VOCATIONAL EDUCATION A SOCIALIZING FACTOR.

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PART I.

WHY VOCATIONAL EDUCATION IS NEEDED.

GENERAL DISCUSSION.

The need of vocational education is today apparent on almost every hand, as it perhaps has never been before in all our social life. This is true in a striking degree in the public schools. To see the extent, we have but to look about us in our own community; and in other communities it is equally true in greater or less degree.

We see, the boy especially, of the seventh, sixth, and sometimes even lower, grades becoming restless and tiring of school and casting furtive glances toward some phase of practical livlihood - whether of necessity or not, the fact remains. And a large number of such lads become hard to control, and it is but a short time until we see them leaving the school-room, never to return - as pupils at least, why? because the method and practice of school must change with the ever changing scale and standard of the age and society it is trying to teach or else it will lose its interest, and consequently its grip, on the boys and girls who compose the student body,- not only of that particular school, but of every

other school inthe land. Adapt the school training and method to the boy, and to the girl, in the age in which they live and are to be moulded into intelligent men and women. Do not try, as too often has been done, to adapt the child to some ancient method, educational system or some pet theory of an idealized type. This I think is more largely the cause of failure in so many cases of the present school system, as well as that of years gone by.

Our changed educational problems.

The men and women who have succeeded in the largest way in school matters have been those who made the subject in hand, the most vital to the boy or girl in hand, no matter whether their method or course of study strictly adhered to the hard and fast rules and regulations of "orthodox" teaching or not. For example, we need but refer to the phenomenal success of the Gary, Indiana, school under the leadership of Mr. William Wirt. Here perhaps for the first time has a man successfully attempted to bring the teaching of the public schools into any real adjustment with the conditions of life and modern industrial communities. Here the children get everything of practical value that is taught in the

ordinary public school, and in addition, acquire most of the advantages of a vocational training. The boys in the cabinet and furniture shops, in the printing establishments, foundries and so on, are obtaining practical experience that will be invaluable to them in later life. What is true of the boys is also true of the girls. And what is of even greater importance to both is the fact that they have opportunity to learn along what lines their real talents lie. It will reduce the large number of "square pegs in round holes," to say the least, and the young people who enter the business life of the next generation with such a training as this will be fortunate indeed, and it is a pleasure to see the large influence Mr. Wirt's work is having throughout the city schools of the country.

Our changed economic and social condition.

It is true, past and many present conventions must be ruthlessly cast aside to make way for newer innovatious in an educational way; but in all lines of society, religion and politics, conventions are breaking down under the ever increasing burden of better things; so why should educational conventions be spared? In this great age of progress, of

league-boot strides of invention, reform and vision-realized, the one word, "efficiency," stands out in strongest relief - efficiency for the individual, efficiency for society, efficiency for the nation's good, and in whatever direction, or from whatever source efficiency comes, we must learn to recieve it gladly and profit thereby.

A typical Case.

In Minneaposis, Minnessota, in 1915, a survey of the whole school problem was made, which I shall refer to more at length from time to time.

Here was an ideal state of affairs for such a survey, and resultant conclusions to be made, for they are typical in every respect. And as it is in Minneapolis, so it is in every city of the land. And indeed in many , many cases, so it is in the country. In Minneapolis all the conditions were at their best for such a social-labratory experiment. The rapid growth of manufacturing, and the unusually high proportion of skilled industries make the demand for training of workers paramount. The stringent state laws require attendance at school until the age of sixteen, or the entire completion of the elementary course.

High standard of the public schools.

The city has a school system of high traditional excellence. Clearly, all the factors that would stimulate a campaign for vocational education are here in their most exacting form, and from this setting, the survey has an added value as a study of a typical case, and this fact will be seen in the careful study of her manufacturing and mechanical industries, and their attendant requirements both of the school and of the pupils.

Deficiencies of the public school.

The public school is seen not with its usual fault, as an institution of general education which has ignored prevocational needs, but as a prevocational school, of narrow and exclusive type - for the vocational training of the classes in the community whose actual need was least. For above the earlier years of rudimentary schooling there has been superimposed, a bookish school, which is really a pre-vocational school for the professions or for domestic leisure. The boys and girls whose futures were to be professional and domestic had the benefit of the public school, - a splendid prevocational training for this type of mind and future life.

But the vast majority of motor-minded and those whose aptitudes were not of the purely intellectual type, very properly and automatically left this bookish school as soon as opportunity offered, or as soon as permitted, which was as soon as they had obtained their rudimentary general-education, which education was of course so general and impractical and lacking in stimulative elements that the individual would never make any further preparatory and efficiency progress.

Demands made upon the public schools.

Suddenly the state by legal enactment, refused to allow these children to leave school until they had finished the elementary course. And the school system is faced with the necessity of broadening itself from a narrow pre-vocational school for the professions and domestic leisure, to a prevocational school for all the arts and the industries of a modern community. Even the technical courses in the high schools of Minneapolis, quite failed to meet the problem. Of the recent graduates from these courses in the Minnessota schools it is shown that one half went directly to college, with only one tenth passing into occupations for which the course

could
in any way be regarded as preparatory. And of those of the one tenth, most of them went into drafting rooms. It may be said therefore that to the training of the great ortisan class of a modern and progressive city or community, the public schools have contributed practically nothing.

Industrial Schools.

Moreover tho industrial schools themselves are found to be no more adequately engaged, than are the public schools, in properly training its workers.

The old system of apprenticeship has all but died out, and among neither employers or employees is there any enthusiasm for its return. Yet, although all the trades require a constant supply of trained workers, no substiture has been found for apprenticeship. The movement for industrial education has at times seemed like an attempt of employers to get their skilled workers trained at public expense. The effort to establish separate boards in the cities for industrial education threatened to limit such training to the narrow skill which each industry would demand and to supply employers with apprentices at no cost to the industry itself. The Survey warns against this very narrow and sinister conception of vocational education and shows that

industrial interests cannot shirk the responsibility for the special training of their workers. The rapid growth of "corporation schools" shows that at least the most prosperous and highly skilled shops and factories are accepting this responsibility.

However we can see in the newer and more progressive and aggressive industries a gradual but sure change, and in some cases, striking advances and reform along these very lines, - only barely to mention here the innovations of the Ford motor plant, of Westinghouse, of Montgomery Ward, of Colgate, of Marshall Field and many large commercial concerns.

All the employer has a right to expect of the school system is that it gives the young worker a general prevocational training which will introduce him to the special trade-work. The graduate of the elementary school should have been through a well-rounded course which not only cultivated a general intelligence, but discovered, - by submitting him to many different kinds of activity, - his particular liking, or "knack," and thus enlist his interest in future training for a particular vocation.

"The elementary school should, in other words, be a general pre-vocational school where the

boy or girl could get a bearing towards every type of vocation."[1]

The Minneapolis Survey strikingly confirms the far-sighted vision of Mr. William Wirt and his unspecializing and varied Gary, Indiana schools, in which the children from their earliest years are testing out their powers in shop, in foundry, in labratory, in studio and in classroom. "What is needed, is not a course in special woodworking-the extent of manual training in practical arts, which will include a variety of experiences fundamental to the life of the community. Woodwork, metal work, printing, bookbinding, clay modelling, concrete and electric work, are some of the industries which give an opportunity for experience in certain fundamental processes which are most valuable to boys without respect to the occupation in which they engage."[2]

This quotation only shows bri f as it is, how vital and thorough-going the newer ideas of educational trend are tending to become,- almost revolutionizing it is true, but where these ideas are being tried out, they are proving their worth and merit in efficiency and enthusiasm on the part of pupil and teacher alike.

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1. Randolph S. Bourne, New Republic, March 3,1916.

2.Minneapolis Survey, page 34

The above is true in much larger sense than we can at first grasp, but we are more and more, recognizing that the state has a duty to the individual, in many and vital ways. Not only to save the boys and girls from exploitation, premature labor and demoralizing environment but also to give them every opportunity possible to be trained for an effective vocation. Particularly do we see this true in the recent raising of the age limit for child labor in many of the states, thus keeping thousands of children in school who would have otherwise passed out to work as untrained, uneducated citizens. This fact naturally has put a great strain on the public school. The challenge so far has done little else than make evident the alarming inadequacy of the present type of school to train children for the work which they will shortly be called upon to do.

The school systems of the large cities are having thrust upon them great hosts of children, for whose education in this new sense of the word they are unprepared.

A second Typical Case.

In 1916 the National Society for the Promotion of Industrial Education made a thorough survey

of the whole great commonwealth of Indiana, and found conditions, educational, economic and social- identical with those they found in the Minneapolis Survey, in so far as the fundamental question was concerned. Varying only in detail which the different geographical and industrial localities would naturally demand.

A larger industrial center.

Indianapolis with her two hundred and fifty thousand people was chosen as a typical larger industrial center. Here was made a most careful study, very similar to that made in Minneapolis, Minnessota, with almost the identical findings.

A smaller industrial center.

Likewise Evansville was surveyed in the same thorough manner. Here was a city of eighty thousand inhabitants, and with all the variety of conditions and needs which could be found in a typically small industrial center. In proportion to the two cities were the findings the same.

Rural and farming area.

For this third type study the Society chase Jefferson county, which is a representative farming community of the middle-west, having no

town with a population of more than eight thousand people. Here as in the three cities above mentioned were the findings strikingly similar, showing like needs, like faults and like opportunities for growth and development.

Of this Survey the secretary of the National Society says, "The study was much more than a survey. It had no difficulty in proving the need for some kind of vocational training. To do this, it had only to recite facts that have already sunk deep into the American conciousness. It had only to recall that an army of young children leave the schools every year at the sixth and seventh grades to enter employments for which they have no training. It had only to suggest that our public schools, in so far as our instruction is vocational at all, prepare for a limited kind of employment, chiefly clerical and office employment, and one that is far less prevalent today than when the present courses were devised. Finally the Survey had only to discover that in Indianapolis alone there were more than twenty thousand young people between the ages of fourteen and twenty-one who are entirely without instruction, either in public schools or in in-

dustry."[3]

Needs in Advanced Education.

Beyond the junior high school, which is so very similar, in needs, to the elementary education, we have an almost immeasurable problem to deal with. That of our higher educational methods and institutions, both in process and in content. Here especially have we traveled long, and have plumed ourselves in pride with our exhaustive and learned speeches, discussions and our much wasted oratory. While to the vital fact itself, we have scarcely approached. And of consequence have very little data on the subject.

However it is with just pride we can truly say that the University of Kansas and the University of Wisconsin are perhaps the most progressive of all the first class institutions of higher learning, along the lines of pure vocational education. The engineering schools, the law school,the schools of medicine, of journalism,of fine arts, and so forth, here in our own Kansas University, are examples,the best type we have, illustrating the trend in higher institutions towards vocational training.

The agricultural and mechanical colleges

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3. Winthrop D. Lane; Survey(magazine) April 7,1917.

of the country are trying to accomplish special and intensified preparation along special and specific lines.

Likewise the military colleges of the various grades are attempting the same thing only in more narrow lines.

Harvard and Chicago Universities, Teacher's College of Columbia University, as well as many others in varying degree are all examples of specialized training schools of the highest order, with certain and definite purpose.

These expmples are encouraging and pleasant to think of, - if we do not think too deeply. But how few indeed of our university graduates - the individuals - really know what they are going to do, and just why they are going to do it. How few indeed are there who come up through the four years' course pursuing a positive and definite course, with a positive and definite purpose, because of a positive and definite reason. Which they themselves know individually to be such a reason, and a sufficient and defendable reason, which will ultimately lead them to their greatest life efficiency and happiness.

Yet how many less than the above class are there who have at an early age found where they belong, - what they want and why they want it, and what they intend to do, and to become. How few have come up through high school and later through the university with their one consuming thought, aim and purpose.

Instead of the above mentioned rare condition, this is what we usually find,-even those who have a definite aim and so forth, have but recently decided upon that particular thing, and is the result not of natural fitness, aptitude, or choice, but so often is purely accidental. Because of its being, "the first thing that opens up," or as the enthusiastic or tired out, or "broke," graduate says to himself "What makes the difference: I have to work at something," or as in the last case, "There's money in it." All, or any one of such, after they have struggled through four years of some course, and have now gained a mediocre start in this or that particular, do not think they have time to begin again, or to specialize in something else of larger possibilities or usefulness, so they follow the line of least resistance, and in most cases "drift," and never

change to better or larger usefulness to themselves or to others, because they are not prepared for any particular thing.

Some, it is sadly true, look upon their college course and diploma from their alma mater as a classmate once said to me, "Like my college course, my diploma amounts to the sum total of supplying me a wrapper for my old shoes, that I must have mended,- I cannot buy a new pair." Pessimistic? Yes. But indeed how typical when the "A. B. man" goes for "a job," "a start" and is asked what he can do, what is his specialized preparation to do his bit in the world's work, he must, with drooping head and downcast eyes,hear the ultimatum from the stern-faced and unsympathetic practical world, "I cannot use you, step aside!", and the college-man, the university graduate must complacently and helplessly take his place among the army of unskilled unspecialized unemployed.

Need of Educational Reform.

Should we search deeply into the problem as to the inadequacy of our present educational system, we would find briefly, this, - our ever changing economic condition has brought about a constant

readjustment socially. The social scale has been gradually rising through the years. There have been ever-increasing wants and needs,- many of the former becoming the latter, because of this rising scale. Our unparalleled natural resources, geographical location, and our unique position among the nations of the world, all have peculiarly blessed us with unmumbered advantages and opportunities, nationally and individually and we have almost unmindfully built up an entirely changed social standard for ourselves with its attendant myriad of accumulated needs, which the very complexity of our economic and social state demands shall be met and supplied.

Thus we, in our snug and complacent comfort and ease, have not put forth effort and farsighted preparation to meet and supply the present and future needs corresponding to the phenomenal economic and social increase. And today we find ourselves woefully deficient in meeting the situation, educationally, economically or socially, which we have allowed to slyly creep upon us.

The urgent need.

So the most urgent demand it seems now, is to study thoroughly and scientifically our edu-

cational system, and re-form, re-build, discard or do whatever is necessary, but do that thing, and with a strong hand too, which will meet the crying needs of our educational and social life of today, not only for today, but to prepare for tomorrow, with its unborn millions and the ever increasing tangle of social complex.

The solution, it seems to me, must come through the avenue of educational reform, with especial emphasis and study upon the vocational side.

A makeshift remedy.

The Womans Municipal League of New York is attempting a step in the direction of good-citizen making, seeking to render possible the guiding of boys into industries and trades for whichthey are mentally fitted, and which will offer them some means of improvement. As it now is, the child of fourteen or fifteen, often younger or older, leaves school and goes blindly into the first "job" that is offered. He needs work and there is none to select for him the particular work at which he can advance. He thus becomes one of the army of industrial workers while still a child, and as these jobs are mostly of the type which offer little or no advancement in

efficiency, skill, remuneration or social position, it is but a few years at most, until the boy finds himself a man in years and in stature, with but a boy's job, efficiency, salary and social position. While it is the boys who are the most tragic examples of misdirection and waste of years, attention is also given to girls in the same way. Miss Louise Odencrantz is directing this splendid work, and she gives some excellent proof of the need for more and better education by way of vocational methods in the greatest city of the world.

Brief history of the Minneapolis Survey. In order to get as fair and comprehensive an example of the need of this reform we must not take the greatest-the largest city in the world-but rather we should take for intensive study a typical city of moderate size and geographical location and try to find the elements which are most fundamental and far-reaching. Then in that selected city we shall turn to her largest and most thoroughly organized and equipped institution,- the public school. With these two factors in mind we shall make the most thorough investigation possible, of the whole vocational and consequently social problem, in this representative community. We shall try to make this as typical and

composit a study as possible. For this intensive study the city of Minneapolis offers a most excellent example. This city has for a considerable time been interested in vocational education, and the best things, educationally, in general.

Nine years ago the Schoolmaster's Club made a report on vocational education. Special committees from the board of education, of the city, have from time to time visited various places, to learn what other cities and states were doing. In 1912, the Minneapolis Teachers' Club issued a report with recommendations as to the need for vocational education. This report met with favor and the next year, 1913, the board of education created a special committee on vocational education, which was made up of equal numbers of educators, business men, employers and employes engaged in industry, representatives of women's clubs and social workers. This committee with a few additions has served as the local committee for the direction of the extensive and as exhaustive as possible survey which was made of the city of Minneapolis in behalf of vocational education.

In 1915 Minnesota raised the age to six-

teen years in its compulsory education law, but on account of numerous exceptions, allowed by the law, many went to work under sixteen. Successive legislatures removed these exceptions one by one until practically all children must now attend school until sixteen years of age, unless they have completed the work of the elementery course at an earlier age. This together with the more rigid enforcement of the law has crowded into the schools large numbers of pupils demanding a type of instruction largely vocational in character and aim. The 1913 law providing for a commission to determine the minimum wage for girls and women has brought a demand for increased efficiency that only adequate training can supply.

Dunwoody Institute.

By the will of the late William Hood Dunwoody a trust fund of more than three million dollars which by the will of his wife, Mrs. Kate L. Dunwoody has been increased to five millions, was created for the purpose of giving free instruction in the industrial arts to the youth of Minneapolis and Minnessota.

But before undertaking to put into effect the provisions of the will in any comprehensive way,

the trustees of the fund desired more information as to the kind of vocational education most needed. So because of the freedom from taxation, and the large trust fund, the willingness and eagerness of all agencies to co-operate, furnish us an unusual opportunity to study results under almost ideal circumstances. Though this should not be in any way a hindrance to the same degree of success under a self-supporting taxation system, after its results are once well understood. Mr. Donwoody's gift furnished the necessary funds to meet a part at least of the expense for vocational education and made necessary a study which should define the activities of the public schools and of the Dunwoody Institute.

As the time was propitious, the superintendent of schools together with the board of education and the trustees of the Dunwoody Institute enlisted the cooperation of other local agencies in bringing the National Society for the Promotion of Industrial Education to Minneapolis to make the survey and to hold its annual convention. Thus we see the ample provisions, and thoroughness of preparation in making the survey, which everywhere met with the hearty support of every interest in the city-, business men, social workers, educators, workingmen and

so forth. The fact that the survey cost some twenty thousands of dollars adds also to its importance.

The survey consisted in the main of a series of separate studies of different problems, each organized under a special committee or some special person. Where a special committee had charge of any subject the actual study was also made under the direction of one responsible person, so thus we see no slip-shod work was done.

Aims of the survey.

In order that the whole reach and import of the survey may best be understood the aims, or definite purposes follow,-

1. Facts:

To get the facts about the schools and the vocations and vocational needs inthe city of Minneapolis, which were regarded as necessary in an intelligent planning of a program of vocational education.

2. Recommendations:

To make those recommendations as to a program for such education in Minneapolis which, after careful consideration of the facts, the best

judgement of these vocations and the general local survey committees approved.

3. Co-operation:

To obtain the co-operation of every interested agency in carrying out a comprehensive program of vocational education and training for the city.

4. Local benefit:

To make the survey, its recommendations and the national convention of the national society, the largest possible benefit to the city.

5. Type-study:

To make a type-study of vocational educational education which may be of benefit to other cities facing the problem.

Summary of chapter-subjects of the survey.

I Why the survey?

II To what extent is there need for vocational education?

III To what extent are other agencies meeting the need?

IV To what extent are the public schools meeting the need?

V To what extent is apprenticeship meeting the need?

VI What vocational education is needed for the building trades?

VII What vocational education is needed for the electrical business?

VIII What vocational education is needed for the metal trades?

IX What vocational education is needed for the wood trades?

X What vocational education is needed for the printing trades?

XI What vocational education is needed for the flour mills?

XII What vocational education is needed for the baking business?

The Need of Vocational Education in Minneapolis.

The report made by the survey committee recognizes at the outset the need and necessity for general education for all work. This is the meaning of the saying,"Education will enable a man to dig a ditch better." It is clearly recognized not only that a stronger vocational element is needed in general education, but that no vocational school is worthy the name which fails to give a considerable amount of general education along with special preparation for a vocation. The survey is concerned only with the education which fits directly for the successful persuit of some useful occupation.

Different kinds of vocational education.

At least five different kinds of vocational education are recognized, as follows,-

1. Nautical,- fits one for sea-going.
2. Professional,-
    a. Law.
    b. Medicine.
    c. Engineering.
    d. Ministry.
    e. Dentistry etc.
3. Commercial,- All forms of business training.
4. Agricultural,-

a. Farm work.
b. Animal husbandry.
c. Forestry.
e. Tillage, etc.

5. Industrial education, - prepares for efficient wage-earning in trades and industries.

Obviously there is no need for Nautical education in Minnesota,

Professional education at public expense is already abundantly provided for in the state.

A brief report is given in home gardening and agriculture, and the university of Minnesota, though its research department, made an investigation of a study of commercial education.

Industrial education has a large part in the survey investigation and report.

The General Demand.

Minneapolis has the same general need for vocational education as have all other parts of the country. "The two great assets of a nation which enter into the production of wealth, whether agricultural or industrial, are natural resources and human labor."[4] The conservation and full utilization of both of these depend upon vocational training. Vocational training is required to conserve and to develop natural resources; to prevent waste of human labor; to provide a supplement to apprenticeship; to increase wage earning power; to meet the increasing demand for trained workmen and to offset the increased cost of

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living, as well as the constantly increasing population, with its ever growing complex of economic situations. Vocational education is a wise investment. To provide it for all our workers is a patriotic duty since already our commercial supremacy abroad and our prosperity at home are at stake.

Likewise, so social and educational need of practical education is urgent. We should have it to democratize the education of the country, by recognizing different interests and abilities, by giving an equal opportunity to all to prepare for their life work and by extending education through part-time, continuation and evening classes to those who must go to work with an inadequate preparation. We need vocational education for its indirect but positive effects on the aim and method of general education, first, by developing a better teaching process through which those children who do not respond to book instruction alone may be reached and educated through learning to do by doing: and, second, by introducing into our educational system the aim of utility to take its place in dignity by the side of culture, and to connect education with life by making it purposeful and useful.

Higher standards of living are a direct result of better education, which have increased

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4. Commission on National Aid to Vocational Education. 1915- P. 13.

efficiency as their aim. Out of the industrial and social unrest comes a demand for a more practical education, an education that shall furnish opportunity for creative expression, save the worker from the narrowing influence of his specialized tasks, fit him for progress in industry, enthuse the discouraged and often helpless hopeless youth and enable him to rise to the ranks of leadership and responsibility.

PART II.

RESULTS OF SCIENTIFIC STUDY.

FINDINGS FROM THE MINNEAPOLIS SURVEY.

The Minneapolis public schools have contributed largely to vocational efficiency by the excellent general education which the children obtain in a well-organized school system. General intelligence is fundamental to industrial intelligence and skill, as well as advancement. Minnesota's compulsory attendance law has placed her in the front rank among the states, and has insured for most of the children of Minneapolis the necessary basic preparation for labor as well as for citizenship. The compulsory law requires an employment certificate of all under sixteen who have finished the eighth grade of the public school or its equivalent in a parochial or private school. This means that practically all children more than eight and less than sixteen years of age must attend school. The only legal excuses being ill-health, distance, religious holidays and completion of the eighth grade, while employment certificates can be issued legally only to eighth grade graduates.

Results of enforcement of the attendance law.

Grade and high school certificates.

In 1907-08, 312 certificates were issued to non-graduates, and 101 to eighth grade graduates, a total of 413. In 1914-15 there were only 351 certificates issued of which 285 were granted to graduates and only 66 to non-graduates. And these much smaller numbers too notwithstanding the rapid growth of the city since 1907. In the former year, three of every four certificates granted went to those who had not graduated, who had not finished the elementary school. In the later year only two out of every eleven were so issued. To prove the thoroughness of the public school attendance enforcement - in 1914-15 applications for 250 non-graduates were received. In 191 cases "financial necessity," and in 59, "for the good of the child," or really where progressin school had ceased and no suitable school was available. After March 8, 1915 no certificates were issued except to eighth grade graduates as the law provides. So with the exceptions and the strict regulations noted, Minneapolis is on a straight, eighth grade, 16-year-old basis so far as compulsory education is concerned.

The number of graduates from the high

schools for several years is as follows:-

1908-09,--741

1909-10,--762

1910-11,--819

1911-12,--849

1912-13,--907

1913-14,--971

1914-15,--1088

School Enrollment by Years.

Grade	1905-6	1906-7	1907-8	1908-9	1909-10	1910-11
Kin.G.	617	705	765	694	568	952
1st	9,237	8,950	8,919	8,402	7,496	7,498
2nd	5,194	5,033	4,723	5,078	5,375	4,936
3rd	4,956	5,314	4,950	4,576	4,820	5,262
4th	5,077	4,988	5,083	5,056	4,832	4,887
5th	4,513	4,680	4,819	4,859	4,920	4,698
6th	4,073	4,346	4,403	4,450	4,373	4,740
7th	3,245	3,611	3,840	3,886	3,902	4,102
8th	2,544	2,586	3,070	3,332	3,407	3,454
9th	1,474	1,642	1,892	2,326	2,222	2,313
10th	1,244	1,409	1,359	1,359	1,479	1,490
11th	729	815	858	976	956	1,087
12th	701	604	654	650	794	848

Grade	1911-12	1912-13	1913-14	1914-15	Average
Kin.G.	1,062	1,847	1,939	2,568	1,170.7
1st	7,444	7,576	7,731	8,171	8,142.4
2nd	4,887	4,986	5,191	5,416	5,081.7
3rd	4,823	4,884	5,004	4,870	4,945.9
4th	5,086	4,806	4,674	4,983	4,947.2
5th	4,808	5,030	4,780	4,602	4,770.0
6th	4,590	4,579	4,815	4,574	4,494.3
7th	4,257	4,260	4,387	4,526	4,001.6
8th	3,730	3,630	3,699	3,890	3,334.2
9th	2,315	2,640	2,805	3,010	2,263.9
10th	1,554	1,715	1,777	1,919	1,530.5
11th	1,096	1,152	1,254	1,339	1,026.2
12th	1,137	9 925	998	1,111	842.2

By inspection of the above table we see that the enrollment in the first six grades has remained fairly constant during this time. But the chief thing for our purpose it shows that the various laws regulating school attendance have retained in the seventh and eighth grades a large number of pupils over 14 years of age who otherwise would have left school to go to work. The clearest evidence is here shown by comparison of the figures showing the general average for the seventh and eighth grades for all the years, and the enrollment in these grades for 1914-15. Which shows enrollment in the seventh grade, since 1905 an increase of 39 per cent and the eighth grade for the same time shows an increase of 52 per cent. Therefore the need, and onthe part of pupil and parent, the right to demand, for these two years some form of efficient vocational education.

By a careful study of the abundance of data available we find the following as to elimination or falling off in attendance. Using as a basis the 1914-15 enrollment in all grades as given in the table.

Ninth grade -------23 loss, per 100.

Tenth " -------36 " " "

Eleventh grade -------30 loss, per 100.

Twelfth " -------17 " " "

71 per 100 between the eighth and twelfth grades.

This number is large but by tracing it back through twelve most common causes for withdrawal we find 72 per cent should be included in a special class.

The Go-to-work Group.

Causes of Withdrawal		Elementary.	High	Total.
1.	Left the city	361	173	489
2.	Attend Private School	146	79	225
3.	Death	10	5	15
4.	Economic pressure	40	28	68
5.	Illness of Pupil	75	240	315
6.	Illness in Family	25	56	81
7.	Physical defect	12	5	17
8.	Mental defect	26	25	51
9.	Indifference	34	131	165
10.	Failure promotion	9	37	46
11.	Go to work	629	331	960
12.	Unexplained	50	90	140
		1,372	1,200	2,572

The withdrawing pupils constitute a large proportional group which should have had preparation for wage earning before leaving school. The idea is more easily prasped if we consider that for a period of two years previous to their withdrawal from school special consideration had been given to the vocational interests of this group who annually go to work, it would involve during any year the question of providing proper facilities for 4,482 children, and too, this disregarding the 225 children, many of whom withdraw to attend private schools, these also would remain for the vocational instruction. The failure to provide vocational education for this "go-to-work" group has been an even greater loss to general education, and to society and citizenship; for they have been deprived of the experience and training which would be most educative to them from any standpoint.

Doctor Ayers shows that in twenty nine cities of the United States, on the average of every-one hundred children, thirty seven were over age for their respective grade, (in this Minneapolis ranked third from the highest.)

While vocational education is not for

retarded children, yet practical activities in the industrial srts when properly taught inthe elementary, as well as the high school will tend to prevent retardation by appeal to the " motor-minded" child, though action rather than abstraction, while to this type of children the industrial school supplies training in general education more successfully than the regular school.

Vocational education is not primarily for any but the normal, capable, red-blooded, ambitious adolescent and adult, yet the retarded child finds in the Minneapolis schools manual training, domestic science and art of the usual type from the sixth grade on through the high schools, and four year commercial courses in each of the high schools.

The Girls Vocational High School.

This school was established in December 1914, and offers two years in dressmaking, millinery, cooking, salesmanship and stenography. The evening classes cover a variety of subjects in industrial, commercial and household arts courses:

It is found from actual working out in typical cases, and observation of many general-type cases of retardation that the vocational type of

education is often far more effective - in fact generally so - than the regular training, and many unfortunate boys and girls have in this way been enabled to acquire a preparation and equipment for efficient citizenship, wage-earning and social standing equal wholly or in aprt, at least, to his average comrad in educational affairs of the ordinary method.

Industrial and Commercial Data.

Industrial.

In 1909 Minneapolis stood second among the large cities of the country in the value added by manufacture for each wage earner, that being $2,110 annually.[5]

In value per capita output of all employers in manufacturing lines it was greater than that of any other city in the country, if not in the world, being $4,880 annually for each employee.

In 1914 there, were engaged in manufacturing lines 1,431 establishments with a total of 41,052 employes. Of these, 6,764 were salaried employes and firm members, and 34,288 were wage-earners, there being 28,205 males and 6,083 females.[6]

One hundred and twenty three separate and distinct industries were represented, of which six employed more than half, (or 20,805) of all the persons engaged in manufacture. These six were in order as follows,- Comparison.

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5. United States Census.

6. Industrial Census, by Civic and Commerce Association.

Product value	Number of Employes.
Flour	Foundry and Machine Shop.
Lumber and Timber	Flour and Grist Mills
Foundry and Machine shop	Lumber and Timber
Printing	Printing
Car construction and Repair.	Car Construction and Repair
Baking	Baking

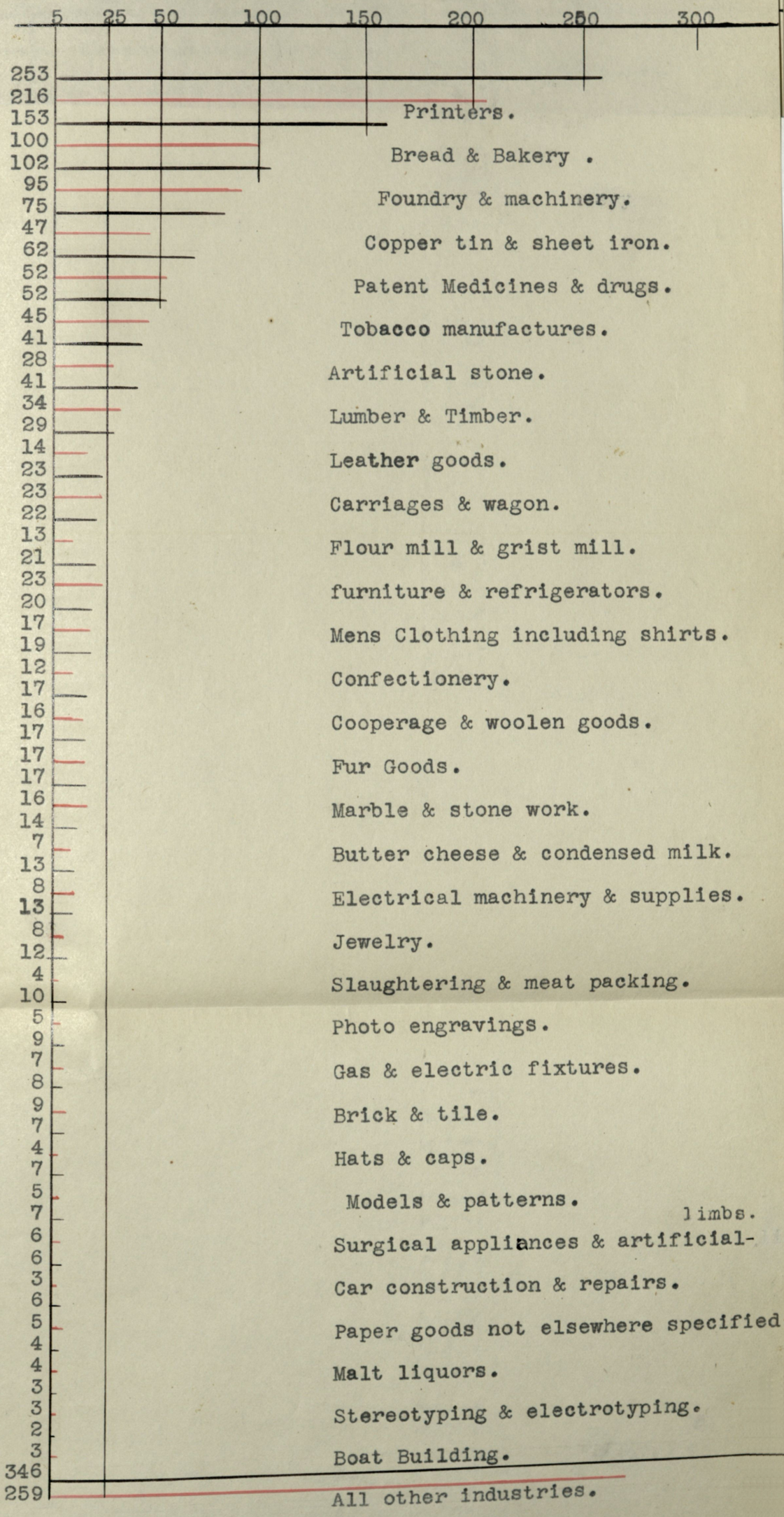
Together the above industries covered 577 different establishments, employing 20,805 workers. Their combined out put value being $111,811,000, the total value of all manufactured products, $165,405,000.

Rapid growth of industry and commerce.

The growth of Minneapolis, in manufacturing has created a corresponding demand for more workers as shown by the two following graph-charts, and the two Summary charts, —

Number of Manufacturing establishments in Minneapolis.

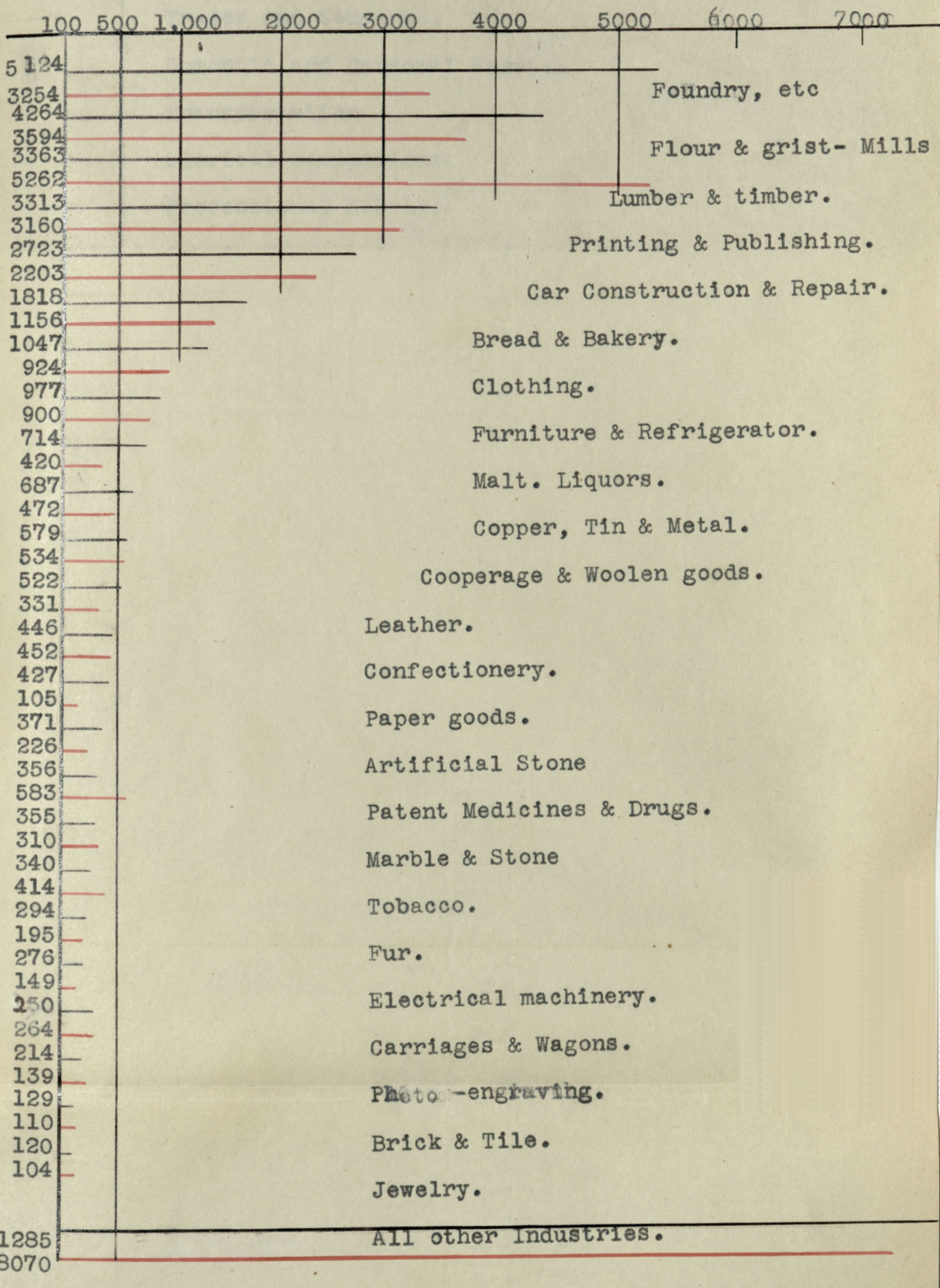
Comparative Representation 1909-14.



7. U.S. Census of Manufacturing 1909.

Number of Employes Minneapolis Industries

Comparative Representation. 1909-14.



8. Census by Civic and Dommerce Association-1914

9
Summary of Occupation Statistics for Minneaposis.

Occupations	Total
Manufacturing & Mechanical industries	53,250
Trades and Commerce.	25,259
Domestic and Personal Service	19,423
Transportation	17,202
Clerical Occupations	14,868
Professional Service	8,648
Public Service (not elsewhere classified)	2,586
Agriculture, forestry and animal husbandry	1,974
Extraction of Minerals	272
Total	143,482

9. U.S. Census on Population. 1910, Vol. IV, P. P. 166-180.

10 Summary: Manufacturing & Mechanical Industries.

Industries	M-Skilled-F		M-Semi Skilled-F		Male-Laborer-Female.		Total.
Bldg Trades	9,379	2			5,494	61	14,936
Metal Indust.	5,324	2	1,743	52	839	7	7,967
Clothing	1,236	4,792	144	134	3		6,309
Supervisors & Tech.	5,310	175					5,485
Lumb. & Furn.	1,272	15	1,379	42	1,347	10	4,065
Food and Grain	1,031	57	851	477	613	17	3,046
Chem. & Drug	2,405	6	76	45	272	3	2,807
Ptg. & Engrav.	1,184	62	294	266	9	2	1,817
Textile	2		185	684	48	13	932
Tobacco			244	99	4	2	349
Boots, Shoes & Leath.	307	2	440	121	18	4	892
Clay, Glass & Stone	150		283	4	278	1	716
Liquor & Beverage			203	8	126	1	338
Jewelry	150	4	16	1			171
All other Indust.	701	20	1,110	764	821	4	3,420
Total	28,451	5,137	6,968	2697	9,872	125	53,250

10. Ibid.

If one exempts from consideration the flour mills, car and construction work and the street railway company, the problem of vocational education is to provide training that shall reach a wide variety of small but growing industries, each of which employs, on the average, comparatively few workers.

The average number of workers employed in the 102 foundries and machine shops is 51: in the flour and grist mills, 145; in lumber and timber, 82; in printing, 13; and in bread and baking 12.

The street railway company employs 2,923 persons in car construction and repairing,and one of the knitting mills, are the only concerns employing more than 1,600 persons each. The average number of employes in all the manufacturing establishments in the city is 29.

It should be remembered that all these establishments provide various occupations, calling for different kinds of training and experience. It is also true that small establishments call for broader practical training of the average worker than dothe larger ones where there is a greater division of labor and specialization of tasks; that in the specialized industry there is need of training

for advancement. The progress of Minneapolis, as has been the case in all other larger cities, will depend more and more upon the development of its human resources to the end that they keep step with the rising demands of the natural resources of the region and the rapidly increasing population of the great northwest.

The extraordinary growth of Minneapolis has been due largely to its geographical position and the rich natural resources of that part of the country of which it is the market. The population of the city grew from 301,408 in 1910, to 343,466 in 1914, an increase of 13.9 per cent. At this rate for ten years the population would be 406,303.[11]

Investigation shows at once a great gap between the number of workers needed and those reached by training, in spite of the progress which has been made in vocational training as well as that in purely industrial training . For example, deducting from figures and data contained in the survey, only 634 apprentices were learning the trades of manufacturing and mechanical industries in which in 1910 there were 52,250 persons employed. Even in these cases no technical instruction was given, and in

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11. United States Census, 1910-14. Vol.IV.P.P.166-180.

very few instances, was the shop experience such as to give an apprentice the proper training for his trade. Just here we might mention that both employes and employers agree that there is very great need for vocational education in all the manufacturing industries covered by this survey. A like agreement was found in the case of the building trades, in which in [12] 1910 there were 14,936 workers employed of whom only 9381 were rated as, "engaged in skilled occupations." Likewise were similar findings in trade and commerce; in clerical occupations; in service, not including housewives and daughters in families.

The needs of the workers in the skilled trades were felt so definitely that representatives from the trades in conference were able to suggest readily definite courses to meet them. These courses were approved by respective trades, and represent in a most concrete way the ideas of the schools have not devoted their attention to the industrial worker. With the exception of the trade courses in the Girls Vocational High School, and a few evening classes

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12. United States Census, 1910. Vol.IV.P.P.166-180.

carried on by various agencies the whole field of serious trade and technical training is yet to be developed. There are agencies enough, as a whole, for giving commercial training for the ordinary office worker. Too many of them, however, are private schools and require the payment of such large tuition fees as to render them prohibitive to many who need them most.

The large attendance upon these private schools of all kinds, shows a need for additional facilities for training of this character by the public schools. In 1914, more than 7,000 students in Minneapolis were enrolled in private vocational courses of all kinds. They paid tuition of more than $300,000 - a significant fact. A need not properly met.

Compulsory Education-effects and results.

The enforcement of the compulsory education law retains in the schools hundreds of boys and girls every year, who in nost states go to work at the age of fourteen. On the theory that two additional years in school are necessary properly to prepare children for life and for work, the state has deprived them and their families of two years

of wage-earning. Parents and children may justly demand that the state guarantee these children a training which will fit those who wish it, to be, not only intelligent citizens but intelligent and successful wage-earners if need be.

Of those who reach the second grade of the Minneapolis public schools, about four out of five never finish high school: about one of two never attend high school; about three out of ten never complete the elementary school. The bigness of the problem becomes at once apparent by the fact that of the 4,956 enrolled in the third grade in 1905-06, only 1,111 were enrolled in the same class when it came to the senior year of the high school in 1914-15; which in other words means that 3845 out of 4,956 students fell by the wayside.

Merit of every kind in every citizen of the community might well be the fundamental ideal of organized society. The way should be open for the fullest expression of all the wit, energy, genius, dexterity, skill, taste, technique and art of every man woman and child of every city and town and country place.

"When the pathways for merit are wide open for all, the city of Minneapolis will profit a

hundredfold from its most precious asset of human resources; and democracy will find not only its best expression but its fullest fruition. Not until a system of vocational education has given the mechanic and the artisan, the disigner and the decorator, a chance, through training, to develop their peculiar interests and abilities, can it be said that the city has opened up for them a clear pathway of merit."[13]

Manual Training.

The question involved in the investigation of the problem of manual training in the public schools is, to what extent is manual training meeting the need for vocational as well as pre-vocational education.

In Minneapolis the manual training department is of high recognized standard. It includes all boys of the sixth, seventh, and eighth grades, and offers a four years' course in each of the high schools. Following is the list of subjects taught in the course with respective time allotment,-

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13. Minneapolis Survey. 1915, Page 18.

Outline, course of study.

Grade.	Subject.	Time.
Sixth	Woodwork	One hour per week.
Seventh	"	Two hours " "
"	Drawing	One hour " "
Eighth	Woodwork	Two hours " "
"	Drawing	One hour " "
1st year high school	"	Two periods " day.
2nd " " "	" turning and patterns	two periods per day
3rd " " "	" and forging	" " " "
4th " " "	" Machine shop	" " " "

Thus woodwork is given in five successive years from the sixth grade through the second year of high school.

All the teaching is done by special teachers, under the direction of the supervisor. The cost of the instruction in 1915 was $82,500. Of materials used in the shops during the year $17,500. The total cost of equipment, exclusive of rooms, hear and light was $136,300. So we see a well equipped manual training department.

The general aim of this elementary manual training work is, "to promote honesty, industry and

health, to cultivate self-reliance, to develop general efficiency and skill, and to help the boy to discover the place for which he is best adapted in the vocational world."[14]

The Aim,- not realized.

If this aim is to be realized in full the brief experience in wood must be enlarged to include activities in a variety of industries and occupations representative in nature, such as metal, printing, electricity, clay and building materials. This need has been felt, but not yet fulfilled in the department.

There is no adequate training in manual work for boys who cannot go to high school. A little less than half the boys of the city never enter high school. These, and the boys who are behind their proper grade from one to four years will go to work without finishing the eighth grade, and practically none of them will ever attend the high school. Hence we see the present elementary experience in the single line of woodwork is inadequate, and neither furnishes a basis for an intelligent choice or gives a markitable skill in woodworking. Since this group is denied entrance to the manual training of the high school, they are denied, "an equal chance of

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14. Minneapolis Survey, Page 33.

getting an education which will start them in some useful calling,"[15] so they should be cared for in some other way if the schools are to supply "an equal opportunity to all."[16] Many of these boys may get into the Dunwoody Institute, whose work is designed to supplement that of the public schools for the industrial and medhanical arts. But a larger number of this same group of boys will not be qualified to attend the Institute and some adequate provision should be made for them in the public schools.

Before taking up the discussion of another phase of specialized training it might be well here to evaluate the shop courses by means of five pertinent questions, and with especial attention to the last one.

1. Do these schools attempt to train boys for the industries?

2. Do boys completing these courses enter the industries?

3. Do boys go the the High School to get industrial training?

4. Do these schools give adequate preparation for the industries?

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15. Survey Page 33. 16. Survey Page 34.

5. If not, what do they do for the boy?

The importance of the suggestion in the above questions is just as true in all the other phrases of vocational and public school work as it is in relation to woodworking and manual training. Just as true and suggestive in the work for the girls as it is for the boys. We have chosen the work of manual training because it is the oldest established, and best equipped specialization, in our most thoroly organized school system, and for like reason is woodworking especially emphasized. The thought constantly is forcing itself into our minds - What is it really accomplishing? If not, why not? and this becomes the inexorable measuring-rod of all our efforts at achievement - educationally and socially.

I would not for one moment condem or decry the excellent results obtained in the manual training departments, for the boy does get an experience of unquestionable value as a part of his general knowledge and equipment for life. He gets an opportunity to "sample" his tastes for many industries- the chief fault here today is the limitations of his opportunities and choices; and the lack of flexibilety in the course which cuts off his "turn" at some of the

most valuable experience, for example, the machine shop, unless he completes the high school course. And as about two out of three drop out before they complete the high school course, we readily see the deficiency. No doubt however many boys who have not completed the course have gone into industrial life with an invaluable foundation derived from these very sources in the manual training school, which fact only heightens the importance of a larger, broader, more flexible system, not only in manual training but throughout the whole vocational educational field.

Domestic Science and Art.

As the above is true in relation to manual training, likewise we find very similar conditions in every other phase of vocational training. We will devote some attention to the next best equipped and thorough-going vocationalizing department of the public schools,-the domestic science and art. Here practically no claim is made to prepare for the trades. Nor do the pupils herein trained enter the industries to any extent. Rather has the aim been to give to each girl, as a part of her general education, a specialized practical training that will be useful to her throughout her whole life, no matter what her

career may be.

The defects and defficulties here found in these departments are typical of those throughout the country, and are not confined to Minneapolis.

Should be broadened.

1. In both the grades and in the high school.
2. By adjustment of equipment and cirriculum.
3. Time allotment too high for best use of pupils time.
4. More time to cooking and sewing in the grades.
5. Inadequate facilities in some schools.
6. Utilize lunch rooms, opportunities of high schools.
7. Broaden utilitarian efforts in pupils-not for self alone.

Suggestion, Study-courses.

Concluding the discussions regarding manual training for boys and domestic science for girls, we will offer two study course outlines both of which, are worked out quite thoroughly, but not necessarily exhaustively. They are offered here in order to suggest the possibilities and range of improvement, rather than being the last word, or in any way at all dogmatic in thought, plan or content. These being only two, out of some twenty or more.

The course of telephony for boys in school,

and for men in night school courses, is made up of unit courses, so arranged that the student may take one or several in any one year, and in three years can complete the full course. After fulfilling the requirement of general science, the student may elect whatever course or courses he feels most in meed of, both in daily work and for benefit of promotion.

Telephony-course of study.

I. Magnetism.

Magnets-permanent, electros.

Magnetic circuits.

Calculations.

II. Ohms law I R

Series circuits, R R1 R2, etc.

Parallel circuits, $1 \quad \frac{1}{R1} \; 1 \; R2$

Measurements of resistance.

VM AM method-Wheatstone method.

Line drop C.M. .22 D I

D Distance in feet.

I Current in amperes.

E Allowable drop.

III. Power Equation.

Watts E×I

Measurements of power.

1. AM and VM.

2. Wattmeter.

THEORY OF THE TELEPHONE: Sound waves, voice frequencies. This subject will be illustrated by a simple circuit showing functions of the following pieces of apparatus: transmitter and receiver, induction coil, repeating coil, ringer and condenser.

SUBSTATION: Study of circuits. Theory of protection to substation equipment. Installation methods. Ringer adjustment and troubles. Local battery: local battery, transmitting and common battery signalling. Common battery.

CENTRAL OFFICE: Description of switchboards and their operation. This subject will be covered by starting with a simple talking circuit and adding one by one the different pieces of apparatus, showing the function of each.

STUDY OF SWITCHBOARD CIRCUITS: Their purpose and operation. Reading blueprints. Study of color code.

SWITCHBOARD MAINTENANCE: Routine testing. Clearing trouble. Relay adjustments.

POWER APPARATUS:

IV. Generators.

Tests.

1. Shunt.

2. Series.

Care of commutator and brushes; troubles and corrections.

V. Motors-Tests.

1. Shunt.

2. Series.

3. Alternating: Single, two and three phase.

VI. Ringing machines.

Frequency.

1. Dynamotors.

2. Generators.

3. Interrupters.

VII, Mercury arc rectifiers.

1. Theory.

3. Care and operation.

VIII. Batteries.

1. Primary (chemistry of construction and uses.)

2. Storage (chemistry of: Impurities in water and electrolyte, their effect on the battery.)

3. Care and operation.

TEST BOARD (LOCAL): DESCRIPTION AND PURPOSE. OPERATION.

1. Testing subscriber's line and central office

trouble.

2. New installations.

3. Breakdown test.

4. Insulation test.

PRIVATE BRANCH EXCHANGE: Description of the different types, their uses and operation. Study of circuits, installation, battery supply, maintenance, troubles.

CABLE AND CABLE TERMINALS: Manufacture (Mechanical requirements) (Electrical requirements.) Types of cable and their uses. Types of cable terminals and their uses. Cable lapping, method of laying out. Building cabling and wiring. Construction methods, serial and underground. Splicing. Troubles, causes, methods of locating and clearing. Theory and application of protection.

OUTSIDE PLANT CONSTRUCTION: Aerial, underground.

TOLL PLANT: Types and construction. Handling and placing copper wire. Transportation schemes and method of cutting transpositions. Phantom circuits. Composite circuits. Simplex circuits. Duplex circuits. Loading. Theory-application, open wire and cable. Inductive disturbance.

TOLL TEST BOARDS: Description of the different types.

Operation: covering testing for and locating trouble by use of voltmeter and Wheatstone bridge. Open location test. Line insulation test.

In the following course of study for girls and women we have a representative line of employment, and perhaps the largest one of all. This course is quite comprehensive in training and efficiency possibilities, though offered only for the benefit of suggestion which is at once apparent.

SALESMANSHIP,-GRADED COURSES.

I. Introductory Course.

For aisle girls, messengers, stock keepers, and others who wish to qualify as sales persons. To test the general ability,(2) to determine the attitude toward store word, and (3) to serve as a basis for eliminating those lacking fundamental education.

1. Arithmetic

A. Fundamental processes, common and decimal fractions as applied to

a. Money; b. quantities; c. measurements.

2. English and spelling

A. Oral English

a. For ability to express simple information about merchandise correctly; b. for use in greeting a customer and ordinary conversation.

B. Dictation exercises to test

a. Ability to take customers' orders or directions; b. common facts about merchandise.

C. Spelling lists of words selected to

suit the needs and ability of each group of beginners.

a. Words in common use; b. names of merchandise; c. names of streets.

3. Personal hygiene and dress.

A. Care of the hair, nails and teeth.

B. Neatness in dress and its importance in store work.

4. Store deportment.

A. Toward customers.

B. Toward fellow employes.

5. Store system.

A. How to make out sales slips.

B. Policy of the store with regard to exchanges and refunds.

C. Policy of the store with respect to the treatment of customers.

II. Elementary Salesmanship.

To test the talent for salesmanship, (2) to serve as a basis for eliminating those unsuited for store work, and (3) to assist in classifying workers as stock-keepers, sales persons, or office workers.

1. Salesmanship.

A. Elementary principles.

a. How to greet customers; b. how to find out customers' needs; c. how to hold the customer until a more experienced sales person can give her the attention desired; d. how to locate stock in the department; e. such elementary information about stock as prices, stock numbers, special names or other means of identifying stock.

B. Care of stock.

a. How to dust, brush, clean and fold stock; b, how to replace it in boxes on the shelves.

C. Demonstration sales applied to familiar miscellaneous merchandise.

a. Practice in making a sale thru the demonstration.

aa. How to show the goods; bb. how to interest the customer; cc. how to meet customer's objections; dd. how to substitute merchandise; ee. closing the

sale; ff. making the sales slips; gg. counting and giving the customer change.

b. Relation of counter display, store display, and advertising to selling.

2. Arithmetic.

A. Drill in the use of fundamental processes in arithmetic, fractions and decimals based on problems taken from daily routine of the store.

a. On sales slips; b. Rapid drill for accuracy and speed.

B. Short methods for making computations used in the store.

C. Practical business problems in interest and profit and loss.

3. English.

A. Oral.

a. Talking about merchandise; b. repeating and giving directions; c. telephone conversation; d. talking to employers when applying in person for a position.

B. Written.

a. Business letters.

aa. Letters of inquiry; bb. answers to inquiries.

b. Short descriptions of merchandise.

C. Dictation.

a. Directions for amounts, kinds of merchandise; b. names and addresses of customers; c. short business letters.

D. Reading such literature on salesmanship and merchandising as beginners can understand.

a. Salesmanship literature; b. descriptions of merchandise and methods of manufacture; c. trade journals.

E. Spelling.

a. Words in common use; b. names of merchandise especially the kinds that are being handled from day to day, and new merchandise; c. drill in names of streets; d. abbreviations in common use.

4. Penmanship-for legibility and speed.

5. Color and design.

A. Unity and variety as applied to merchandising.

a. Harmony of color.

aa. Matching and blending of colors in fabrics and trimmings; bb. combining colors for store displays; cc. what to avoid in showing colors to customers.

B. Study of line and space as in plaids, stripped and figured goods.

C. Talks on what constitutes good taste.

D. Art vocabulary for business purposes, and so on.

a. Accepted trade names for colors, and so on; b. descriptive terms as smart, chic, mode, and so on.

6. Business ethics, store deportment and citizenship.

A. Relation of employer and employe.

B. Loyalty of employer and employe-reasons for.

C. Good manners and courtesy-reasons why they are an important part of salesmanship.

D. Discussion of laws relating to store employment, school attendance and community life, in their relation to self and others.

7. Personal hygiene and health.

A. Health-a business asset.

B. Simple rules for:

a. Sleeping; b. bathing; c. exercise; d. proper food-the noon lunch.

C. Dress-its relation to health, attractive appearance and business.

D. Exercises in proper sitting and standing.

E. Recreation.

F. Care of the teeth, nails, eyes and hair.

9. Textiles.

1. How to know staple fabrics.

A. Names of cotton fabrics and drills in recognizing them. Also market prices, widths and uses.

B. Names of woolen fabrics, names of weaves, how to recognize them, widths and market prices.

C. Linen fabrics, their names, prices, weaves, widths and uses.

D. Instruction about one or more of the textile fibers.

III. Salesmanship and department duties.

Pupils for these courses (when given in the store,) should be taken from the departments having merchandise with points in common. This course is a continuation of the elementary course. Its aims are (1) to develop selling ability, (2) to give specific information about merchandise and methods of obtaining such information, (3) to give methods for learning new points about merchandise, and (4) to develop ability to meet and deal with people.

1. Salesmanship applied to specific merchandise.

A. Demonstration sales with discussion and analysis of the principles of making a sale.

a. Gaining the attention; b. interest; c. desire; d. decision.

B. Planning of demonstration sales by pupils.

C. Suggestion in salesmanship.

D. Care and arrangement of stock.

a. In the department; b. on the shelves or in boxes; c. Display of stock on the counters and in the cases.

E. Merchandise talks by buyers.

F. Talks on advertising by advertising man-

ager.

G. How to cultivate customers and gain good will for the store.

H. Relation of good health to efficient service.

I. Personal qualifications (as expressed in manner and dress) required for successful salesmanship.

J. Study of trade journals with reports and discussions.

2. Arithmetic.

A. Continuation of drill as given in the previous course, if necessary.

B. Elementary accounting and principles of bookkeeping.

C. Personal accounts.

D. Apportionment of personal income for:

a. Living; b. dress; c. savings; d. recreation; e. philanthropy and church.

3. English.

A. Oral continuation of the work outlined in the previous course as applied to the demonstration sales and talks about merchandise.

B. Written.

a. Descriptions of merchandise; b. plans for demonstration sales; c. selling talks; d. taking notes from buyers' talks and advisers' talks.

C. Reading.

a. Keep up-to-date with trade journals; b. methods for manufacture of merchandise; c. current magazines and newspapers for general information; d. literature, selected classics.

4. Commercial geography.

A. Where merchandise comes from.

B. How shipped-freight, express, boat.

C. Cost of transportation-freight, express, duty, and so on.

D. Sources of raw materials.

5. Spelling.

A. Occasional drills to keep up-to-date with new terms used in merchandising, in styles.

6. Color and design.

A. Balance and account, more advanced work in blending of colors for the sake of:

a. Light and dark in colored fabrics; b.

how to recognize neutralized colors in fabrics; c. how to suggest warmth or coolness in color and when they are to be used for dress, furnishings, and so forth.

B. Design.

a. Arrangement, balance and accent.

aa. How to arrange trimmings or draperies.

1. Regularity as in making two sides alike.

2. Irregularity.

3. Lines applied to trimmings or draperies.

bb. Value of color in relation to their use as in fabrics with their relation to their use as in dress, trimmings and furnishings; cc. textures of fabrics and their relation to dress trimmings and furnishings; dd. place of color, line proportion, etc., in advertising and display work; ee. talks on what constitutes good taste.

IV. Course for assistant buyers and buyers.

This course takes the form of a club of forum lectures, discussions and debates. The following topics are suggested:

1. Market centers for various kinds of merchandise.
2. Study of merchandise.
   a. Quality.
      1. Grades of raw materials.
      2. Mixtures used in different materials.
      3. Adulterations.
      4. Methods of finishing.
   b. Price.
      1. Style.
      2. Quality.
      3. Workmanship.
      4. Demand.
      5. Transportation facilities and proximity of market.

B. Factors governing selection of merchandise.

a. Style; b. use; c. service; d. amount; e. price; f. job lots; g. discounts.

3. Supply and demand as related to merchandising.

4. Current labor conditions and problems and their effect on merchandising.

5. Store arrangement as location of departments.

6. Department arrangement.

A. Methods for placing merchandise.

B. Shifting merchandise for seasonal demands.

C. Featuring stock.

7. Department management.

A. Policies relating to dealing with employes.

B. Management of stock as in planning for turnover.

8. Current legislation especially in its bearing on store work and merchandising.

9. Lectures on commerce and business problems by authorities.

10. Textiles.

A. Drill in recognizing staple fabrics continued.

B. Drill in names, kinds, grades, widths,

prices of staple and popular silks.

C. Study of weaves-how they are made.

a. Plain weave; b. basket; c. cord; d. twill; e. serge; f. brocade; g. satin; h. Marquisette or scrim; i. nap.

D. Simple tests for wool, cotton, silk, and linen fabrics. How to know mixtures.

E. Such simple practical comparisons as difference between damask and crash; serge and broadcloth; cotton twill and Indian head.

F. Dyes-where they come from, and how made and how used.

G. Weighing and finishing fabrics.

H. Source of raw textile fibers.

a. How secured; b. preparation for spinning and weaving,

ADVANCED COURSE IN SALESMANSHIP for persons who have been in the store a year or more. To be conducted as class work or club work, for persons selected from allied departments. The object of this course to develop a knowledge of scientific salesmanship and study of merchandise.

1. Demonstration sales with discussion and grading.

2. Discussions of such store problems as:

1. Problems of merchandising.

   a. Division of merchandise among departments and salespeople; b. methods of keeping stock; c. plans for disposing of stock; d. featuring cut of season stock; e. display of stock.

2. Problems of discipline.

   a. Team work in departments and in the store; b. deportment in the store, employes' codes and standards versus those of employers; c. treatment of customers.

3. Ways of improving service.

   a. For convenience and comfort of customers; b. for saving time and energy of employes.

4. Required readings from trade journals and books on salesmanship, discussed or debated.

5. Current literature, magazines, newspapers for general information.

6. Industrial history as related to merchandise.

   a. History of source and uses of mer-

chandise; b. evolution of manufacturing methods and the effect upon merchandise as to:

a. Quality; b. cost; c. colors; d. design in decorative patterns.

7. Literature selected classics.

Criticism.

The most apparent defect in these suggested courses of study, is that also found often in the method and recommendations made by the National Society, both in Minneapolis and Indiana. The surveys in both instances showing a distinct tendency toward narrow specialization, seeking to meet the immediate and near future demands of industry—a sort of violent effort to satisfy the economic demand for the moment, rather than the careful seriously thoughtful planning in the largest and most comprehensive way possible to cope with the great social needs of the now; and the laying of the foundations of an educational system which is sound psychologically; and which is in method and result, at once sound and flexible enough to meet the exigencies of the crying and ever-changing economic, social and cultural needs of all classes, conditions and degrees of our complex society.

PART III.

DEMOCRACY VIA VOCATIONAL EDUCATION.

GENERAL CONCLUSION.

As the preceeding intensive study of one typical locality, and of a great commonwealth, both show the limitations, successes and needs of vocational effort educationally and socially, so would an intensive study of any other locality or section show similar limitations, successes and needs, varying only with the peculiarities and conditions which obtain in the various locality or section show similar limitations, successes and needs, varying only with the peculiarities and conditions which obtain in the various localities. This can be seen in the Indiana survey and the resulting activities in both this survey and the Minneapolis survey, and the activities elsewhere in the whole country wherever effort is being made to meet the increasing demands economically, educationally and socially. The recognition of the fact, and an evidence of the sincere cooperation on the part of leaders of all classes is shown in the "concluded trade agreements between the schools and employers for all-day, part time and evening vocational instruction."[17] For example,

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17. Minneapolis Survey- Page 11.

under one agreement, free evening classes in plumbing were established and some sixty employers agreed to place at permanent work and definite wages, all who took the work in these classes, and to hasten and shorten their regular apprenticeship as their efficiency and ability permitted. Other similar agreements in other industries were completed.

Survey-definition of vocational education.

The conception underlying all the work outlined and done by the National Society is set forth most clearly perhaps which is stated in these words "Vocational education means just what the term implies, an education or training which aims to fit an individual or group of individuals for a particular occupation or trade. * * * * All work and all subjects-technical, scientific and academic which contribute to this purpose are selected; all subjects which do not contribute to this purpose are excluded from the course." [18] The course in english, for example, would include spelling, punctuation, composition and proof-reading. The courses in printing, art and mathematics would include training in type-harmony, design, color harmony, stock cutting and cost estimating. Industrial geography

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18. Survey Magazine- April 11, 1917

and history would aim to give boys a broader view of life and industrial possibilities. Instruction in personal and shop hygiene and in practical citizenship would be included.

Purpose of vocational education.

"The purpose of every vocational school is not merely to make more intelligent, capable and ambitious workers, but happier and more useful citizens."[19] (Italics mine.)

Surely this last clause is the tap-root of the whole vocational idea-of all education and culture, advancement or improvement along whatever line, or to whatever end- the end, the highest goal possible should be to make, "happier and more useful citizens," or in other words society, for society is only the crystalization of the social aims, ambitions, achievements and standards of citizens.

Vocational education must be adapted to the peculiar needs of the particular locality in its narrow sense, but in no way should we confuse industrial education with the broader phase of vocational education. Yet what is especially needed in one community may not be the best thing for a neighboring or remote community. Alvin E. Dodd,

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19. Ibid.

secretary of the National Society says,"the same vocational courses will not serve in a furniture manufacturing city like Grand Rapids, and a textile city like Fall River." Likewise this statement would apply throughout the country. In its narrower sense the training of children must be regulated in large measure by the particular industrial needs where the child happens to be born and reared. If flour mills abound his training would be along the lines of that industry, if manufacturing of textiles along that particular line, and so on ad infinitum. But we must not for one moment, be blinded to the largest possibilities of vocational education because of the narrower industrial demands; the need for a higher degree of happiness, usefulness, citizenship and social efficiency, must ever be the highest aim and profit. In the Indiana survey summary there are sixteen economic and industrial reasons given for vocational education, and seven given in favor of the social or general gain to the individual and to the community. This clearly shows the two approaches to the solution of the biggest educational problem of to-day, vocational education for young people.

The broad concept and aim.

John Dewey in his address in New York city, February, twentieth, mineteen seventeen, gave such a clear-cut analysis and statement of the broader idea, and of the narrower part: idea, that I shall quote him here in "To understand the educational issue is to see what difference is made in the schools themselves, whether we take the improving of economic conditions to be the purpose of vocational training, or take its purpose to be supplying a better grade of labor for the present scheme or helping on the United States in a competative struggle for world commerce. I know that those who have had the latter end chiefly in view, always make much of the increased happiness of the industrial worker himself as a product to result from better industrial education. But after all, there is a great difference between the happiness which means merely contentment with a station, and the happiness which comes from the struggle of a well equipped person to better his station. Which sort of happiness is to be our aim? I know, also, that stress is laid upon the ability which is to proceed from a better industrial education for the laborer to increase his earnings. Well and good. But does this mean simply that laborers

are to have their skill to add to the profits of employers increased, by avoiding waste, getting more out of their machines and materials, so that they will have some share in it as an incidental by-product, or does it mean that increase in the industrial intelligence and power of the worker for his own personal advancement is to be the main factor."[20]

The narrow trade plan.

"The cirriculum will neglect as useless for its ends the topics in history and civics which make future workers aware of their rightful claims as citizens in a democracy, alert to the fact that the present economic struggle is but the present-day phase taken by the age-long battle for human liberties. So far as it takes in civic and social studies at all, it will emphasize those things which emphasize duties to the established order and and a blind patriotism which accounts it a great privelege to defend the things in which the workers themselves have little or no share."[21]

The process of the broader view.

"Instead of trying to split schools into two

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20. Survey Magazine. April 11,1917.

21. Ibid.

kinds, one of a trade-type, for children whom it is assumed are to be employes, and one of a liberal type. for the children of the well-to-do, it will aim at such a reorganization of existing schools as will give all pupils a genuine respect for useful work, an ability to render service and a contempt for social parasites, whether they are called tramps or leaders of "society." * * * * It will indeed make much of developing motor and manual skill, but not of a routine or antomatic type. It will rather utilize active and manual persuits as the means of developing constructive, inventive and creative power of mind. It will select the materials and the technique of the trades, not for the sake of securing industrial intelligence, but a knowledge of the conditions and processes of present manufacturing, transportation and commerce so that the individual may be able to make his own choices and his own adjustments, and to be master, so far as in him lies, of his own economic fate. * * * * * * It will remember that the future employe is a consumer as well as a producer, and that the whole tendency of society, so far as it is intelligent and wholesome, is to an increase of the hours of leisure, and that an education which does nothing to enable individuals to utilize leisure wisely is a

fraud on democracy. So far as method is concerned, such a conception of industrial education will prize freedom more than docility, imtiative more than automatic skill, insight and understanding more than capacity to recite lessons or to execute tasks under the direction of others."[22]

Following this clear statement of the difference between the purely trade school and its aims, and the larger vocational idea and aim, we will turn our thoughts to the effects of vocational education in society-its possibilities, and suggested changes.

"The world in which most of us live is a world in which everyone has a calling, an occupation, something to do. Some are managers, others are subordinates. But the great thing for one as for the other is that each shall have had the education which enables him to see within his daily work all there is in it of large and human significance."[23]

The ultimate goal.

Nothing, it seems, short of universal education can be the ultimate goal of a purely democratic society,

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22. Survey Magazine. April 11, 1917.

23. School and Society. P.38.

in which equality of opportunity is the basic foundation. There is nothing which offers a more ideal pathway to true equality and democracy than education. Education at its best. Education in its most comprehensive aspects of content and administration. Education in its largest and yet simplest form.

Perhaps it is the dream of the idealistic to speak of a pure democracy, but too, the ideal can be more nearly realized through a democratic education,- the society which most mearly approaches the true democracy by way of education. This is, no doubt, what Ezra Cornell meant when he said, "I would found a university where <u>any</u> person can find instruction in <u>any</u> study." If this oft-quoted statement is realized we must seek to make our educational system the most flexible, in order to adapt it to the immumerable individual needs - for the individual <u>cannot</u> be ignored-; we must make it comprehensive and practical to meet the needs of everchanging economic conditions; and we must make it democratic in order to meet the gradual and sure upward trend toward social and world-democracy..... Surely if there is any <u>one</u> thing portended in it is most surely the doom of all things autocratic,-

iron-clad customs and unchanging institutions and systems; with the rise of world-democracy, equality of nations, and in larger degree than has ever been since the dawn of civilization,-of individuals. Then why not seek to make our largest single institution-our educational system-just as largely democratic as it can possibly be made. "First, that the realization of a form of social life in which interests are mutually interpenetrating and where progress or readjustment, is an important consideration, makes a democratic community more interested than other communities have cause to be, in deliberate and systematic education. Second, since a democratic society repudiates the principle of external authority, it must find a substitute in voluntary disposition and interest, these can be created only in and by education." [24]

A society to be the best society must be mobile and full of avenues for automatic adjustment to any change occurring anywhere. Its members must be so trained and adaptable that by personal imtiative they can adjust themselves to the ever-changing state of affairs, or else they will be overwhelmed when they are caught by some new economic, political or social situation, with which they have not previously met.

In other words, the educative system should be so democratic in method and content as to give each individual sufficient basis and impetus that he will go on, as the years go, and "keep up" with life in its various phases of "up-to-dateness" and will automatically maintain his proper relation as a wide-awake useful and happy citizen. "It is but the other side of this fact to say that in the degree in which society has become democratic, social organization means utilization of the specific and variable qualities of individuals, not stratification by classes."[25]

So a purely democratic standard of society naturally demands a subordination and readjustment of its instituitions which will most effectively secure equality in participation of all the advantages of its members, and only to the extent that this is accomplished is the society democratic. "Such a society must have a type of education which gives individuals a personal interest in social relationships and control and the habits of mind which secure social changes without introducing disorder."[26]

The trouble with the Platonic idea, which

25. Democracy and Education, Dewey: page 105

26. Ibid. page 115.

was of this same viewpoint, was that in the working out it made a class rather than the individual the social unit. The individualism of the eighteenth century made the individual the means rather than the end, and lacked the agency of securing the development of its ideal. The idealistic philosophies of the last century supplied the agency by making the state the center of authority, but this in turn made the political unit the aim and of course again subordinated the individual to the institution. Herein we can see how history has revolved in a circle, and leaves us at a similar starting point to that of other days. So by profiting by the mistakes and efforts of the past, ought we to subordinate our institutions to the individual, not in theory only but in actual practice.

Suggested Remedies.

So if the education of tomorrow is to be of the highest efficiency in every respect, it must follow along the lines, not of empirical knowledge alone, but must add to "the mode of practice based upon accumulated observations," the practical knowledge gained through experimental science.

Trend of educational reform.

This should be done, not that experimental science shall be or become, an end within itself, for example the labratory work in physice, chemistry, manual training, domestic art, or that of agriculture, but use the experience and knowledge herein gained to stimulate to larger and more useful fields of activity, educationally, commercially and socially. This would mean that reason could and would operate within experience, not beyond it, in order to give an intelligent and reasonable quality to it. "Sience is experience becoming rational,"[27] and this applies in reference to our educational reform that must come about in the near future – is coming about now, and it behooves us to shape it into the greatest gain possible.

Whenever we take into consideration <u>all</u> the factors which enter in, and in their most scientific, practical and reasonable aspects, and treat each one in like manner, then will we make the method subordinate to the end, and not the end itself; then will we make the institution subordinate to the individual, and not lose sight of the fact that the individual is <u>the</u> greatest factor; and then will we consider the individual's abilities, choices, limitations and aspirations as fundamental bases for his greatest achieve-

27. Ibid. page 263.

ment intellectually, morally and socially.

Individual placing.

In this connection Doctor Blackford offers an excellent remedy for correcting and preventing many of the vocational and social "misfits," and at the same time a very sane guidance in the honest efforts of those who desire to succeed. She takes into consideration all the available factors which go to make up the gross individual-physical, mental, moral and spiritual. She seeks to avoid placing the fat man in the lean man's job, and vice versa. Likewise the slow plodder, and the brilliant enthusiast; the highly spiritual artisan and the drudge. Her work has to do largely with the adult - the mature man, but she shows so splendidly, in her many thousands of cases, just what can be done, and the advantages available just in the proper "placing" of the "misfit"man or woman. She has proved with her many cases the shortcomings and weakening effects of our haphazard, happy-go-lucky, drifting system, and this wholly apart from training and adequate preparation too-just takes the "square peg" out of the "round hole" and puts him where he belongs. Add to this the advantages of reasonable practical scientific

training through our great school system, using all our available and obtainable, psychological experimental and practical instruction and information,- every educator "get busy" with the consuming thought of the fullest realization of the highest ideal obtainable, and we would find almost immediate results of the most encouraging sort, not to mention the flattering results that would develop in a few years of consistent, concientious, intelligent thinking and planning.

This idea must be realized fully and must be wrought out along the lines of vocational education in varying adjustment to meet the all but numberless peculiar needs locally economically and socially. As has been before mentioned, and which has continually shown up in the foregoing intensive study of the Minneapolis and Indiana surveys, the idea of individual reaction, choice, environment, and ambition (or lack of ambition) has constantly to be taken into consideration. And as we study this big problem the real bigness of it grows upon us until it assumes almost overwhelming proportions, but by a careful analysis and sorting of different elements it can be greatly simplified. I shall mention but one method

here, but one which seems to go to the very key-portal of the seemingly inpossible maze.

The psychological basis.

In all the wonderful social complex of humanity, with its devious turnings and twistings, we find largely the same fundamental and basic human nature and human mind, with fundamentally the same inherent desires and reactions. Of course there are developed differentiations both of desire and response individually, but at bottom they remain practically stable and the same.

The individual response.

As the individual responds physically and mentally to the external stimuli brought to bear upon him, so will the resultant be shown, in very large degree, in his mental and social life. Through interchange of ideas, and the responses to his ideas by his fellows, a man learns to interpret his own ideas and responses by those of his rivals, or of his companions. As we are taught through association of gesture and response in many times repeated situations, we come to respond to this imaged response anticipated, and to meet it before it actually occurs. By means of this "built up" "experience" we

acquire the "experiences" as our own without actually having gone through them, by assimilating these vicarious experiences to our own actual experiences. In this way each can build up his own self out of the common material on the basis of his own experiences. And as the self is always relative and reflective we become conscious of ourselves in relation to others, and thereby do we become aware of our social beings or social self. And while the self in each separate experience differs from and is contrasted with the others yet the common material makes the likenesses far greater than the differences.

The individual paramount.

Applying this psychology to the vocational educational advancement and reform we find by observation, esperiment and experience, that the child reacts differently, and in a graduated scale of degree, to the different stimuli given him. Also he will respond as a social unit (a citizen) with different previous experiences and stimuli in varying degree, depending upon his individual characteristics, his previous experiences and the immediate educational and social stimuli given.

It is this psychological basis that simplifies

and classifies in a large way the huge problem before us. In all progress of the world we have had to build off the old ideas into the new. When an old idea or system breads down, or fails to meet the demands made upon it most efficiently, we must use the fragments which have not broken down, to build a new idea or system. Linked almost inseparably, is the realization of self-reliance in doing and being- and this applies to the pupil, the teacher and the layman alike — with all its broadening, deepening and quickening influences. The individual must do this through a liberal, flexible, efficient, educational system else whither shall he turn? The answer can be found in a vocational educational system of the highest adaptability and efficiency - culturally, industrially and socially-possible.

Summary from the survey.

Briefly summarizing, with the recommendations and conclusions of the survey committee in mind.

Specialized teaching.

In the last year of the elementary school, or in the years of the junior high school, more specialized teaching and technical courses could be introduced.

Increase shop responsibility.

For the advanced work more and more responsibility should be thrown upon the shop.

School background of theory.

The school furnishing the theoretical backing and the shop, the practical application with the student alternating between the shop and the school as in the socalled coöperative courses.

Workers already engaged.

For the workers already at work, part-time continuation classes are advised, with "dull season" classes and evening trade extension courses. For these, various special schools in the city, commercial and technical schools could coöperate. In this correlation of shop and school a new form of apprenticeship would grow up.

Trade agreements.

The survey reports trade agreements already worked out, and in operation in several trades which provide that after two years of high school instruction and practical, technical and acedemic subjects the worker will be placed in the occupation at wages equal to those of a third year apprentice. These agreements require the approval of the union, and

the employers agree to use the school as the first source of supply in engaging new workers.

Criticism and Conclusion.

Along such constructive lines, as are suggested in the Minneapolis and Indiana surveys, will the problem of vocational education be worked out. An ideal system would not only give every boy and girl an opportunity to find an aptitude and cultivate some skill but it would make possible the training of "non-commissioned officers" in the industrial army. The education of such leaders will really be a goal of organized vocational education. As the industries, become more technical and more scientifically managed, the demand for administrative, supervisory, directing, and planning officers taken from the ranks is constantly widening. Efficient management will be the reward for intelligence and skill. Until we have an educational system which in coöperation with shop and factory gives fullest opportunities for each child in the schools to work towards qualifying as such a "non-commissioned officer " in some vocation of the social army, we shall not have our democratic school, or our framework for the future democratization of industry. Nor shall we be able to attack those mountainous problems of unskilled labor which no system of vocational

training can touch.

"In the scheme of reorganization, stress falls not upon pecuniary rewards but upon the necessity of a democracy of a genuinely universal type of education which will make equality of opportunity a reality for all, with the adaptation to individual capacity and interest which is involved in this ideal. Ability to make a useful and decent living is an important part of the program for realizing this ideal.

Society today demands an educational system by which all education is relevant to a life remunerating the individual in happiness and in intellectual progress, as well as in material rewards, and a life servicable to the community in product and method,"[28] but not with the idea alone of merely commercializing education in any degree, But instead, the full-rounded education which goes most directly to the goal of a generally cultural and efficient preparation for life - not for some one occupation, or to "fill in" the industrial ranks like the "filling in" of a depleted regiment. The educational system of today must be made to meet the social and economic demands of tomorrow.

"This country has passed through the crude,

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28. Survey Magazine. April 11,1917.

quantitative, wholesale stage of its natural life, and is entering upon an age of qualitative and detailed adjustments. Waste of natural resources and carelessness as to human life, together with almost exclusive attention to raw materials and coarse methods was the mark of the former." [29] Conservation of resources and of life, together with preparation of individuals, trained in organization in a complex society, must be the mark of our future America.

The establishing of a proper relationship between industry and education may mean a complete reorganization of industry and of our twentieth-century educational system.

The thoroughly educated man or woman - the resultant of an educational system of the highest efficiency will be a vital social unit, a social agent who cares, not alone for self-aggrandizement, or position or power, but will in large degree be, "His brothers keeper." and no American is truly educated in whom has been omitted progressive purposeful preparation; his own social conciousness and responsibility and the largest meaning and sweep of education; of true culture and of genuine democracy in education, and in society, which has for

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29. Ibid.

its constant goal the social uplift and world betterment. He must early learn his natural limitations and resources, and start to prepare along the lines of his greatest desires and aptitudes- though not to the exclusion of other utilitarian, cultural and pleasurable phases of life-then follow his elementary training with specialized and practical advanced doing-of-things,-both mental and manual, keeping ever in mind the thought of a constantly intensive and increasing ability to add most vitally to the general improvement and to the good of all.