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THE BOY AND THE SCHOOL  
A PARTIAL SURVEY OF THE PUBLIC SCHOOLS  
OF FORT DODGE, IOWA

BY  
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## FOREWORD

The growing movement toward vocational education has recently received an added impetus from the Smith-Hughes bill, in accordance with which Federal Funds are apportioned to each state to be expended for strictly vocational instruction of less than college grade in Agriculture, Home Economics, and Trade and Industry.

Iowa has its own special problems. It is not a state in which one large center of population or one industry is the dominant factor. It is an agricultural state containing many small cities in which are located a variety of comparatively small industries. The problem of vocational education in cities of this type is yet to be worked out.

Fort Dodge is a typical Iowa town situated in the center of a farming community and yet having distinct industries of its own. The survey made indicates one of the educational problems of such a city and, in some measure, the means used in meeting it.

It is clear that the present academic type of education in the schools is all too narrow in its appeal. Over 80% of the total population are capable of profiting by specialized instruction beyond the mastery of the tools of knowledge (common branches) and for the vast majority this specialized training should be vocational. It must be different from the present upper grade and high school training or pupils will not stay in school to receive it. One of the main conclusions,—that pupils will drop out of school unless they make regular promotions,—has been fully verified by other studies.

The author of the bulletin, Mr. Edw. T. Snively, Supervisor of Manual Training, Fort Dodge, Iowa, is responsible for gathering all data and for all the work of writing the bulletin. The Engineering Extension Department of Iowa State College has edited and published the material as a part of its work in industrial education, feeling that the data here presented would be of interest in other cities contemplating a closer co-ordination of schools and industry.

K. G. SMITH,  
Director Engineering Extension  
Iowa State College

# A PARTIAL SURVEY OF THE PUBLIC SCHOOLS OF FORT DODGE, IOWA

BY EDWARD T. SNIVELY

## GENERAL PURPOSE

The purpose of this survey is to discover: the chief reasons why so many boys leave the schools of our city before completing the course; in what grades the greatest number of boys drop out; what they do after leaving school; what their earning capacity is, and what readjustments should be made in our present courses of study to make them meet, even more fully than they are now doing, the needs of our boys and of the community.

## THE SURVEY

For the purposes of this survey the boys enrolled in the 6th and 7th grades of our city schools during the fall of 1909 were selected as typical groups. These grades were chosen because it was assumed that our compulsory education laws kept the majority of boys in the lower grades. The year 1909 was selected because the boys remaining in school from the 6th and 7th grades of that year would, at the present time (February 1916) be enrolled in our high school or would have been graduated last June.

This fact made it possible to obtain accurate data concerning a greater number than would otherwise have been possible. Moreover, the boys who dropped out of school in 1909 and 1910 have had a fair number of years in which to show what they could do in the business world with their limited preparation.

The total number in these groups was one hundred and thirty-eight, but death and removals from the city somewhat reduced the number that could be utilized in making certain records.

The data shown in the following tables was obtained from these sources:

1. School records on file in the superintendent's office.
2. Conferences with pupils, parents and employers of pupils.
3. Letters from pupils and parents.

## PART I

A study of the boys enrolled in the seventh grades of the public schools of Fort Dodge, September, 1909.

Table No. 1 shows that  $\frac{5}{7}$  of the boys in this group dropped out. Though it seems deplorable that only  $\frac{2}{7}$  of them remained in school, this is a better showing on a percentage

TABLE 1

Total Number in Group	Grade	Number Dropped	Number Remaining in School	Percentage of Total Number
63	7th	15	.....	23.8
	8th	20	.....	31.7
	9th	4	.....	6.1
	10th	4	.....	6.1
	11th	2	.....	3.1
	12th	.....	.....	.....
Total	.....	45	18	100

basis than that made by larger cities. However, no one interested in the welfare of the community can feel satisfied to see more than 70% of the boys enrolled in the 7th grades continue to drop out of school before completing the course, especially since more than 55% of them do not even enter the high school.

TABLE 2

Building	Total Enrollment	No. Dropped from each Grade					Completing H.S. Work	
		7th	8th	9th	10th	11th	Number	Percentage
Lincoln	21	4	5	2	2	1	7	33.3
Riverside	9	3	4	.....	.....	.....	2	22.2
Wahkonsa	14	4	5	1	.....	.....	3	21.4
Arey	19	4	6	1	2	.....	6	31.5
Total	63	15	20	4	4	2	18	.....

Two of these schools enroll a larger percentage of children of foreign born parents than the others. Leaving this fact out of consideration the relative number finishing the high school course undoubtedly varies from year to year.

TABLE 3

COMPARATIVE AGES IN THE 7TH GRADE OF BOYS WHO DROPPED OUT AND REMAINED IN SCHOOL

Total No. in Group	Boys Who Were Dropped			Boys Who Completed H. S. Course		
	Number	Age in 7th Grade	Average Age	Number	Age in 7th Grade	Average Age
45	4	11+	.....	1	11+	12+
	11	12+	.....	7	12+	
	9	13+	14+	2	13+	
	10	14+	.....	.....	.....	
	1	15+	.....	.....	.....	
Total	35	.....	.....	10	.....	

This table indicates that the boy who is well up in his school work, for his age, is the one who remains in school. Boys who are somewhat behind their classmates drop out either from discouragement or lack of interest. The brighter the boy, the greater is the probability that he will remain in school. Evidently the average boy does not find the present school curriculum sufficiently attractive to warrant his remaining in school. The school ought to furnish something of benefit and interest

to the average boy as well as to the bright boy, especially since the average boy must earn his living soon after leaving school. The following table, giving reasons for leaving school, also indicates clearly that a large number of boys leave because of lack of interest.

TABLE 4

REASONS FOR LEAVING SCHOOL

Grade	Financial Necessity	Lack of Interest	Desire to Work	Trouble with Teacher	Change of Residence	Failure to Pass	Ill Health	Criticism of School Course
7th	3	3	2	.....	3	1	2	1
8th	5	4	4	2	3	1	1	.....
9th	1	2	1	.....	.....	.....	.....	.....
10th	.....	2	.....	.....	.....	1	1	.....
11th	1	.....	.....	.....	.....	.....	.....	.....
12th	.....	.....	.....	.....	.....	.....	.....	1
Total 45	10	11	7	2	6	3	4*	2
Percentage of Total	22.2	24.4	15.5	4.4	13.3	6.6	8.8	4.4

\*3 deceased.

Perhaps the most significant point emphasized by this table is the fact that only 22% of the boys who drop out of school do so from financial necessity. Though few gave *failure to pass* as a reason for leaving school, the majority of those who said they lacked interest were failing in one or more subjects. If the various reasons, *lack of interest*, *desire to work*, *failure to pass*, *trouble with teacher*, and *criticism of course* were included under the general head of *lack of interest*, as they might be, it would appear that more than 50% of the boys are leaving school chiefly because the work there does not appeal to them.

TABLE 5

RESPONSIBILITY FOR LEAVING SCHOOL

Total No. in Group	Parent		Child	Both		
	Thought further education unnecessary	Favored Specialized Instruction		Unwillingness to remain in school	Necessity	
			Financial		Health	Indifference
45	1	2	22	10	4	6

It is a cause for reflection to find that the majority of the boys followed their own sweet will in this matter of leaving school. Even when parents showed a disposition to share the responsibility, it was often evident that they did so with the idea of appearing to maintain family discipline. They frequently said, "My boy was not interested in school, so I thought he might as well drop out and go to work".

Aside from interest in school studies, the question uppermost in the mind of every boy and parent is: Does it pay to stay in school? Table 6 throws some light on this question.

TABLE 6

RELATIVE EARNING CAPACITY OF BOYS LEAVING SCHOOL IN THE DIFFERENT GRADES

AVERAGE EARNING CAPACITY PER MONTH

Time of Leaving School	1st year at work	2nd year at work	3rd year at work	4th year at work	5th year at work	6th year at work
7th Grade.....	\$28.88	.....	.....	.....	.....	\$41.38
8th Grade.....	40.01	.....	.....	.....	\$53.69	.....
9th Grade.....	42.66	.....	.....	\$50.00	.....	.....
10th Grade.....	42.66	.....	\$53.00	.....	.....	.....
11th Grade.....	49.00	\$60.00	.....	.....	.....	.....
12th Grade.....	.....	.....	.....	.....	.....	.....

Even considering the fact that a boy's earning capacity increases somewhat as he approaches maturity, two conclusions may be drawn from the above table. Either the boys who remain in school have much more native ability to begin with, or else their earning capacity is increased by added years in school, possibly a combination of both. Though the boys who left the 7th grade have now been out of school six years and are past twenty years of age, yet their average monthly wage is but \$41.38 and their average monthly increase in income is but \$2.00. They are earning \$18.62 less per month than are the boys who left the 11th grade, though the latter are not yet eighteen years old and have been at work only two years. The school ought to increase the earning capacity of the average boy. If it does, more boys should remain in school. If it does not increase the earning capacity of the average boy, some change in the curriculum should be made. Proper changes may accomplish both purposes; hold the boys, and increase their earning capacity as well.

It must be borne in mind, however, that the record of one group does not furnish sufficient data upon which to base a definite conclusion as to time spent in school and earning capacity. Table 13 on page 8, showing the earning capacity of a second group of boys, adds further evidence (from a financial standpoint) of the desirability of remaining in school.

Several very natural questions now arise. What did these boys do who dropped out of school? What are they doing now? Have they any chance for advancement?

It is to be noted that these boys particularly, all of whom left school from the 7th and 8th grades, have made little progress. Few have advanced to a higher order of work. The increase in the number of clerks came largely from the seven who attended business college. Though the two who had no work during the first year after leaving school are not necessarily the same two who are without work at the present time, yet it is of deep significance that the same number are *loafing* at the beginning and the end of the six years. Several of those listed under various

TABLE 7

OCCUPATIONS ENTERED AND PRESENT OCCUPATIONS OF BOYS WHO DROPPED OUT OF SCHOOL IN THE 7TH AND 8TH GRADES

No. in Group	Occupations Entered	Number of Boys in Occupation the First Year	Number of Boys in Occupation at Present Time	Increase	Decrease
40	Delivery work .....	5	5	0	0
	Clerking .....	4	10	6	0
	Waiting Tables .....	1	1	0	0
	Train Calling .....	.....	1	1	0
	Factory Work .....	4	2	0	2
	Farm Labor .....	3	2	0	1
	Press Work .....	1 (App)	1	0	0
	Day Labor .....	5	4	0	1
	Dairy Work .....	.....	1	1	0
	R. R. Switching.....	1	2	1	0
	Asst. in repair shop	1	1	0	0
	Work as Fireman...	1	1	0	0
	Work in Navy.....	1	6	2	0
	"Job" Work .....	4	2	0	0
	No Work .....	2	.....	.....	.....
	Attending Bus. Col..	7	.....	.....	.....

occupations have jumped from one job to another until they might be classified more truly as *roust-a-bouts*. Only one of the entire group has learned a trade and but one has made any attempt to work for himself. The latter has a small bicycle repair shop.

It is a tremendous waste for the community to lose the native resources of the boys who have not been properly equipped for some useful work.

## PART II

The following tables are based upon the data which it was possible to obtain concerning the seventy-five boys who were enrolled in the 6th grades of our schools during the fall of 1909. As will be seen readily, the longer boys have been out of school, the more difficult it becomes to obtain accurate information concerning them; yet through five or six months of effort, the record of a sufficient number was traced so that tabulations could be made concerning groups as large or larger than the various groups considered under Part I.

TABLE 8

NUMBER LEAVING SCHOOL

Total Number in Group	Grade	Number Dropped	Number Remaining in School	Percentage of Total
75	6th	14	.....	18.6
	7th	14	.....	18.6
	8th	17	.....	22.6
	9th	2	.....	2.6
	10th	3	.....	4
	11th	.....	.....	33.3
Total	.....	50	25	100

Three of this number are completing their course in high

schools outside of our city; one in Sheldon, Iowa, one in Omaha, and one in Salem, Oregon.

Of this group 1/3 or 33 1/3% remained in school and are completing the work of the high school. This is a better showing than that made by the former group. Before feeling too well satisfied with this record, however, it is well to consider: Where are the fifty? What is their chance in life? Has the school done for them what it should have done?

TABLE 9  
SCHOOLS REPRESENTED

Building	Total Enrollment	No. Dropped from Each Grade					Boys Completing H. S. Course	
		6th	7th	8th	9th	10th	No.	Percentage
Lincoln	19	2	1	3	1	1	11	57.81
Riverside	22	10	4	3	1	1	5	22.71
Wahkonsa	20	1	4	6	1	1	7	35
Arey	14	1	5	5	1	1	2	14.31
<b>Total</b>	<b>75</b>	<b>14</b>	<b>14</b>	<b>17</b>	<b>2</b>	<b>3</b>	<b>25</b>	

In Riverside ten boys dropped out of the 6th grade--more than twice the number that left the 6th grade from other schools combined. Both of the tables on schools show that all of the Riverside boys who entered the high school from these groups completed the course and that this was true of the boys from no other school.

TABLE 10  
COMPARATIVE AGES OF BOYS WHO DROPPED OUT AND REMAINED IN SCHOOL

Total No. in Group	Boys Who Were Dropped			Boys Who Completed H. S. Course		
	Number	Age in 6th Grade	Av. Age	Number	Age in 6th Grade	Av. Age
75	2	11	.....	11	11	11
	13	12	.....	11	12	
	17	13	.....	3	13	
	11	14	.....	.....	.....	
	7	15	.....	.....	.....	
<b>Total</b>	<b>50</b>	.....	.....	<b>25</b>	.....	

Again it appears that the boys who drop out of school from a given grade average about two years older than the boys who remain in school from that grade, which strengthens the finding from the former group that the boys who once get behind their classmates lose interest in their school work. (See Table 3, Part I.)

TABLE 11  
REASONS FOR LEAVING SCHOOL

Grade	Financial Necessity	Lack of Interest	Desire to Work	Trouble with Teacher	Change of Residence	Failure to Pass	Ill Health	Criticism of Course
6th	2	2	1	.....	2	1	1	2
7th	2	6	1	.....	.....	.....	.....	.....
8th	4	1	2	1	.....	.....	.....	1
9th	.....	.....	.....	.....	.....	.....	.....	.....
10th	1	.....	.....	.....	.....	.....	.....	.....
11th	.....	.....	.....	.....	.....	.....	.....	.....
<b>Total 50</b>	<b>9</b>	<b>16</b>	<b>9</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>3</b>
<b>% of 50</b>	<b>18</b>	<b>32</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>6</b>	<b>10</b>	<b>6</b>

This second investigation into the reasons why our boys leave school shows a still smaller percentage doing so because of financial necessity; 18% in Table 11 as against 22% in Table 4.

TABLE 12  
RESPONSIBILITY FOR LEAVING SCHOOL

Total No. in Group	Parent		Child	Both	
	Thought further education unnecessary	Favored Specialized Instruction	Unwillingness to remain in school	Financial Necessity	Health Indifference
44	1	3	24	9	5
					2

Since in several cases families had moved from the city only forty-four were included in this group instead of fifty as in Table 11. The table verifies our former conclusion that in the great majority of cases the boys themselves decide whether or not they will continue to attend school. The tendency seems to be for parents to shift more responsibility to the school and the teachers. Where boys have dropped out of school the parental attitude is often about this: We have sent our boys to school. If the teachers cannot hold them there, what are we to do about it?

TABLE 13  
RELATIVE EARNING CAPACITY OF BOYS LEAVING SCHOOL IN THE DIFFERENT GRADES  
AVERAGE EARNING CAPACITY PER MONTH

Time of Leaving School	1st year at work	2nd year at work	3rd year at work	4th year at work	5th Year at work	6th Year at work	7th Year at work
6th Grade	\$22.20	.....	.....	.....	.....	\$44.33	\$42.00
7th Grade	23.11	.....	.....	.....	\$50.83	.....	.....
8th Grade	30.22	.....	.....	\$56.00	.....	.....	.....
9th Grade	37.50	.....	\$59.20	.....	.....	.....	.....
10th Grade	37.50	.....	.....	.....	.....	.....	.....
11th Grade	.....	.....	.....	.....	.....	.....	.....

As no boys from this group dropped out of the eleventh grade, only five grades could be considered in this table. As

before stated, many facts must be carefully weighed before deciding on the value of the figures above. They indicate, as did the figures in Table 6, that the boys who remain in school have a better chance in the business world, but this may be due to native capacity.

The occupations of these boys are more diversified than those of the first group.

TABLE 14

## OCCUPATIONS ENTERED AND PRESENT OCCUPATIONS OF BOYS WHO DROPPED OUT OF SCHOOL IN THE 6TH GRADE

No. in Group	Occupations Entered	Number of Boys in Occupation the First Year	Number of Boys in Occupation at Present Time	Increase	Decrease
42	Electric Work.....	2	2	2	0
	Clerking.....	8	7	0	1
	Bicycle Repairing...	1	1	0	0
	Carpentry.....	2	1	0	1
	Tailor's Trade.....	1 (App)	1	0	0
	Plastering.....	1	1	0	0
	Painting.....	2	1	0	1
	Factory Labor.....	7	5	0	2
	Baker's Trade.....	1	1	0	0
	Farm Labor.....	2	2	0	0
	Work in R. R. Wrecking Crew.....		1	1	0
	Hotel Work.....	1*			
	Telephone Work.....		2	2	0
	Orchestra Work.....		1	1	0
	Delivering Groceries	3	3	0	0
	Waiting Tables (Res)	1	1	0	0
	Day Labor.....	2	2	0	0
	Bookkeeping.....		1	1	0
	Work in Garage.....		3	3	0
	Attending Bus. Col.	3			
	No Work.....	2	2	0	0
	Odd Jobs.....	5	4	0	1

\*Office Boy

Several from this group of boys learned a trade and, in this respect, they showed advance over the previous group as to character of occupations; but, in general, the two tables of occupations show similar conditions. They indicate that it is only the exceptional boy who makes any marked advance, either in wages or in type of work. A large percentage of both groups realize that their employment is only temporary and few are sure about what they will do next year. Only a very limited number show the enthusiasm for their work or pleasure in it, which are evident when the boys have found their true niche in life and are doing the thing for which they have had adequate preparation and for which they are naturally adapted.

## CONCLUSIONS

- (1) 50% of boys reaching grades 6 and 7 in Fort Dodge do not enter high school.
- (2) Most of them drop out because of lack of interest, not from financial necessity.

- (3) The boy's attitude and not the parent's is the determining factor in keeping him in school.
- (4) Boys who drop out of the grades average 2 years older than boys in the same grade who complete the high school course.
- (5) The boys who remain in school have a better chance of success in the business world (possibly due to native ability).
- (6) Boys who drop out of the grades are not prepared to decide upon or to perform any definite useful work and do not enter occupations in which there is opportunity for advancement.
- (7) Some means ought to be found to hold boys in school longer and to give them definite preparation for useful work if they are to earn their living soon after leaving school.

## SOME ADDITIONAL FACTS AND RECOMMENDATIONS

## A HIGH SCHOOL EDUCATION PAYS FINANCIALLY

One of the most important facts demonstrated by this survey is that added years in school increase greatly a boy's chance of success in the financial world as well as in other fields of endeavor. Further data upon this point was obtained by making a canvass of the boys who were graduated from the high school in 1914 and 1915. The following table shows some of the results:

TABLE 15

Year	No. of Boys in Class	No. Attending College	Per Cent	No. Working Now	Average Wage per Month
1914.....	17	(1914) 8	47	.....	
		(1915) 11	64.7	6	\$50.00
1915.....	25	11	44	14	50.00
Totals.....	42	22	.....	20	\$50.00

Eight of the class of 1914 enrolled in college work during that year. In 1915 three more enrolled.

Though the average wage of \$50.00 for the first year at work shows a marked advance over the first year's wage of the boys who dropped out of school, yet the fact of deepest significance concerning the graduates from the high school is that they have entered or are preparing to enter occupations in which there is opportunity for advancement and development.

The advantage of a high school education, as such, is receiving new emphasis. Recently a large business house in Chicago announced that only those who have a good high school education or its equivalent will be employed by that firm. Since the curriculum of the secondary schools has been revised and enriched,

there is in a high school not only the opportunity to prepare for college or for scientific and other special schools, but also a considerable degree of culture. The average high school of today offers a broader field for study than was offered to our forefathers in the best colleges of the country. In order to discover the efficiency of the boys who have graduated from the Commercial Department of the high schools in Springfield, Massachusetts, letters were sent to seventy-six of the graduates who had been at work from one to seven years. Sixty-seven replies were received and they show that each of the boys has had an average annual increase in salary of over \$100. This fact alone seems to answer the question as to whether a high school education "pays".

In an investigation of the influence of education upon earning power, Arthur Powell of Middletown, Ohio, found that the average earnings of uneducated labor are \$1.50 per day for three hundred days a year. This for forty years amounts to \$18,000. He also found that the average wage of educated labor is \$1,000 per year. Since this amounts to \$40,000 in forty years, the gain for educated labor is \$22,000, or \$10 per day for each day spent in school from the primary department through the high school.

After a study of the latest census returns of the United States, a few years ago, a high authority arrived at the following conclusions:

First: That an uneducated child has one chance out of 150,000 to attain distinction as a factor in the progress of the age.

Second: That a common school education will increase his chance nearly four times.

Third: That a high school training will increase the chances of the common school boy twenty-three times—giving him eighty-seven times the chance of the uneducated.

#### A HIGH SCHOOL EDUCATION DEVELOPS CHARACTER AND MAKES FOR GOOD CITIZENSHIP

The training given in a course of the high school not only increases the power to earn money, but it also enlarges the capacity for happiness and develops character. Since a man does not spend all his waking hours at work, his education should fit him to spend his hours of leisure with pleasure and profit—both for himself and his fellow citizens. Arthur Powell says—"A high school graduate is sure to have more happiness and a higher degree of happiness than if he had been satisfied with the completion of the grammar school course. He is much more efficient, he can do more things and do them better. He is a

more useful, hence a more valuable member of society. He has gained a larger outlook on life and a broader view of its duties. He has become a stronger, a more symmetrically developed character. He is much more certain to be what the state wants all of her citizens to be—thoughtful, industrious, patriotic, efficient."

After considering Mr. Powell's statements, the people of Fort Dodge have reason to feel gratified because the local high school graduates a larger percentage of those who enroll in the beginning classes than do most other schools in the country. The tables below indicate the figures upon this point.

TABLE 16  
ENROLLMENT OF STUDENTS IN SECONDARY SCHOOLS BY YEARS

	Schools Reporting	Total No. of Pupils	Percentage in Various Years			
			1st Year	2d Year	3d Year	4th Year
United States .....	11,277	1,134,771	40.94	26.94	18.65	13.49
Iowa .....	576	44,444	37.5	27.21	20.8	15.66
Fort Dodge.....		353	31.6	27.7	22	18.7

TABLE 17  
ENROLLMENT OF STUDENTS BY YEARS IN FORT DODGE HIGH SCHOOL  
SEPTEMBER, 1914

Year's Work	Boys	Girls	Totals	Percentage
5th (Postgraduate) .....	0	3	3	
4th (Senior) .....	29	30	59	18½
3rd (A) .....	7	15	22	
(B) .....	18	25	43	65
2nd (A) .....	15	17	32	
(B) .....	26	39	64	96
1st (A) .....	23	69	41	
(B) .....	25	34	59	100
				31

TABLE 18  
ENROLLMENT OF STUDENTS BY YEARS IN FORT DODGE HIGH SCHOOL  
SEPTEMBER, 1915

Year's Work	Boys	Girls	Totals	Percentage
5th (Postgraduate) .....	1	1	2	
4th (Seniors) .....	26	40	66	18.7
3rd (A) .....	15	10	25	
(B) .....	18	35	53	78
2nd (A) .....	19	17	36	
(B) .....	34	28	62	98
1st (A) .....	11	23	34	
(B) .....	38	39	77	111
Totals .....	162	193	355	
			*353	(Undergraduate)

\*The enrollment in the Fort Dodge High School is now over 500, due largely to the introduction of vocational courses.

In connection with the fact that more than 18½% of those enrolled in our high school are members of the senior class, it is well to recall that Table 15 shows 44% of boys of last year's senior class and 64.7% of boys of the class of 1914 attending college at the present time. Undoubtedly, many more from these classes will enter college during the coming autumn. It means much to Fort Dodge that so large a percentage of the high school students continue their training in higher educational institutions.

#### THE VALUE OF HIGHER EDUCATION

Formerly it was the custom in America to laud the self-made man and to question the value of advanced scholastic training. Paul H. Neystrom of the University of Wisconsin contributed an important article upon this subject in *World's Work*, December, 1911. His study showed facts concerning the money value of an education and the relation of education to leadership as well as to morality.

Under the first point he gave the figures of William T. Harris, former United States Commissioner of Education, showing that the average school period per inhabitant in the United States was 4.3 years; and also showing that for each year spent in school beyond the average 4.3 years, the earning power of the individual was increased more than \$1,000.

In his investigation of "Who's Who in America", Mr. Neystrom discovered that out of the 17,000 persons who had achieved eminence in any field, 71% had had college training; 58% had been *graduated* from colleges or universities; 16% had completed only courses in high schools, academies, normals, or seminaries; 9% had received only a common school education; 3.8% had been educated privately and 2/10% had been self-taught.

His examination of the records concerning crime and criminals proved that 75% of public wrong doers have had even less than the influence of eight years in the common school. In concluding his study, Mr. Neystrom says, "The breadth of view, the liberality of thought, the increased satisfaction in living, the diversified interests, the various touches which higher education lays upon character are all incommensurable but of undoubted value".

Since it can be demonstrated that higher education increases vastly a man's earning power, trains for citizenship, develops leaders of men, reduces crime, and promotes happiness and morality, *does it not seem deplorable that the great majority of the boys in Fort Dodge do not even enter the high school?* Is it not time to make strenuous efforts to hold these boys, most of whom are dropping out of school *because they do not find there*

*the work which appeals to them?* The school can and should save the wasted energies, develop the latent powers of these future citizens, and thus prepare them for the highest usefulness in the community.

#### GIVE THE BOYS A CHANCE TO DO SOMETHING

Consideration of the statements on the preceding page gives rise to this query: How can the boys who are not interested in school be influenced to remain for further training? The answer to this must be sought in part from the boys themselves. Many of them in giving reasons for leaving school made remarks like the following:

"Got tired of *doing nothing*"; "Wanted to go to work"; "Too much *sitting around*"; "Got tired of *books*"; "Couldn't *do well* in my studies"; "Failed"; "Wanted to *do something*". A little more conversation with the boys revealed that what they wanted was *more activity* and a *sense of accomplishment*.

Investigations in seventy-eight American cities show that one-half of all the thirteen-year-old boys in the country are in the 6th grade or below. Often boys, overgrown and overage, are down with the little folks in the third, fourth and fifth grades. Can such boys be expected to show much enthusiasm over school work? In the July number of the *Industrial Arts Magazine* one of the editors makes the following terse comments upon the above situation:

"After a year or so of stagnation, interest disappears, disgust appears, delinquency begins, and such boys are referred to as subnormal or defective. . . . There are defectives, but neither 50% nor 1% of our thirteen-year-old boys are of this class. Experiments with such reputed subnormal boys prove beyond question that the overwhelming majority are *not defective* and that sane practical work of an occupational sort will arouse them from their torpidity and start them on the road again with interest revived and hopes high. *Such boys simply have not had a chance.* . . . .

"There are cities now where boys a year or more behind grade are immediately transferred to other forms of work, and to other buildings, if necessary, until they have regained their standing. When they get *the habit of succeeding* instead of *failing*, they are sent back and *they make good.* . . . .

"Work must be furnished wherein every child may do his best. Systems must take on more flexibility. Standards need not be lowered, they must be broadened, so that whatever a boy's inclinations or endowments, he may find some unobstructed avenue through the school in a reasonable time."



## PLANS TRIED ELSEWHERE

Various plans have been devised to meet the needs of retarded boys and those who are not "book-minded" as well as of those who must begin early in life to earn a living. Among these plans the three following have met with greatest favor: The separate technical school, the junior high school, and vocational or prevocational work in the sixth, seventh and eighth grades. Many favor the separate technical school, but Frank W. Leavitt, Professor of Industrial Education in the University of Chicago and one of the greatest authorities upon this subject, gives it as his opinion that the natural development of industrial education is within the regular school system. To enforce his point he refers to the experience of Boston with both pre-vocational centers and a separate industrial school for boys as follows:

"The pre-vocational centers may be said to represent the natural growth, and the separate technical school the forced or specially stimulated growth of industrial education. In some respects these two types of schools are similar; in others, different. A boy under fourteen may enter a prevocational class, but not the industrial school. The hours are somewhat shorter in the former than in the latter. In each type of school there are to be found both general and special instruction. The most noteworthy difference is that the prevocational boys do not have to leave the "system" and may go to high school if they graduate. The enrollment in the industrial school is 180 against a total enrollment in the prevocational school of 370 students.

"The point of all this is that the natural growth of industrial training through a development of the department of manual arts has, without state aid, accomplished considerably more in the way of genuine industrial training for the fourteen-year-old boys of Boston than has the state-aided plan. If state aid had been given this type of industrial education on the same basis as that afforded the industrial school, at 50 per cent of the net maintenance cost, the number of boys reached could easily have been 25 per cent greater."

Both the prevocational classes and the junior high school give opportunity for vocational or industrial training within the regular school system. In the latter plan the children of the 7th and 8th grades become a part of the high school. They are taught by high school teachers and share the enthusiasm created by numbers. They do not study in the assembly room, but in separate rooms where regular teachers supervise their work and teach them how to study. When these children enter the high school, they have the privilege of continuing the regular course or of entering prevocational classes. In either case they may graduate from the high school without loss of time. The chief

advantage of the junior high school is that it bridges the present gap between the grades and the high school; thus it results in greatly increased attendance. The junior high schools have proved most successful in many cities. When the new high school building for the "greater Fort Dodge" is erected, may it not be worth while to consider this plan?

## WHAT WE CAN DO IN FORT DODGE

At present, the most feasible plan for our city is prevocational work in the grades and continued vocational work in the high school; yet not much can be accomplished until more room is provided, for our shops are now crowded to their utmost capacity. However, with a comparatively small outlay, it will be possible to create conditions under which real beginnings may be made in this vital work. In some localities vocational classes have been inaugurated during the summer when, otherwise, the school equipment would be idle. As soon as accommodations can be furnished the following changes are recommended:

First: That the time devoted to manual training in the grades be extended to two hours a week and that mechanical drawing be given as part of the course.

Second: That from the 7th and 8th grades a special class be organized for those students who are not likely to enter high school, and from one-third to one-half of their time to be devoted to prevocational work.

In connection with the prevocational work, the essentials of various academic subjects should be presented; for instance, applied mathematics, business English, commercial geography, industrial history and civics, hygiene, and elementary science or mechanics. Whatever prevocational work has been introduced, it has been found in practically every case that boys in these classes have accomplished as much or more in academic subjects than when they had devoted their entire time to them. The prevocational boys frequently decide to take a course in high school and they do the work there most creditably.

The courses offered in the prevocational classes depend upon the needs and interests of both the boys and the community. Among the courses which have been given successfully are: carpentry, brick laying, cement work, electrical construction, plumbing and gas fitting, ceramics, printing, typewriting, and agriculture.

It does not follow that all of the boys who take such courses will necessarily enter these occupations; but it is certain that by furnishing more motor activities this prevocational work stimulates mental development; and, more important still, that it helps a boy to find out what he can do successfully. It enables

him to measure the results of his efforts and he gets *satisfaction through accomplishment*. Mr. William Dalton, Chief Engineer, American Locomotive Company, Schenectady, made a noteworthy address before the Empire State Vocational Conference last year. Among other good things, he said:

"I can think of no greater service that a teacher can render a pupil than to be able to discover and train the peculiar faculties with which he may succeed and find his place in life. . . .

"Refrain from driving any student to the point where he loses the greatest pleasure in life—the consciousness of having accomplished something. . . . Boys come to our shops not knowing what they can do because they have not been shown exactly what kind of abilities they have; then we sometimes waste five years in trying to make shop people out of those who are not adapted to it. Don't forget that the fun of living comes from the pleasure that we can get in the things *we can do*, and when you are teaching, in some way get the children to feel that they are mastering the thing they do. Let them have the satisfaction of mastery."

#### COMMUNITY CO-OPERATION NECESSARY

To solve this problem of vocational training in our schools, the co-operation of the entire community is needed. Mr. Hugh Frayne, General Organizer of the American Federation of Labor, suggests that in order to keep our school in close touch with the trades and industries, there should be local advisory boards including representatives of the schools, the industries, the employers and organized labor.

\*It is questionable whether the time is ripe for such a board in Fort Dodge, though it may be of service in the near future. At present, however, a bureau of vocational guidance, composed of various employers and representatives of the school, could be most helpful. Such a bureau would accomplish three things: it would help worthy students to secure employment, it would help employers to secure proficient labor, and it would add impetus to school work because students would have a new reason for wishing to excel. Already some vocational work has been given in our schools and a number of students have obtained positions through the recommendations of teachers, but by the establishment of a regular bureau, much more could be done to serve the interest of both the school and the community.

This survey was made because the teachers and other school officers wish to make our public schools more effective. The schools have done much, are doing more, but hope to do the *most*

\*Under the Smith-Hughes Act, passed since this was written, such a committee is most desirable.

possible for all the children of all the people. If the needs of the few rather than the many have been considered at times, it is hoped that in the future, work will be provided which will enable us to hold and not lose, as we are now doing, the great majority of our boys. Perhaps the statesman is right who says that the most important bill on "Preparedness" now before Congress is the Smith Hughes bill, which provides for national aid to vocational education. At any rate, may our schools soon be organized so that no child shall go out from them until he is *prepared* in some measure, for happy, useful living.

#### APPENDIX

The Engineering Extension Department of Iowa State College is ready to aid schools in organizing vocational classes in industrial subjects. Assistance may be rendered by letter, personal conference or actual organization work. The department has a number of special industrial texts available for schools. Some of these are supplied from the department and some direct from the publishers. It also has ready short courses or intensified instruction in special trade lines for men already engaged in a trade. These are useful in arousing interest in the general problem of vocational education. Some of these short courses are:

- Course for Plumbers and Steamfitters.
- Course for Warm Air Furnacemen.
- Course for Janitor-Engineers.
- Course in Estimating for Carpenters and Builders.
- Short Course in Concrete Construction for Consolidated Schools.

Among the vocational texts which can be furnished are the following:

- Mechanical Drawing.
- Drawing for Builders.
- Sheet Metal Drawing.
- Arithmetic for Carpenters and Builders.
- Shop Arithmetic (Elementary and Advanced).
- Estimating for Carpenters and Builders.
- Gas Engines.
- Short Course in Steam, Hot Water, and Vapor Heating.
- Elementary Electrical Construction.
- Elementary Concrete Construction.
- Questions and Laboratory Outline for Automobile Work.

The department will also make recommendations as to other texts which are already in print and obtainable from publishers.



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## The College

The Iowa State College of Agriculture and Mechanic Arts conducts work in five major lines: **Agriculture, Engineering, Home Economics, Industrial Science, and Veterinary Medicine.**

The Graduate Division conducts advanced research and instruction in all these five lines.

Four-year, five-year, and six-year collegiate courses are offered in different divisions of the College. Non-collegiate courses are offered in agriculture, engineering, and home economics. Summer Sessions include graduate, collegiate, and non-collegiate work. Short courses are offered in the winter.

Extension courses are conducted at various points throughout the state.

Research work is conducted in the Agricultural and Engineering Experiment Stations and in the Veterinary Research Laboratory.

Special announcements of the different branches of the work are supplied, free of charge, on application. The general college catalog will be sent on request.

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