everything the boys make is to be used unless spoiled.

The average annual value of material produced by each boy is approximately $1,000. This income from work done for the Ford Motor Company, therefore, is now at the rate of $2,000,000 per year. This is sufficient to pay the students' scholarships, salaries to instructors, and all the upkeep of the equipment. It does not pay any interest on the investment in buildings and equipment.

A boy making satisfactory progress both in his academic and shop work is eligible for an increase of 40¢ a week every six weeks. A boy who applies himself

should receive $12.80 and $16.00 per week at the end of his second and third years. By the time the boy is 17 years old he should have a scholarship rate of $18.00 per week which is the maximum for a boy until he is eighteen, when he completes the junior course.

In order to help the students develop the thrift habit $2.00 per month in addition to his scholarship is given each boy. This fund must be deposited in some bank and kept there as long as the boy remains in school. The bank books are submitted to the school monthly for examination.

Each noon a hot lunch is furnished to all students. This, with the two cash gifts, makes a boy's minimum rate $450 per year and the maximum $1,020. With the present enrollment the scholarships amount to a million dollars a year.

At eighteen the boy enters the Senior Course. He works in the shop eight hours each day and attends class work in advanced drawing and mathematics four hours each week. His rate is gradually increased to $30.00 per week by the time he is nineteem, and may reach $40.00 per week when he is twenty. At twenty or before he is offered a position in some department of the Ford Motor Company.

The work of this school has the approval of the City and State Board of Education.

FACTORS INFLUENCING GRADUATES' CHOICE OF AN OCCUPATION

The year to year distribution of the graduates of the Fordson High School has been very uneven. (Table IV) The class of 1925 contained only five graduates while the June 1931 class had 101 members.

It is to be noted that no replies were received from the June 1925 class, and that the percentage of replies for the succeeding classes were not very large until the January 1931 class was reached.

This brings out probably the most serious limitation of this study. The two graduating classes of 1931 contain 43% of all the graduates, while the classes for the years 1930 and 1931 have 60% of all the graduates. It is also shown that the largest percentage of replies were received from the 1931 graduating classes with over 53% of the June 1931 class answering and over 42% of the January 1931 class replying. 57% of the replies received were from the January and June 1931 classes. This means that 57% of the cases studied have had very little opportunity to satisfactorily adjust themselves to life conditions. Business conditions have been at an extremely low level so the percentage of unemployment is bound to be higher than what it would be during normal times.

The fact that 57% of the graduates have only recently completed high school makes it possible for only a few

TABLE IV

NUMBER OF GRADUATES FROM FORDSON HIGH SCHOOL AND THE NUMBER REPLYING

Class	No. of Graduates			No. of Replies Received			Percent of Graduates Reply		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Average
June 1925	2	3	5	0	0	0	00	00	00
June 1926	7	6	13	2	3	5	28.57	50.	38.47
June 1927	9	13	22	2	5	7	22.22	38.47	31.81
June 1928	12	30	42	2	10	12	16.67	33.33	28.57
Jan. 1929	10	3	13	1	2	3	10.	66.67	23.08
June 1929	17	25	42	5	7	12	29.41	28.	28.57
Jan. 1930	6	5	11	1	0	1	16.67	00	9.09
June 1930	20	28	48	9	6	15	45.	21.43	31.25
Jan. 1931	31	16	47	12	8	20	38.71	50.	42.55
June 1931	59	42	101	27	27	54	44.07	64.3	53.47
Total	173	171	344	63	69	132	36.42	40.35	38.37

to have had time to complete college or other types of advanced training or to have progressed very far vocationally.

Sex has been very evenly divided, there being 173 boys and 171 girls. The replies received show 63 boys and 69 girls answered, or a total of 132 out of a possible 344, a percentage of 38.37%.

The average age of the boys graduating is 18.01 years while the girls is 16.58 years. (Table V) The boys average age exceeds that of the girls by 1.43 years.

TABLE V

AVERAGE AGE OF GRADUATES REPLYING TO QUESTIONNAIRE [1]

Boys		Girls	
Number	Average Age	Number	Average Age
61	18.01	67	16.58

[1] 128 Replies

The age of the youngest boy graduate--16 years

The age of the youngest girl graduate-15 years

The age of the oldest boy graduate----24 years

The age of the oldest girl graduate---22 years

Nativity of Graduates and their Parents.

The percentage of foreign born graduates is not large, being 13.08%. (Table VI) Exactly half of this number were born in the English speaking countries of Canada, Scotland and England. Thus the racially foreign element is relatively small.

TABLE VI

NATIVITY OF GRADUATES

130 Replies

United States	113	Pupils
Canada	5	"
Scotland	3	"
Roumania	3	"
Bulgaria	1	"
England	1	"
Germany	1	"
Italy	1	"
Norway	1	"
Switzerland	1	"

Percent of foreign born pupils	13.08%
Percent of American born Pupils	86.92%

This is not true however for the graduates' parents. The percentage of foreign born fathers is 41.93%. (Table VII) and the percentage of foreign born mothers is 42.62%. (Table VIII) Nearly half of all the graduates' parents are foreign born.

TABLE VII

NATIVITY OF GRADUATES' FATHER

United States	72	Russia	3
Canada	5	Armenia	2
Austria	5	England	2
Poland	5	Czechoslovakia	2
Romania	5	Hungary	2
Germany	4	Bulgaria	1
Finland	3	Greece	1
Italy	3	Litherania	1
Scotland	3	Norway	1
Sweden	3	Switzerland	1

Percent of Foreign Born Fathers 41.93%

TABLE VIII

NATIVITY OF GRADUATE'S MOTHER

United States	70	Finland	2
Canada	9	Hungary	2
Austria	5	Czechoslovakia	2
Poland	5	Scotland	2
Germany	4	Bulgaria	1
Roumania	4	Lithuania	1
England	3	Sweden	1
Russia	3	Greece	1
Italy	3	Norway	1
Armenia	2	Switzerland	1

Percent of Foreign Born Mothers 42.62%.

TABLE IX

NUMBER OF YEARS FOREIGN BORN PARENTS

HAVE LIVED IN THE UNITED STATES

Greatest No. of Years	Smallest No. Of Years	Average Number of Years
51	5	24.43

For 60 of the fathers and mothers

Although nearly one-half of the parents are foreign born, the average number of years these parents have lived in the United States is surprisingly large. The average is 24.43 years. One would think that most of

these people would be thoroughly Americanized, but this is far from true. As a rule, these people locate in a district that is entirely made up of people of their own nationality. They speak their own language and follow their own customs. Only gradually do they come in contact with American ways and ideals. Many can not read or write English. Their ideas concerning education are very different from American ideas. Consequently, while most of the graduates are American born, nearly 50% live in a foreign environment. Many of the graduates speak with a noticeable foreign accent which is a handicap in locating work.

The general attitude of most of the foreign parents is against keeping their children in school. It is a decided hardship for many of the pupils to continue in school because of this attitude on the part of their parents. After graduation, the foreign parents feel that their children are now prepared to conquer the world and they cannot understand why the school is, in many cases, unable to place their children in a very good position. They feel that the wages paid for the work their children is qualified to do is unreasonably low. Often, after such discussions at home, the pupil also believes these ideas and then becomes a difficult person to deal with. The majority of the graduates, however, present no special problem as they realize the true state of affairs.

Present Occupations of the Graduates and their Fathers.

The occupations of the graduates' fathers and of the graduates were compared on the basis of the Federal Census Classification of Occupations. (Tables X and XI) This comparison shows that most fathers were employed in the "Manufacture and Mechanical Industries" (41) with "Trade" (35) next. The remaining 21 "fathers' employment" is scattered among the remaining five classifications.

In contrast, the employment of the male graduates shows "Clerical Occupations" (35) to be far ahead, while the remaining 32 male graduates employed are scattered among the five remaining classifications.

In the "Manufacture and Mechanical Industries" the graduates show only 6 employed, as compared to 41 of their fathers. This great contrast is undoubtedly due to the vast amount of unemployment, especially in the factories, at the present time. Many of the boys who have graduated and are now unemployed, ordinarily would be working in the shops.

Due to present conditions, many boys in the Fordson High School have dropped out of regular school to enter the Ford Trade School. Only the limited enrollment of the Trade School has kept many other boys from making a similar transfer.

TABLE X

CLASSIFICATION OF OCCUPATIONS OF GRADUATE'S FATHERS

Federal Census Classification of Occupations

Agriculture (2)	Manufacture & Mechanical Industires (41)	Transportation (6)	Trade (35)	Public Service (2)	Domestic & Personal Ser (2)	Professional Service (9)
Farmer	Shop Laborer --22	Engineer --1	Merchant-7	City	Caretaker -1	Teacher --4
Gardner	Foreman -- 5	Motorman --1	Laborer -5	Assessor	Watchman -1	Accountant-2
	Toolmaker -- 3	Railroad	Builder -2	City		Chemists --2
	Diemaker -- 2	Clerk --1	Carpentar2	Employee		Supt. of
	Crane Operator-- 2	Sailor --1	Gafageman2			Public
	Machinist -- 2	Switchman --1	Manager			Schools --1
	Electrical	Truck	Store -2			
	Draftsman -- 1	Driver --1	Bottling			
	Metal Finisher-- 1		Business			
	Moulder -- 1		Bricklayer			
	Tool Grinder -- 1		Cement			
	Tool Repairer -- 1		Worker			
		Trade (Cont)	Collector			
		Plumber	Head			
		Painter	Janitor			
		Printer	Lath			
		Real Estate	Contractor			
		Supt. Gas Plant	Laundry			
		Structural	Supt. Milkman			
			Mechanic			

The following classifications has none engaged in them: Forestry, Animal Husbandry, Extraction of Minerals, Clerical Occupations.

TABLE XI

CLASSIFICATION OF OCCUPATIONS OF THE GRADUATES

Manufacture & Mechanical Industries (6)	Transportation (2)	Trade (7)	Domestic and Personal Ser (8)	Professional (9)	Clerical Occupations (35)
Mechanics --3	Telegraph Operator --1	Printing --2	Married --8	Teaching --4	Office Clerks --18
Draftsman --1	Sailor --1	Gas Station Attendant-1	Housework--1	Chemists --2	Stenographer5
Machinist --1		Lather --1	Waitress --1	Nurse --2	Store Clerk-3
Timekeeper --1		Painter --1		Trainer --1	Bookkeepers-2
		Press Helper --1			Bank Clerks-2
		Radio Mechanic--1			Salesman --2
					Dental Clerkl
					Comptometer Operator--1
					Receiving Clerk --1

The following classifications have none engaged in them: Agriculture, Forestry, Animal Husbandry, Extraction of Minerals, Public Service.

A comparison of 52 of the graduates' occupations with those of their fathers, shows only 6 following the same line of work, while 40 of the graduates are engaged in entirely different types of work. (Table XII)

Out of the 6 cases (Table XIII) where the occupation of the son and father are the same, 3 of the boys are working for their father and one is helping his father temporarily. When business revives, it is possible that several of these 6 boys will find other employment.

From Tables XII, XIII, and XIV it appears that the occupation of the father has practically no influence upon the son's choice of an occupation. Rather, the reverse seems to hold, namely, that the occupation of the father influences the son to follow, not the same, but a different line of work. The fact that the majority of the fathers are employed in the industrial plants of the city probably has a great deal to do with this situation, since at present there are practically no new openings available in this line of work.

TABLE XII

INFLUENCE OF GRADUATES FATHERS'

OCCUPATION UPON THE OCCUPATION OF THE GRADUATE

Same Occupation	Similar Occupation	Different Occupation	Father not Living
6	2	40	4

TABLE XIII

OCCUPATIONS FOLLOWED BY BOTH

GRADUATE'S FATHER AND THE GRADUATE

Occupation	Lather	Sailor	Merchant	Rest-aurant	Truck Driver	Machine Worker
Father	1	1	1	1	1	1
Son	1 Temp-orary	1	1 Works for Father	1 Works for Father	1 Helps Father	1

TABLE XIV

SIMILARITY OF OCCUPATIONS OF

GRADUATE'S FATHER AND THAT OF THE GRADUATE

Occupation	Teacher	Manager Retail Store
Father	1	1
Son	1 Preparing for Dr.	1 Clerk in Store

The Choice of an Occupation.

The age that the graduate decided upon his or her life occupation shows a great variation. Some decided as early as 10 years, others not until 23 years of age. (Table XV) Between the ages of 14 and 17 inclusive was the time that over 63% of the graduates decided upon their life work. This does not necessarily indicate that their present employment is the same as their chosen life occupations. Many of the graduates were unable to get the type of position they desired and were forced to take whatever was available.

It is shown that the majority decided upon their intended life work at the age when they are in high school. It is interesting to note (Table XVI) that 63% of the graduates thought their high school training aided them in making their occupational choice.

It is rather surprising that only a small number of the graduates indicated that they experienced any difficulties in making their occupational choice. (Table XVII) The difficulties experienced are shown in detail in Table XVIII. "Financial Problems" formed the main obstacle, while many varied reasons are given by the remaining 18 graduates.

TABLE XV

AGE GRADUATE DECIDED UPON HIS LIFE OCCUPATION[1]

Age of Graduate	Number of Graduates	Percent of Graduates
10 years	3	2.83%
11 "	2	1.88%
12 "	4	3.77%
13 "	4	3.77%
14 "	15	14.15%
15 "	23	21.7 %
16 "	15	14.15%
17 "	14	13.21%
18 "	9	8.49%
19 "	7	6.6 %
20 "	1	.95%
21 "	0	00
22 "	1	.95%
23 "	1	.95%
Not Decided	7	6.6 %
Total	106	100. %

[1] Life occupation does not necessarily mean what the graduate is now employed at.

TABLE XVI

HIGH SCHOOL TRAINING AS AN AID TO THE GRADUATE IN CHOOSING HIS OCCUPATION

High School Training an Aid	Number	Percent
Yes	60	63.16%
No	33	34.74%
Partly	2	2.1 %
Total	95	100. %

TABLE XVII

NUMBER OF GRADUATES EXPERIENCING DIFFICULTIES IN CHOOSING OCCUPATIONS

Experienced Difficulties	Experienced no Difficulties	Indecision
16	53	9

TABLE XVIII

VARIOUS TYPES OF DIFFICULTIES EXPERIENCED BY GRADUATES IN CHOOSING THEIR OCCUPATIONS

Financial	5
Discovering Own Abilities	3
Lack of Proper Education	3
Lack of Experience	2
Doubt of Ability to go to School	1
Parental Influence	1
Inability to Judge Occupations	1

The reasons given as influencing the graduates in their choice of their occupations are shown in Table XIX. "Personal Interest and Love for the Work" accounted for 35 of the pupils, while "Necessity" was listed by 17 of the graduates. The other items are varied and suggestive.

TABLE XIX

INFLUENCES THAT AIDED IN CHOICE OF AN OCCUPATION

Personal Interest and Love of the Work	35
Necessity	17
Influence of others (Parents, Teachers)	12
Desire for an Education	7
Lack of Funds	7
Opportunity	3
Ambition	2
Personal Ability	1
Promotion	1
Former Training	1

OCCUPATIONAL DISTRIBUTION OF GRADUATES (ACCORDING TO COURSES)

Present Occupations of Graduates.

It is indicated by Table XX that most of the College Preparatory graduates who are employed follow an occupation that does not require college training. Seventy-five percent of the graduates of the College Preparatory course who are employed at the present time are doing work that does not require college training, while 52% of this number are engaged in commercial positions.

TABLE XX

PRESENT OCCUPATIONS OF COLLEGE PREPARATORY GRADUATES

	Requiring College Training	Commercial Positions	Industrial Positions	General-Requiring no special training
Boys	1	2	7	2
Girls	6	9	-	1
Total	7	11	7	3
Percent	25%	39.29%	25%	10.71%

Approximately 90% of the Commercial Course graduates (Table XXI) who are employed are doing work requiring commercial training. This seems to indicate that these pupils' course was satisfactory as they are successfully occupying commercial positions at the present time.

TABLE XXI

PRESENT OCCUPATIONS OF COMMERCIAL COURSE GRADUATES

	Commercial Positions	General--Requiring no special Training
Boys	3	1
Girls	13	1
Total	16	2
Percent	88.89%	11.11%

Two-thirds of the Industrial Course graduates who are working, hold positions requiring industrial training. (Table XXII) The number of pupils in Tables XX, XXI and XXII is small and this fact possibly makes it difficult to draw definite conclusions. It does, however, give an indication that should be fairly representative.

TABLE XXII

PRESENT OCCUPATIONS OF INDUSTRIAL COURSE GRADUATES

	Industrial Positions	General--Requiring no Special Training
Boys	4	2
Percent	66.67%	33.33%

The distribution of the General Course graduates who are working is shown by Table XXIII. Nearly 50% are following commercial work, while 36% hold jobs requiring

no special training of any kind.

A summary of the employment of all the graduates with a detailed list of the occupations followed is given in Table XXIV. Exactly 50% of the graduates employed are occupying commercial positions, 20% hold industrial positions, while 17% are doing work requiring no special training.

TABLE XXIII

PRESENT OCCUPATIONS

OF GENERAL COURSE GRADUATES

	Commercial Positions	Industrial Positions	General--Requiring no Special Training
Boys	3	2	2
Girls	2	-	2
Total	5	3	4
Percent	45.46%	18.18%	36.36%

TABLE XXIV

TOTAL EMPLOYMENT OF ALL REPORTING GRADUATES OF ALL THE COURSES FROM THE FORDSON HIGH SCHOOL

Graduates	Professional Occupations	Commercial Occupations	Industrial Occupations	General Occupations
No. Boys	1	8	13	7
No. Girls	6	24	0	4
Total No.	7	32	13	11
Percent	11.11%	50.8%	20.63%	17.46%
Includes following Positions	Nurses Teachers Trainer	Bank Clerks Bookkeepers Comptometer Operator General Office Workers Salesman Receiving Clerks Stenographers	Auto Mechanic Draftsman General Motors Part-time work and School Lather Machinist Printer Radio Mechanic Timekeeper	Gas Station Attendant Sailor Store Clerks Waiter Waitress

Occupational Readjustment of the Graduates.

It is shown in Table XXV that over 50% of the graduates have followed their present occupation for less than one year. This would seem to indicate a high rate of employment turnover, but the main reason for this will be found in the fact that most of those replying to the questionnaire were recent graduates and have not had the opportunity of following any occupation for a very long period. The average length of time on one job by the 57 graduates reporting is approximately two years.

TABLE XXV

LENGTH OF TIME GRADUATE

HAS FOLLOWED THE SAME OCCUPATION

Time	Number of Graduates
Less than one year	30
From one to two years	9
From two to three years	9
From three to four years	2
From four to five years	3
From five to six years	1
From six to seven years	0
From seven to eight years	1
More than eight years	2

In examining the number of times the graduates have changed their occupation, it is found that 63% are on the same job with which they started. This means that the readjustment in occupations is 37%. (Table XXVI) This low figure is primarily due to the recency of graduation for the majority of those replying.

TABLE XXVI

NUMBER OF TIMES GRADUATES

HAVE CHANGED THEIR OCCUPATION

Number of Times Changed	Number of Graduates	Percent of Graduates
None	45	63.38%
Once	13	18.31%
Twice	7	9.86%
Three	5	7.04%
Four	1	1.41%
Total	71	100. %

In examining the reasons given by the graduates stating why they changed their occupations, (Table XXVII) "Advancement" is given by 21%, while "Services no longer Required" is also given by 21%. The remaining graduates listed various reasons such as "Entering College", "Financial" and "Marriage".

TABLE XXVII

REASONS WHY GRADUATES CHANGED THEIR OCCUPATIONS

Advancement	5
Services no longer Required	5
Entered College	4
Financial	2
Marriage	2
Only Position Available	2
Change in Choice of Occupation	2
Indecision	1
Earn Money during Summer	1

Many employers are apparently interested in the young people that work for them. 28% of the graduates' employers discussed the graduates high school training, (Table XXVIII) and made suggestions regarding future preparation. (Table XXIX) 80% of the suggestions offered by employers had to do with future education, while most of these were definite advice regarding the type of training to persue for future progress.

The trend of the employers' statements seems to indicate a general satisfaction with the training given the graduates at the Fordson High School.

TABLE XXVIII

NUMBER OF EMPLOYERS WHO HAVE DISCUSSED WITH THE GRADUATE HIS OR HER HIGH SCHOOL TRAINING

Discussed	Number	Percent
Yes	33	28.4%
No	58	71.6%

TABLE XXIX

SUGGESTIONS OFFERED BY EMPLOYERS TO THE GRADUATES CONCERNING THEIR HIGH SCHOOL TRAINING

Advised a College Education	5
Continue with Education	4
Obtain Commercial Training	4
No Suggestions Offered	4
Not to Restrict Oneself to a Definite Course unless Life Work has been Decided	1
Combine a Business Course with a College Preparatory Course	1
Make Use of all Educational Opportunities Possible	1
To Choose Life Work before Entering College	1
More Work and less Play, more Seriousness	1
Follow the Course you are Interested In	1

Distribution of Graduates According to Course Completed.

A comparison of the number of graduates from the various courses who are employed, unemployed, at school or married is given in Tables XXX, XXXI, XXXII and XXXIII. The Commercial Course graduates head the list, two-thirds of all the Commercial Course graduates being employed. The General Course graduates are next with 55%. The majority of the General Course graduates specialize in commercial training while the rest take several courses in shop or homemaking. The College Preparatory graduates are low on the list with 39% working but it is to be expected that this would be low as many of these graduates are at school.

In the ranking of graduates at school, the College Preparatory graduates head the list with one-third, while the Industrial graduates are next with one-sixth, the commercial graduates have one-ninth and the General graduates one-tenth.

In the matter of unemployment the Industrial graduates rank highest with 33% out of work. The College Preparatory are next with 25%, the Commercial with 22% and the General with 30%.

Very few of the graduates are married. The General course graduates lead with 15%, while the College Preparatory has a percentage of 2.78%.

A s previously stated, the General Course is primarily for pupils who do not wish to specialize or who lack

the mentality to satisfactorily complete one of the other courses. However, this interpretation was not placed on the General Course until the graduating of the January 1933 class. So all graduates listed in this study as a General Course graduate were on that course primarily because they did not know or desire to specialize in any one field.

It will be noted in comparing the following tables that the General Course graduates have done equally as well if not better than some of the other groups.

If a similar study were made a few years hence, it is very possible that the General Course graduates would occupy a relatively lower position. This would be due to the fact that now the General Course pupils are marked on effort rather than on accomplishment and it is inevitable that this would reflect in the types of positions secured after graduation.

Table XXXIV shows the distribution of the graduates according to their monthly salary. The ten graduates represented in the group receiving less than $50 a month are made up mostly by pupils who have secured part-time employment. Only a few in this group are working full-time.

The salaries shown to be received by the other graduates are very satisfactory. In fact, many of the salaries are extremely good when it is considered that most

of the graduates have been working a comparatively short time.

It is interesting to note that the average wage paid the boys at the Ford Trade School per year is about $750 while the average wage of the graduates is just over $1,000 a year.

TABLE XXX

DISTRIBUTION OF COLLEGE PREPARATORY GRADUATES ACCORDING TO OCCUPATION PURSUED AT THE PRESENT TIME

College Preparatory Graduates

Occupation	Boys Number	Boys Percent	Girls Number	Girls Percent	Total Number	Total Percent
Employed	12	35.29	16	42.1	28	38.89
At School	12	35.29	12	31.59	24	33.33
Unemployed	10	29.42	8	21.05	18	25.
Married			2	5.26	2	2.78
Total	34		38		72	

TABLE XXXI

DISTRIBUTION OF COMMERCIAL GRADUATES ACCORDING TO OCCUPATIONS PURSUED AT THE PRESENT TIME

Commercial Course Graduates

Occupation	Boys Number	Boys Percent	Girls Number	Girls Percent	Total Number	Total Percent
Employed	4	66.67	14	66.67	18	66.67
At School	1	16.67	2	9.52	3	11.11
Unemployed	1	16.67	5	23.81	6	22.22
Married	0	0	0	0	0	0
Total	6		21		27	

TABLE XXXII

DISTRIBUTION OF GENERAL COURSE GRADUATES

ACCORDING TO OCCUPATION PURSUED AT THE PRESENT TIME

General Course Graduates

Occupation	Boys Number	Boys Percent	Girls Number	Girls Percent	Total Number	Total Percent
Employed	7	77.78	4	36.37	11	55.
At School			2	18.18	2	10.
Unemployed	2	22.22	2	18.18	4	20.
Married			3	27.27	3	15.
Total	9		11		20	

TABLE XXXIII

DISTRIBUTION OF INDUSTRIAL COURSE GRADUATES

ACCORDING TO OCCUPATION PURSUED AT THE PRESENT TIME

Industrial Course Graduates

Occupation	Boys Number	Boys Percent
Employed	6	50.
At School	2	16.67
Unemployed	4	33.33
Married		
Total	12	

TABLE XXXIV

MONTHLY SALARY OF GRADUATES

EMPLOYED AT THE PRESENT TIME[1]

Salary Received	Number of Graduates Receiving this Wage	Average Wage of this Group
Less Than $50	10	$30.10
Between $50 and $75	12	$63.17
Between $75 and $100	12	$85.60
Between $100 and $125	11	$105.00
Between $125 and $150	6	$126.67
Above $150	3	$170.00

The Average Wage is $83.54 per month

[1] In two cases, the graduate was receiving board and room plus a salary. In these cases, board and room was figured as $40 a month.

Number of Graduates Continuing their Education.

The percent of College Preparatory graduates who actually went to college is 47%. (Table XXXV). This indicates that while the college entrance requirements must be met, the pupils should also be given enough practical training so in the event he is unable to enter college, he is able to support himself.

It is possible that several of the graduates have entered college this fall, which would raise the percentage of those attending college to at least 50%. Undoubtably the press of hard times has also taken its toll among the prospective college students.

During normal times however, it is fairly safe to conclude that not over 60% of the College Preparatory Course graduates enter college and a small percentage graduate from a four year college course.

The percent of pupils graduating from college (Table XXXVI) is low because most of the Fordson High School graduates have only recently completed their high school training and have not yet had the opportunity to complete their college courses.

The large number attending business schools (Table XXXVII) and night schools is an indication that the pupils training so far is inadequate to earn a satisfactory living.

The reason that the number of graduates going to college, according to Table XXXV and the number going to college as shown by Table XXXVI vary is due to the fact that several graduates from other courses have, by additional work, prepared themselves to enter college.

TABLE XXXV

PERCENT OF COLLEGE PREPARATORY GRADUATES GOING TO COLLEGE

No. of Graduates College Preparatory Course	Number Going To College	Number not going to College	Percent of Graduates Going to College	Percent of College Preparatory Graduates not at College
72	34	38	47.22%	52.78%

TABLE XXXVI

NUMBER OF YEARS SPENT IN COLLEGE BY COLLEGE PREPARATORY GRADUATES

Number of Graduates Attending College	Number of Graduates Attending College			
	1 year	2 years	3 years	4 years
39	23	6	4	6

TABLE XXXVII

NUMBER OF COLLEGE PREPARATORY COURSE GRADUATES WHO ATTENDED OTHER SCHOOLS OTHER THAN COLLEGES

Attended Business School	Graduated From Business School	Attended Night School	Took Correspondence Course
17	4	23	2

RELATION OF SCHOOL RECORD AND OCCUPATIONAL RECORD OF GRADUATES

Relation Between Graduates' Mental Rating and their Occupational Record.

A comparison between the graduates' mental rating and their apparent success in life as judged by their present occupation and salary is shown by Table XXXVIII. The results seem to indicate one of two things. Either the reliability of the Intelligence tests is negligible or pupils with just average ability are more apt to make something of themselves than those of superior mental ability.

The percentage of the number of graduates working having "A" and "B" ratings is slightly over 48%, while the number with "C" rating who are employed is over 72%.

It is evident that the pupils of higher mentality go on with advanced education as shown by the percentages of 31.43% for the "A" group and 34.14% for the "B" group.

The group for whom no letter ratings were obtainable seem to be about average except for the large number of unemployed, the percent being 34.13%.

The types of employment in which the graduates are engaged in relation to their mental rating is shown by Tables XXXIX, XL, XLI, and XLII. These show that the pupils with "A" and "B" mental ratings command the larger salary. The group for which no ratings were available have slightly the best earning average. The pupils with the "C" mental rating are approximately $20 a month

lower than the other groups.

The facts shown in Tables XXXVIII to XLII are in accordance with some of the findings of Dr. Purdom of the University of Michigan who has recently completed a comprehensive study of the success of Michigan High School graduates at various Colleges in the State.

Dr. Prudon checked the progress made by all the graduates of Michigan High Schools to see what percent from each high school failed to make good at college. He also obtained the average mental rating of all the graduates who entered college from each high school. He discovered one high school whose graduates were 10% below the average in mentality, yet only 8% of those graduates failed at college. In the case of another high school whose graduates were 10% above the average in mentality, exactly 50% of those graduates failed at college.

This seems to indicate that it is not so much what the pupil's mental capacity is but rather the degree of initiative and willingness to work that really counts. Those of superior ability often get into the habit of not working in school and the habit seems to carry over in after life.

TABLE XXXVIII

POST-GRADUATE STATUS OF GRADUATES OF DIFFERENT MENTAL RATINGS

Number of Graduates	Number Working	Per-cent	Number Unemployed	Per-cent	No. at School	Per-cent	Number Married	Per-cent
"A" Rating 35	17	48.6	7	20.	11	31.4	0	00
"B" Rating 29	14	48.3	6	20.7	7	24.1	2	6.9
"C" Rating 18	13	72.2	2	11.1	3	16.7	0	00
Rating Unknown 41	17	41.5	14	34.1	8	19.5	2	4.9

TABLE XXXIX

TYPE OF EMPLOYMENT GRADUATES WITH AN "A"

MENTAL RATING ARE ENGAGED IN AT THE PRESENT TIME

Type of Work	Number Employed	Monthly Salary	
		$100	$100
Stenographer	4	$100	$ 85
		$ 85	$ 85
Office Clerk	3		?
		$ 85	$ 50
Store Clerk	3		?
Receiving Cl.	2	$ 92	$ 60
Printer	2	$100	$ 72
Teacher	1		$155
Tool Maker	1		$ 56
Trainer	1		?

Average Salary $88.21

TABLE XL

TYPE OF EMPLOYMENT GRADUATES WITH A "B"

MENTAL RATING ARE ENGAGED IN AT THE PRESENT TIME

Type of Work	Number Employed	Monthly Salary		
Office Clerk	3	$100	$95	$80
Bookkeeper	2	$30	$40	
House Work	1	$30		
Gas Station AT	1	$100		
Sailor	1	$110		
Sales Clerk	1	?		
Stenographer	1	$100		
Teacher	1	$130		
Timekeeper	1	$135		
Waiter	1	?		
Waitress	1	$48		

Average Wage $87.33

TABLE XLI

TYPE OF EMPLOYMENT GRADUATES WITH A "C"

MENTAL RATING ARE ENGAGED IN AT THE PRESENT TIME

Type of Work	Number Employed	Monthly Salary
Salesman	2	$80 ?
Stenographer	2	$85 $48
Auto Mechanic	1	?
Draftsman	1	$100
Pharmaceutical Worker	1	$80
Comptometer Operator	1	$90
Lather	1	?
Mechanic	1	$72
Printer	1	$64
Radio Mechanic	1	?
Telegraph Operator	1	$85

Average Wage $69.33

TABLE XLII

TYPE OF EMPLOYMENT GRADUATES WHOSE MENTAL

RATING IS NOT KNOWN ARE ENGAGED IN AT THE PRESENT TIME

Type of Work	Number Employed	Monthly Salary
Clerk	4	$60 $24 ? ?
Stenographer	4	$100 $72 $72 ?
Office Clerk	2	$85 ?
Nurse	2	$125 $80
Teacher	2	$155 $130
Bookkeeper Machinist	1 each	$105 $300
Receiving Clerk	1	$40

Average Wage $90.29

Relation of Record in High School and Occupational Record after Graduation.

The scholastic records of the graduates of the Fordson High School were examined and the pupils grouped according to their average grade earned while in high school. The pupils were divided into the following grade groups: "A" average, "B" average, "C" average, and "D" average.

In dividing the graduates according to achievement it was discovered that 8% was in the "A" group, 39% in the "B" group, 53% in the "C" group and 1% in the "D" group. In comparison, the division of the graduates according to mental rating shows 28% in the "A" group, 24% in the "B" group, 15% in the "C" group and 33% in the unknown group.

In table XLIII we find 50% of those with "A" grades are working and 50% are at school, while those with "A" mentality show 48.5% working, 31.5% at school and 20% unemployed.

In comparing those receiving "B" grades in school, 49% are employed, 12% are unemployed, 35% are at school and 4% are married. (Table XLIII) In comparison, the "B" mentality group shows 48% working, 21% unemployed, 24% at school and 7% married.

Those receiving "C" grades in school show 53% employed, 33% unemployed, 10% at school and 4% married; (Table XL III) while those in the "C" mentality group

have 72% employed, 11% unemployed, 17% at school and none married. This rather indicates that low mental rating is no great handicap in securing employment.

There was only one graduate in the "D" grade group and he was unemployed.

The outstanding variation is in regard to salaries. Tables XLIV, XLV, XLVI.. These show that the earning of the graduates show a positive relationship to their average marks earned in high school. The average salary of those in the "A" grade group is $125 monthly, those in the "B" grade group earn on the average $96.15 monthly, and those in the "C" grade group earn on the average $69.67 monthly.

In comparison the salaries of the graduates when grouped by mental rating show quite a variation. Table 49 shows the differences. The "A" mental group average wage is $88.21 or $31.79 a month less than the "A" grade group. The "B" mental group average wage is $87.33 or $8.82 a month less than the "B" grade group while the "C" mental group average wage is $69.33 and the "C" grade group is $69.67 or 34¢ a month less.

This indicates that regardless of the native mental ability of the graduate, if he or she works diligently and develops work habits in school, those habits will carry over after graduation and will be reflected in greater earning capacity.

It is interesting to note that 80% of the graduates continuing their education are in the "A" and "B" grade groups. The majority of the six graduates in the "C" grade group are attending either business or music schools.

TABLE XLIII

POST-GRADUATE STATUS OF GRADUATES OF DIFFERENT GRADE RATINGS OBTAINED IN HIGH SCHOOL

Number of Graduates	Number Working	Per-cent	Number Unemployed	Per-cent	No. at School	Per-cent	Number Married	Per-cent
"A" Grade 10	5	50	0	00	5	50	0	00
"B" Grade 49	24	49	6	12	17	35	2	4
"C" Grade 64	34	53	21	33	6	10	3	4
"D" Grade 1	0	00	1	100	0	00	0	00

TABLE XLIV

TYPE OF EMPLOYMENT GRADUATES WITH AN "A" GRADE IN HIGH SCHOOL ARE ENGAGED IN AT THE PRESENT TIME

Type of Work	Number Employed	Monthly Salary
Teacher	3	$155 $155 $130
Stenographer	2	$100 $85

Average Salary $125

TABLE XLV

TYPE OF EMPLOYMENT GRADUATES WITH A "B" GRADE IN HIGH SCHOOL ARE ENGAGED IN AT THE PRESENT TIME

Type of Work	Number Employed	Monthly Salary
Office Clerk	10	$110 $110 $95 $92 $85 $85 $80 $60 $40
Store Clerk	2	$50 ?
Bookkeeper	2	$100 $105
Comptometer Operator	1	$90
Draftsman	1	$100
Gas St. Attend.	1	$100
Machinist	1	$300
Nurse	1	$125
Stenographer	1	?
Sailor	1	$110
Trainer	1	?
Tool Maker	1	$56
Teacher	1	$130

Average Salary $96.15

TABLE XLVI

TYPE OF EMPLOYMENT GRADUATES WITH A "C" GRADE IN HIGH SCHOOL ARE ENGAGED IN AT THE PRESENT TIME

Type of Work	Number Employed	Monthly Salary Rec.
Store Clerk	6	$85 $80 $24 ? ? ?
Stenographer	5	$120 $100 $72 $72 $48
Office Clerk	3	$120 $85 $35
Bookkeeper	2	$80 $40
Printer	2	$72 $84
Salesman	2	$80 ?
House Work	1	$80
Lather	1 each	?
Laborer		$100
Mechanic	2	$72 ?
Press Helper	1 each	$100
Radio Mechanic		?
Receiving Clerk	1 each	$80
Timekeeper		$125
Waiter	1 each	?
Waitress		$48

Average Salary $89.67

TABLE XLVII

COMPARISON OF GRADUATES WITH "A" MENTAL RATING AND THOSE WITH AN "A" AVERAGE GRADE IN SCHOOL WITH GRADUATE RECORR

Type of Rating	Number of Graduates	Number Working	Number Unemployed	Number at School	Number Married
"A" Mental Rating	35	17	7	11	0
"A" Grade Average	10	5	0	5	0
Percent of "A" Rating	28%	48.5%	20%	31.5%	0
Percent of "A" Grade	8%	50%	00%	50%	0

TABLE XLVIII

COMPARISON OF GRADUATES HAVING A "B" MENTAL RATING AND THOSE RECEIVING A"B" AVERAGE GRADE IN HIGH SCHOOL WITH GRADUATE RECORD

Type of Rating	Number of Graduates	Number Working	Number Unemployed	Number at School	Number Married
"B" Mental Rating	29	14	6	7	2
"B" Grade Average	49	24	6	17	2
Percentof "B" Rating:	24%	48%	21%	24%	7%
Percent "B" Grades:	39%	49%	12%	35%	4%

TABLE XLIX

COMPARISON OF GRADUATES HAVING A "C" MENTAL RATING AND THOSE RECEIVING A "C" AVERAGE GRADE IN HIGH SCHOOL WITH GRADUATE RECORD

Type of Rating	Number of Graduates	Number Working	Number Unemployed	Number at School	Number Married
"C" Mental Rating	18	13	2	3	0
"C" Grade Average	64	34	21	6	3
Percent of "C" Rating:	15%	73%	11%	17%	0
Percent of "C" Grades:	52%	53%	33%	10%	4%

Graduates Estimated Value of School Studies and Activities.

The subjects the graduates feel have been most helpful since leaving school are listed in Table L. It is only natural for the pupils to list the subjects they use on the job so it is to be expected that commercial subjects would have the largest total as most of the graduates are employed in some type of commercial work. English ranks second, while Science and Social Science are tied for third place.

In contrast, Table LII shows the subjects the pupils feel have not been of much aid since graduation. English was not mentioned once in this list and Commercial only eleven times. Language and Mathematics head the list on this chart, while on Table L they are the lower groups.

It is undoubtedly true that in many instances where the pupil feels a subject has not been helpful that he or she fails to realize in what way that subject may have aided. In cultural value and general educational background all subjects have a value. However, it was the purpose of these particular questions to determine what group of subjects actually are the most useful after getting out on the job.

The activities engaged in at high school that seem to have value after graduation are given in Table LI. "Athletics" head this list with "Music" and "Dramatics" and "Clubs" being fairly evenly distributed.

The ways the activities engaged in at high school have been of benefit are shown by Table LII. "Socially" is the main reason given with "Poise" and "Self-expression" following closely.

The activities that have been of practically no assistance since graduation are found in Table LIII. The small total of 13 listed is quite conclusive evidence that the majority of pupils do derive some useful benefit from the various forms of activities.

TABLE LII

WAYS IN WHICH ACTIVITIES HAVE

HELPED THE GRADUATES SINCE GRADUATION

Socially	8	Financially	2
Poise and Self-expression	7	General Education	2
Meeting People	4	Aid in Studies	2
Experience	4	Knowledge in Music	2
Physically	3	Singing in Choir	2
Argumentation & Thinking	3	Teaching Singing	1
Activities for Leisure	3	Confidence	1
Improved Writing	3	Reasoning	1
Cultural	3	Follow Instructions	1

TABLE L

SUBJECTS TAKEN IN HIGH SCHOOL THAT GRADUATES BELIEVE HAVE BEEN THE MOST USEFUL SINCE GRADUATION

Commercial (77)	English (57)	Science (32)	Social Science (32)	Mathematics (22)	Industrial (13)	Language (10)	Homemaking (9)	Miscellaneous (15)
Typewriting 31		Chemistry ---13	History--14		Auto Shop-4	Latin--5	General--7	Journalism --7
Bookkeeping 14			Sociology 9		Machine Shop-3	French-3	Child Care--1	Music --2
Shorthand 7		Physics --11	Economics 9		Drafting--2	German-1	Home Decoration --1	Physical Education--2
Penmanship & Spelling 6		Biology-4			Mechanical Drawing-2	Spanish1		Art --1
Commercial Law 5		General-4			Building Trades--1			Play Production --1
Salesmanship 3					Printing--1			Public Speaking --1
Filing 3								Debating --1
Office Practice 3								
General Commercial 3								
Business Arithmetic 1								
Commercial Geography 1								

TABLE I I

ACTIVITIES ENGAGED IN AT HIGH SCHOOL THAT

GRADUATES BELIEVE HAVE BEEN THE MOST USEFUL SINCE GRADUATION

Athletics (26)		Music (11)	Dramatics (9)	Clubs (20)		Miscellaneous (14)	
Basketball	5			Glee Club	8	School Paper & Annual	7
General	5			Girl Reserves	4	Debating	2
Gym	4			Commercial Club	3	Class Officer	2
Swimming	3			Boy Scouts	2	Art	1
Baseball	2			F. Club	1	dancing	1
Football	2			General	1	Student Council	1
Tennis	2			Science Club	1		
Track	2						
Intermural	L						

TABLE LIII

SUBJECTS TAKEN IN HIGH SCHOOL THAT GRADUATES

BELIEVE HAVE BEEN OF NO VALUE SINCE GRADUATION

Mathematics		Language		Social Science		Science		Commercial		Industrial		Miscellaneous	
(28)		(26)		(23)		(17)		(11)		(3)		(7)	
Geometry	16	Latin	12	History	15	Chemistry	--9	Typewriting	--4	Machine Shop	2	Play Production	3
Algebra	8	General	7	Sociology	4	Biology	5	Bookkeeping	--3	Drafting	1	Journalism	3
General	3	French	6	Economics	2	General	3	Shorthand	2			Gym	1
Trignometary	1	Spanish	1	General	2			Commercial Law	1				
								Salesmanship	--1				

TABLE LIV

ACTIVITIES ENGAGED IN AT HIGH SCHOOL THAT

GRADUATES BELIEVE HAVE BEEN OF NO ASSISTANCE TO THEM SINCE GRADUATION

Clubs (5)	Dramatics (3)	Athletics (1)	Music (0)	Miscellaneous (4)
Athletic Club --1				Debating --2
Commercial Club --1				School Paper-1
French Club-1				Student Council --1
Glee Club --1				
Industrial Club --1				

SUMMARY

The results of this study may now be reviewed and summarized. The response to the questionnaire by 38.37% of the graduates was not a high percentage because of the recency of their graduation. Many of the graduates, when called upon personally, said they thought it would be of no aid for them to send in the questionnaire because they were unemployed and had done nothing since leaving high school. So it is quite possible that the number of unemployed as shown by this study is lower than it would have been if a larger percentage of the graduates had reported.

The percentage of foreign born parents seems exceedingly large but probably would be the same in similar industrial cities. Practically one half of the graduates are of foreign parents although American born.

One of the most striking things brought out in this study was the small number of male graduates who followed the occupation of their fathers. As most of the fathers have worked in the industrial plants in which employment is at present at an abnormally low level, it is easily seen that it has been practically impossible for most of the graduates to follow their father's occupation even if they desired to do so.

The tendency, as shown by the present occupation of the graduates, is toward occupations of a commercial

nature. Approximately 50% of all the graduates are engaged in commercial positions ranging from stenographers and office clerks to clerks in the chain stores. This condition would seem to make it desirable that some definite training for business be included in every pupil's course regardless of what course it is.

The fact that approximately only 50% of the college preparatory graduates entered college was rather surprising. Of course, present conditions have a great influence upon many of the graduates. Ordinarily the number entering college should be considerably higher.

A comparatively few of the graduates reported that they experienced difficulties in choosing their life occupation. The fact that the majority of the pupils decided upon their life occupation while in Junior or Senior High School indicates that the vocational guidance given in school may have been an important factor in this decision.

Most of the graduates chose an occupation because they liked that particular work. This would seem to indicate that the parents of the graduates are allowing their children more freedom in their choice of an occupation than was formerly the case. It is a very desirable condition as success in life is more likely to come from doing what one likes to do rather than from doing what one is forced by circumstances to do.

The relationship between the graduates' average marks in school and their success after graduation is fairly close. The salary of those having a "B" grade in school was approximately $30 a month more than those having a "C" grade, and the graduates having a "A" grade are earning approximately $30 a month more than the "B" grade group. There was no unemployment among the "A" grade group and only a small percentage of unemployed in the "B" grade group. From these results it would seem that the pupils who are able to attain high achievement in high school would have fair prospects of obtaining employment after graduation with better than average salary.

The grouping of the graduates according to mental rating follows fairly close the grade grouping. There was very little difference between the salaries of the mental rating groups, except that the mental groups of "A" and "B" received higher salaries than the "C" group. However, the "C" mental group had the highest percent of employment.

The results of this study seem to indicate that the graduate of average intelligence, if he applies himself, is a steadier worker, although those of superior mental ability, when they apply themselves, are capable of earning larger salaries.

Altogether it appears that the Fordson High School has satisfactorily prepared its graduates for life con-

ditions. From the tone of the graduates replies, it is shown that the graduates themselves are satisfied except in a few scattered cases. The main items of dissatisfaction reported by the graduates had to do with school policy, a thing that had to be constantly changed because of the abnormal growth of the school.

Reports of Graduates of the Fordson High School

Dearborn, Michigan

Name_____ Address_____

Date of high school graduation_____ Course completed_____ Age_____

Place of Birth_____ Father's Birth place_____ Mother's Birth place_____

Year your parents came to U. S._____ Present Occupation of Father_____

Have you attended college since graduation?_____ Business school?_____ Night school?_____

How long did you attend the school?_____ Graduate?_____

What is your present occupation (include Homemaking, if married)_____

Name of firm where employed?_____

Address of firm_____ Name of Position_____

Present monthly salary?_____ What other positions have you held since graduation?_____

_____

How long have you followed your present occupation?_____

At about what age did you definitely decide on an occupation for your life work?_____

What difficulty did you have selecting your occupation?_____

Did your high school work help you to decide upon your occupation?_____

What caused you to choose your present occupation?_____

How many times have you changed your occupation since graduation?_____

Why did you change?_____

What subjects in high school have been the most helpful to you since graduation?_____

_____

What activities?_____

In what particular ways?_____

What subjects in high school have not been of assistance to you since graduation?_____

_____

What activities?_____

Has your employer ever discussed your high school training with you?_____ If so, what is the nature of his suggestions?_____

_____

What are some duties now being demanded of you that your high school training could have prepared you to meet?_____

_____

What suggestions can you offer for the improvement of the work offered in high school?_____

_____

_____

Please use reverse side for additional information.

August 24, 1931
Fordson High School
Dearborn, Michigan

Dear Friend:

Since the organization of the Fordson Public Schools, formerly Springwells, exactly 344 pupils have graduated from the high school.

What are these 344 young people doing now? Where are they? Was their high school training sufficiently broad to enable them to step into worth-while positions or go on with further education? In what ways may the training of the high school students be improved?

In order to attempt to determine of what value and aid your high school training was to you, I am undertaking a study of all the graduates of the Fordson High School. Enclosed you will find a questionnaire prepared for this purpose. Will you aid me in this by taking 10 minutes to fill out the questions that pertain to you and return in the self-addressed stamped envelope?

This study has the approval and support of Superintendent Harvey H. Lowrey and Forrest Averill, our Principal. The aid of every graduate is essential for the success of this undertaking.

All information reported in this questionnaire will be regarded as confidential and will be reported only in a group report. Your support will be appreciated. Thank you.

Very truly yours,

Stanley Smith

Chairman, Commercial Department

Part 8

Line A pecks bushel many how a in ( )

1 five the number write ( )
2 and add five six ( )
3 write letter alphabet seventh the of the ( )
4 minutes number of hour in the write an ( )
5 letters alphabet many in the how ( )

6 last write of hearing organ letter of the the ( )
7 many how fifth year month the in days the of ( )
8 letter alphabet tenth write the the of ( )
9 many has how sides hexagon a ( )
10 a nickel a if pencil costs three cost will what pencils ( )

11 in letters many capital England of how the ( )
12 even write the number fourth eleven after ( )
13 be fourth this should what letter sentence in the ( )
14 sum what odd first numbers five the of is the ( )
15 write product the and one-half eight of three ( )

16 book books three quarter a a if will what cost costs ( )
17 add third and fifth words sentences in number the of the ( )
18 number two the words this of sentence in to add ( )
19 three three is number that than the write more ( )
20 write question answer as same eighth in the the ( )

21 of the of the the in month days eighth write number year ( )
22 opposite letter meaning write dry the word of first the of the ( )
23 thirty-one months year the of have many how days ( )
24 seven much seven how dollars save you weeks save if for week will a you ( )
25 what number the five six is twice of product and ( )

26 the square two and product three of ( )
27 letters State of Ohio west many in how the ( )
28 the of letter sentence longest print in first this the word ( )
29 number what divided fifteen three is by ( )
30 this number the multiply four sentence by in words of ( )

Score.....

Advanced Intelligence Test—V
Harry J. Baker
High School and College

Published by the
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Printed in U. S. A.

Form V

DETROIT ADVANCED INTELLIGENCE TEST

DEVISED BY HARRY J. BAKER

Name.....Years.....Months.....
First Last

Grade.....School.....City.....

Boy.....Girl.....Home Language.....

Letter Rating.....

Instruction Group.....

SCORE RECORD

Part No.	Score
1	
2	
3	
4	
5	
6	
7	
8	
Total	

Part 1

Line A	Gloves are worn on the	1 ears	2 feet	3 hands	4 head	( )
1	America was discovered by	1 Balboa	2 Columbus	3 Drake	4 Hudson	( )
2	The tuna is a kind of	1 bird	2 fish	3 insect	4 reptile	( )
3	The U. S. School for Army officers is at	1 Annapolis	2 Ithaca	3 Washington	4 West Point	( )
4	Diamonds come from	1 elephants	2 mines	3 oysters	4 reefs	( )
5	Turquois is usually	1 blue	2 gray	3 red	4 yellow	( )
6	Larceny is used in	1 law	2 medicine	3 pedagogy	4 theology	( )
7	The larynx is in the	1 abdomen	2 head	3 neck	4 shoulder	( )
8	The penguin is a kind of	1 bird	2 fish	3 insect	4 reptile	( )
9	The aspen is a kind of	1 drink	2 fabric	3 machine	4 tree	( )
10	Artichoke is a kind of	1 corn	2 hay	3 mineral	4 vegetable	( )
11	The xylophone is used in	1 music	2 plumbing	3 printing	4 wiring	( )
12	The Guernsey is a kind of	1 cow	2 goat	3 horse	4 sheep	( )
13	The pancreas is in the	1 abdomen	2 chest	3 head	4 shoulder	( )
14	Rubber comes from	1 hides	2 ore	3 petroleum	4 trees	( )
15	Pongee is a kind of	1 dance	2 drink	3 fabric	4 food	( )
16	Salsify is a kind of	1 fish	2 lizard	3 snake	4 vegetable	( )
17	Gettysburg battle was in	1 1778	2 1812	3 1813	4 1863	( )
18	The "Scarlet Letter" was written by	1 Defoe	2 Hawthorne	3 Kipling	4 Poe	( )
19	Largo was composed by	1 Bach	2 Handel	3 Hayden	4 Mozart	( )
20	Cheviot is the name of a	1 drink	2 dance	3 fabric	4 food	( )
21	Newton was famous in	1 education	2 politics	3 science	4 war	( )
22	"The Raven" was written by	1 Hawthorne	2 Kipling	3 Poe	4 Scott	( )
23	Entomology is a study of	1 birds	2 insects	3 minerals	4 stars	( )
24	Wesley was famous in	1 politics	2 religion	3 science	4 war	( )
25	The world's oldest city is thought to be	1 Damascus	2 Jerusalem	3 London	4 Paris	( )
26	The ampere measures	1 electricity	2 rainfall	3 water	4 wind	( )
27	Spare is a term used in	1 bowling	2 football	3 hockey	4 tennis	( )
28	Pestalozzi was a	1 musician	2 educator	3 painter	4 statesman	( )
29	Mauve is the name of a	1 color	2 drink	3 fabric	4 food	( )
30	Mica is a kind of	1 gas	2 liquid	3 mineral	4 vegetable	( )
31	Falstaff appears in	1 Hamlet	2 Henry IV	3 Oliver Twist	4 Romola	( )
32	"To lob" is a term used in	1 football	2 golf	3 hockey	4 tennis	( )
33	Antitoxin is used for	1 diphtheria	2 drowning	3 manicuring	4 tonsillectomy	( )
34	The bassoon is used in	1 fishing	2 music	3 printing	4 wiring	( )
35	The tedder is used in	1 athletics	2 farming	3 fishing	4 hunting	( )
36	An ornithologist studies	1 birds	2 bugs	3 stars	4 stones	( )
37	Froebel fostered the	1 College	2 Kindergarten	3 Platoon School	4 Trade School	( )
38	Paleology is the study of	1 antiquities	2 flowers	3 rocks	4 stars	( )
39	Pythagoras is famous in	1 chemistry	2 mathematics	3 medicine	4 war	( )
40	The dibble is used in	1 farming	2 fishing	3 hunting	4 plumbing	( )

Score.....

Part 2

Line A empty	1 barren	2 free	3 full	4 vacant	5 void	( )
1 near	1 adjacent	2 close	3 far	4 present	5 ready	( )
2 fail	1 bankrupt	2 credit	3 false	4 succeed	5 weak	( )
3 often	1 common	2 daily	3 frequent	4 seldom	5 times	( )
4 prevent	1 assist	2 avert	3 delay	4 hinder	5 preclude	( )
5 confirm	1 church	2 corroborate	3 deny	4 establish	5 report	( )
6 accumulate	1 amass	2 gather	3 hoard	4 scatter	5 wealth	( )
7 eager	1 earnest	2 indifferent	3 keen	4 sharp	5 zealous	( )
8 divide	1 add	2 multiply	3 numbers	4 quotient	5 subtract	( )
9 corrupt	1 deprave	2 laws	3 pure	4 rotten	5 tainted	( )
10 monotonous	1 dreary	2 dull	3 tedious	4 uniform	5 varied	( )
11 reverence	1 adoration	2 desecration	3 devotion	4 respect	5 veneration	( )
12 anxiety	1 concern	2 confidence	3 fear	4 solicitude	5 worry	( )
13 irksome	1 burdensome	2 fatiguing	3 humdrum	4 pleasing	5 task	( )
14 apprehension	1 anger	2 confidence	3 dread	4 fear	5 presentment	( )
15 immune	1 diphtheria	2 disease	3 exempt	4 fever	5 susceptible	( )
16 effeminate	1 ephemeral	2 feminine	3 masculine	4 weak	5 voluptuous	( )
17 sterile	1 barren	2 desert	3 dry	4 fertile	5 flowers	( )
18 hinder	1 check	2 embarrass	3 delay	4 help	5 prevent	( )
19 convoke	1 assembly	2 church	3 dismiss	4 rebuke	5 summon	( )
20 palliate	1 conceal	2 crime	3 exculpate	4 extenuate	5 strengthen	( )
21 acute	1 angle	2 geometry	3 obtuse	4 pointed	5 sharp	( )
22 apathy	1 appetite	2 calmness	3 enthusiasm	4 indifference	5 stoicism	( )
23 infinite	1 definite	2 finite	3 infidel	4 infirm	5 truth	( )
24 perfunctory	1 careful	2 decreased	3 indifferent	4 mechanical	5 superficial	( )
25 assiduous	1 diligent	2 laborious	3 persevering	4 sedulous	5 superficial	( )
26 erudite	1 eruption	2 ignorant	3 learned	4 scholarly	5 wise	( )
27 pertinent	1 essential	2 impertinent	3 polite	4 saucy	5 superfluous	( )
28 autocracy	1 automobile	2 democracy	3 despotism	4 kaiser	5 king	( )
29 celibate	1 bachelor	2 clergy	3 holiday	4 married	5 widower	( )
30 celestial	1 divine	2 reverence	3 spiritual	4 terrestrial	5 veneration	( )
31 hyperopia	1 astigmatism	2 exophoria	3 hydrogen	4 hyperbola	5 myopia	( )
32 obdurate	1 hardened	2 inflexible	3 inured	4 obstinate	5 susceptible	( )
33 latent	1 ambergris	2 apparent	3 dormant	4 quiescent	5 secret	( )
34 proclivity	1 aptitude	2 aversion	3 facility	4 inclination	5 proneness	( )
35 ecstasy	1 apathy	2 bliss	3 exaltation	4 exuberance	5 rapture	( )
36 putrid	1 decayed	2 garbage	3 ptomaine	4 stale	5 wholesome	( )
37 execrate	1 bless	2 curse	3 deny	4 detest	5 imprecate	( )
38 lugubrious	1 cheerful	2 doleful	3 dreary	4 inebriate	5 maudlin	( )
39 abstruse	1 concealed	2 latent	3 obtuse	4 obvious	5 recondite	( )
40 impecunious	1 destitute	2 pecuniary	3 poor	4 simple	5 wealthy	( )

Score.....

Part 3

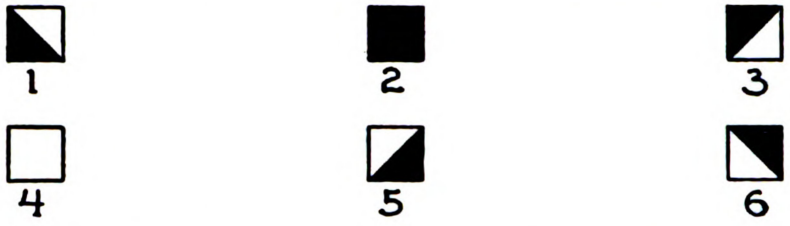
Line A	1 apple	2 banana	3 lemon	4 pear	5 potato	( )
1	1 bread	2 cake	3 doughnut	4 pie	5 pumpkin	( )
2	1 Boston	2 Chicago	3 Detroit	4 Pittsburgh	5 Utah	( )
3	1 add	2 borrow	3 divide	4 multiply	5 subtract	( )
4	1 Airedale	2 Angora	3 Collie	4 Poodle	5 Shepherd	( )
5	1 gram	2 kilogram	3 ounce	4 pound	5 quart	( )
6	1 automobile	2 radio	3 cable	4 telegraph	5 telephone	( )
7	1 alto	2 baritone	3 falsetto	4 soprano	5 tenor	( )
8	1 bottom	2 box	3 edges	4 sides	5 top	( )
9	1 blue	2 green	3 red	4 white	5 yellow	( )
10	1 dust	2 mist	3 rain	4 sleet	5 snow	( )
11	1 governor	2 judge	3 president	4 representative	5 senator	( )
12	1 eighth	2 fourth	3 ninth	4 sixth	5 tenth	( )
13	1 cotton	2 flax	3 leather	4 shoes	5 wool	( )
14	1 bones	2 feathers	3 fur	4 hair	5 scales	( )
15	1 giraffe	2 hippopotamus	3 lion	4 tiger	5 zebra	( )
16	1 Foch	2 Haig	3 Joffre	4 Pershing	5 Poincare	( )
17	1 cavern	2 darkness	3 subway	4 tunnel	5 well	( )
18	1 Chandler	2 Cole	3 Hudson	4 Nash	5 Studebaker	( )
19	1 antenna	2 battery	3 carburetor	4 differential	5 generator	( )
20	1 Elks	2 Maccabees	3 Masons	4 Odd Fellows	5 Unitarians	( )
21	1 cypress	2 elm	3 evergreen	4 pine	5 spruce	( )
22	1 arson	2 assault	3 jail	4 larceny	5 murder	( )
23	1 circle	2 cube	3 ellipse	4 rectangle	5 square	( )
24	1 leopard	2 lion	3 monkey	4 puma	5 tiger	( )
25	1 eating	2 feeling	3 hearing	4 seeing	5 smelling	( )
26	1 Dempsey	2 Grey	3 Lewis	4 Shaw	5 Wright	( )
27	1 appoggiatura	2 rest	3 slumber	4 staccato	5 trill	( )
28	1 celery	2 cucumber	3 potato	4 onion	5 radish	( )
29	1 Durham	2 Guernsey	3 Holstein	4 Jersey	5 Leghorn	( )
30	1 brook	2 creek	3 river	4 run	5 water	( )
31	1 charity	2 devoutness	3 homage	4 respect	5 reverence	( )
32	1 cochlea	2 pinna	3 retina	4 tympanum	5 vestibule	( )
33	1 clarinet	2 cornet	3 horn	4 trombone	5 violin	( )
34	1 asterisk	2 asteroid	3 comet	4 meteor	5 nebula	( )
35	1 Calvin	2 Franklin	3 Luther	4 Wesley	5 Zwingli	( )
36	1 alluring	2 charming	3 dainty	4 pleasing	5 repulsive	( )
37	1 Cornell	2 Dartmouth	3 Harvard	4 Ithaca	5 Princeton	( )
38	1 amethyst	2 diamond	3 emerald	4 porpoise	5 ruby	( )
39	1 Bach	2 Beethoven	3 Ebert	4 Mozart	5 Schubert	( )
40	1 kidneys	2 liver	3 pancreas	4 sublingual	5 trachea	( )

Score.....

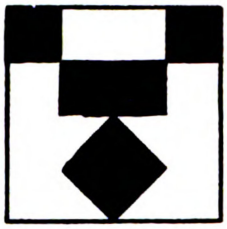
Part 4

Line A	1	2	3	4	9	6	7	( )
Line B	2	4	6	7	10	12	14	( )
1	3	4	5	6	7	7	9	( )
2	10	15	20	25	28	35	40	( )
3	28	24	20	16	12	6	4	( )
4	9	9	7	7	5	4	3	( )
5	1	5	8	13	17	21	25	( )
6	1	4	7	11	13	16	19	( )
7	2	2	5	5	8	10	11	( )
8	2	9	16	23	31	37	44	( )
9	2	2	6	6	10	10	12	( )
10	12	25	38	51	64	77	91	( )
11	41	34	29	23	17	11	5	( )
12	2	4	7	11	16	22	26	( )
13	1	2	5	7	11	16	22	( )
14	2	5	8	16	32	64	128	( )
15	38	31	25	20	16	14	11	( )
16	2	8	15	23	34	42	53	( )
17	45	38	31	24	17	11	3	( )
18	17	17	16	13	13	13	9	( )
19	19	36	53	68	87	104	121	( )
20	1	4	9	16	25	36	47	( )
21	192	96	48	24	18	6	3	( )
22	10	35	56	79	102	125	148	( )
23	17	16	16	15	19	14	20	( )
24	1	3	9	27	54	243	729	( )
25	1	1	2	6	20	120	720	( )

Part 5



A



2	4	4	2
4	2	2	4
4	5	1	4

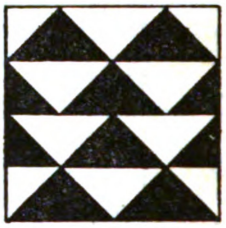
1

2

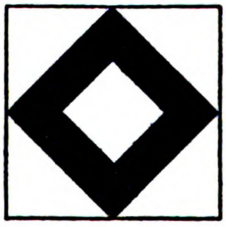
3

4

5



6



7

8

Score..... ÷ 4 = ...

Part 6

Line A	1 maniger	2 mannager	3 managir	4 manager	5 manijar	( )
1	1 anual	2 annual	3 anneul	4 annueal	5 annuall	( )
2	1 comittee	2 commitee	3 committee	4 comitie	5 commttee	( )
3	1 seperate	2 separate	3 sepparate	4 sepereate	5 seporate	( )
4	1 prelinimary	2 pliminary	3 preliminary	4 prelimunary	5 prelimay	( )
5	1 reccomend	2 recamend	3 recmmend	4 recommend	5 recammend	( )
6	1 convient	2 convienent	3 conveinent	4 convenent	5 convenient	( )
7	1 emence	2 immence	3 immanse	4 immense	5 imense	( )
8	1 disiese	2 desease	3 diseace	4 disease	5 diseasce	( )
9	1 physician	2 physican	3 phsichain	4 physicain	5 physisian	( )
10	1 leisure	2 leasure	3 leesure	4 liesure	5 leiseure	( )
11	1 sincerly	2 sincirely	3 sincerely	4 sincearly	5 sinserly	( )
12	1 surgion	2 surgen	3 surgon	4 surgeon	5 sergion	( )
13	1 arkward	2 akward	3 awkard	4 awkwerd	5 awkward	( )
14	1 sovreign	2 soveriegn	3 souvrign	4 sovereign	5 sovern	( )
15	1 approperate	2 appropiate	3 aproppriate	4 appropreate	5 appropriate	( )
16	1 misspell	2 mispell	3 misppell	4 misspel	5 mispel	( )
17	1 privalage	2 privilage	3 privilege	4 privelige	5 privalege	( )
18	1 kearosene	2 kirosene	3 karisine	4 kerrasene	5 kerosene	( )
19	1 disapline	2 discapline	3 disipline	4 discipline	5 disaplin	( )
20	1 morgage	2 mortgage	3 mortage	4 mortgaige	5 mortguage	( )
21	1 ocassionaly	2 occassanally	3 occasionaly	4 occasionally	5 ocasanly	( )
22	1 villian	2 vilain	3 villain	4 villan	5 villean	( )
23	1 pneumonia	2 phneumona	3 pnuemonia	4 pneumonea	5 pneuonia	( )
24	1 restraunt	2 restaurant	3 resterant	4 resteraunt	5 restuarant	( )
25	1 alluminum	2 alunimum	3 alumium	4 aluminum	5 aliumun	( )
26	1 seceptible	2 susceptable	3 sussceptble	4 succeptible	5 susceptible	( )
27	1 diphtherea	2 diphtheria	3 diphteria	4 diptheria	5 dipteria	( )
28	1 chauffeur	2 cheauffor	3 chauffer	4 chaufeur	5 chaufer	( )
29	1 coraborate	2 corobborate	3 corroborate	4 coroberate	5 corobberate	( )
30	1 repecussion	2 repercussion	3 reppercussion	4 repericussion	5 repercusion	( )
31	1 superscilious	2 supercillious	3 supersilious	4 supercilious	5 supersillious	( )
32	1 parsemonious	2 parsimonous	3 parsymonious	4 parsamonious	5 parsimonious	( )
33	1 souvener	2 souvonier	3 sovenier	4 souvinir	5 souvenir	( )
34	1 rhinocerous	2 rhienoceros	3 rhinoceros	4 rhynoceros	5 rhinosorus	( )
35	1 cellibate	2 celivate	3 selibate	4 selebate	5 celibate	( )
36	1 phelgm	2 phlegm	3 phlem	4 phlegmn	5 phylem	( )
37	1 hemorridge	2 hemorage	3 hemorrhage	4 hemerige	5 hemmorage	( )
38	1 acoustics	2 acoustrics	3 accoustics	4 acustics	5 acoustice	( )
39	1 ephiphysis	2 epiphysis	3 epipysis	4 epaphysis	5 epiphisis	( )
40	1 ellemosynary	2 elemosynary	3 eelemosinary	4 eleemosynary	5 eleemosinary	( )

Score.....

Part 7

Line A	eye–see :: ear–	1 face	2 hear	3 light	4 sound	( )
1	leopard–zebra :: spots–	1 head	2 legs	3 stripes	4 tail	( )
2	bold–timid :: advance–	1 campaign	2 proceed	3 retreat	4 soldier	( )
3	feather–floats :: rock–	1 ages	2 breaks	3 hill	4 sinks	( )
4	birds–tree :: man–	1 boys	2 house	3 paradise	4 youth	( )
5	dismal–cheerful :: dark–	1 light	2 night	3 sad	4 starts	( )
6	December–January :: last–	1 day	2 first	3 least	4 month	( )
7	tears–laughter :: sorrow–	1 distress	2 funeral	3 grief	4 joy	( )
8	grass–cattle :: bread–	1 bones	2 butter	3 man	4 water	( )
9	pan–tin :: table–	1 chair	2 dishes	3 wood	4 wire	( )
10	sled–runner :: buggy–	1 carriage	2 harness	3 horse	4 wheel	( )
11	floor–ceiling :: ground–	1 earth	2 grass	3 hill	4 sky	( )
12	aeroplane–boat :: air–	1 dive	2 engine	3 ship	4 water	( )
13	peninsula–land :: bay–	1 boats	2 island	3 ocean	4 water	( )
14	able–unable :: strong–	1 big	2 ox	3 weak	4 wind	( )
15	pint–quart :: foot–	1 inch	2 mile	3 rod	4 yard	( )
16	past–yesterday :: future–	1 generation	2 present	3 today	4 tomorrow	( )
17	white–black :: seldom–	1 late	2 never	3 often	4 soon	( )
18	granary–wheat :: library–	1 books	2 building	3 corn	4 oats	( )
19	birth–death :: spring–	1 autumn	2 summer	3 water	4 winter	( )
20	writer–bee :: books–	1 hive	2 honey	3 shelves	4 sting	( )
21	tolerate–pain :: welcome–	1 foes	2 illness	3 pleasure	4 work	( )
22	rudder–tail :: ship–	1 bear	2 bird	3 dog	4 sail	( )
23	sand–glass :: clay–	1 brick	2 dirt	3 hay	4 stone	( )
24	moon–earth :: earth–	1 ground	2 Mars	3 sky	4 sun	( )
25	historian–facts :: novelist–	1 books	2 fiction	3 poetry	4 writer	( )
26	cold–ice :: heat–	1 coat	2 radiator	3 lightning	4 steam	( )
27	important–trivial :: blonde–	1 brunette	2 complexion	3 good	4 white	( )
28	hand–trunk :: man–	1 clothes	2 elephant	3 travel	4 woman	( )
29	failure–success :: poverty–	1 charity	2 drink	3 play	4 wealth	( )
30	dawn–dusk :: January–	1 day	2 December	3 last	4 month	( )
31	imitate–invent :: copy–	1 draw	2 lesson	3 originate	4 pencil	( )
32	pole–equator :: frigid–	1 Africa	2 cold	3 snow	4 torrid	( )
33	hope–despair :: dismal–	1 black	2 cheerful	3 cloudy	4 rain	( )
34	razor–racket :: shave–	1 board	2 court	3 tennis	4 yard	( )
35	horse–mule :: obedient–	1 dog	2 obey	3 stubborn	4 whip	( )
36	Sunday–Monday :: alpha–	1 beta	2 day	3 delta	4 week	( )
37	engineer–chauffeur :: engine–	1 auto	2 iron	3 launch	4 ship	( )
38	square–circle :: cube–	1 hexagon	2 line	3 round	4 sphere	( )
39	skin–body :: bark–	1 bite	2 dog	3 leaf	4 tree	( )
40	lead–bullet :: gold–	1 coin	2 copper	3 paper	4 silver	( )

Score.....