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EDUCATIONAL GUIDANCE IN HIGH SCHOOLS

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Educational Guidance in High Schools

Educational guidance as used here refers to the guidance or direction of students in the selection of subjects and also to the classification of students into sections so that better adjustment between the school and the student may be secured. In order to appreciate the need for educational guidance it is necessary to recall certain changes which have taken place in our secondary schools.

Two significant changes in our high schools. 1. Enlarged curriculum. When the primary function of the high school was preparation for college the curriculum included relatively few subjects. The student had little or no choice, as all of the subjects were required. Occasionally it was recognized that some students probably would not go to college and for their benefit certain courses were organized. A "commercial course" was offered in a number of high schools. There was also a "general course" which represented some departure from the one designed as preparation for college. Among the causes which have operated to bring about a great increase in the number of subjects in the high school curriculum has been the demand that the high school prepare for life rather than primarily for college. Many "practical" subjects have been introduced. As a result, the typical high school now offers a great variety of courses. No one student can take all of them. Generally English and at least one or two other subjects are required but the students are expected to elect, under certain restrictions, the additional subjects which they pursue during their high-school course.

2. Changes in the character of the student population. A generation ago the boys and girls attending high school represented a highly selected group. A very large percent of them had definite intentions of going to college and preparing for some professional career. In comparison with the present situation there existed a relatively high degree of unanimity of interest in the subjects studied in the high school and in the vocational expectations of the students.

The writer desires to acknowledge his indebtedness to Mr. Oscar F. Weber, Instructor in Education of the University of Illinois. The bibliography is taken from an original one compiled by Mr. Weber. The writer has also made use of portions of a manuscript originally prepared by Mr. Weber.
Furthermore, the differences in capacity to learn were distinctly less than in the typical high school of today. Within a generation there has been a phenomenal increase in the number of boys and girls attending high school. Many of them have no intention of going to college. They desire to secure additional education primarily for the purpose of increasing their earning power when they leave school. Others expect to drop out at the compulsory age limit and need to select those subjects which when studied for a brief period will be of most benefit to them. Thorndike has estimated that in 1918 approximately one of every three children reaching their teens in the United States entered high school. In 1890 the corresponding figure has been estimated to be one in ten. The change which has taken place from 1890 to 1918 may be indicated by saying that "for every one-hundred children who reached the age of fourteen there were approximately three and one-half times as many beginning high school in 1918 as in 1890."²

The increase in the relative number of children entering high school has produced a significant change in the general intelligence of the group. Accurate measures of the general intelligence of high-school students a generation ago are not available but it is reasonably certain that they represented a selected group and hence possessed distinctly higher than average intelligence. As the number entering high school has increased, the average general intelligence of each age group has been lowered because of the fact that more children on the lower levels of intelligence than on the higher have been admitted. The decrease in the average of general intelligence is, however, not as significant as the increase in the range of intelligence. Instead of having a group which is relatively homogeneous with reference to capacity to learn we now have to deal with pupils ranging from the very bright to the slow and dull.

Investigation has shown that pupils on the lower levels of intelligence have only very slight chances of doing satisfactory work in the more abstract subjects such as algebra, geometry and Latin as usually taught. Proctor³ states "there is good ground for the prediction that 75 percent of those who test below average mentality .

will fail in more than half of their studies during the first year of high school; that 50 percent of them will leave school to go to work during the first two years and that none of them will remain to graduate.” This statement applies to conditions prevailing in the typical high school where there is no systematic plan of educational guidance. It may also be noted that the pupils of low mentality who pass, learn more slowly than pupils on the higher levels of intelligence. Frequently they require different methods of instruction.

On the other hand, there are many bright pupils who are failing to find in the work of the school a challenge which is worthy of their abilities. A few become bored because they find the assignments too easy. Many of them are not working up to their capacity. Altho the percent of such students who leave school is much less than the percent on the lower levels of intelligence who drop out, we have here a distinct educational waste.

The percent of failures an index of the need for educational guidance. One index of the need for educational guidance is found in the high percent of failures in many high schools. As indicated above, the majority of these failures is found among students on the lower levels of intelligence. Under present conditions they have only a small chance of success. There is a lack of adjustment of the school to the pupils. Advice should be given with reference to the subjects to be elected, and other provisions should be made which will give children on all levels of intelligence a reasonable chance for doing successfully the work which they undertake. It is only when such provisions have been made that we can claim equal educational opportunities for all.

Investigation has shown that in some high schools more than one-fourth of the children enrolled in certain subjects are judged to fail in the work which they undertake. The average percent of failures for mathematics has been shown to be in excess of 20, and only a little lower for Latin.⁴ Altho it is necessary to maintain high standards, it seems likely that when such a large proportion of the students fail our schools have not attained their highest degree of efficiency. Our public schools are maintained for the purpose of preparing children for effective participation in the activities of adult life. When the work in a given subject is of such a nature that a pupil has only a very small chance of success the school is likely to fail in its purpose so far

as this particular child is concerned. There is need for providing curricula of such a nature that students on all levels of intelligence will be likely to succeed when they make a reasonable effort.

**Relation of standardized tests to educational guidance.** The use of standardized tests has become associated with educational guidance. The information which may be secured by these measuring instruments is helpful and probably will make possible a more efficient form of guidance but it is not essential. In any case the guidance should not be based wholly upon the information secured by standardized tests. The counselor should consider the student’s previous school record, his interests, his vocational expectations, and a number of other items in addition to test scores.

**Relation of educational guidance to vocational guidance.** The relation between these two types of guidance is very close. However, educational guidance is broader, from one point of view, than vocational guidance, and should precede it. The student should be guided so that he will be equipped to meet the moral and social duties and responsibilities of adult life as well as those concerned primarily with making his living. The purpose of vocational guidance should be definitely to prepare the student for his future vocational activities. Some schools consider even the securing of positions for their students as a part of the vocational guidance work.

**Guiding students in electing subjects.** The present practice in high school is to require English and generally one or two other subjects of all students and to permit the election, under certain restrictions, of the additional subjects which they pursue during the four years of their course. Thorndike\(^6\) has recently reported that in an analysis of high-school subjects actually being undertaken by pupils in ten school systems the results show an astonishingly large number of different programs elected by pupils within a single school system. For example, in one school, 139 tenth-grade students reported 110 different programs. In another school with 60 students there were 45 different programs. The results of the investigation are summed up as follows: “The plain fact is that except for the almost universal requirement of English for two years or more and for the very common requirement of algebra the first year, high-school programs have very little uniformity. Whatever arrangements re-

strict the selection of studies the students are permitted to take programs which are almost, if not quite, as varied as college students at Harvard during its period of substantially free election."

A prerequisite to effective educational guidance is an appropriate offering of subjects. This number will naturally be greater in large high schools than in small ones. In every case the subjects from which election may be made should be planned with reference to recognized educational objectives and to the various levels of intelligence. Some subjects should be of such a nature that students on the lower levels of intelligence may be expected to do them successfully; others should be planned for students on the higher levels. Our high schools can never be highly efficient in fulfilling their function to society until adequate provisions are made for those children possessing superior ability as well as for those of average or less than average intelligence.

Information needed by counselor. An educational guidance counselor needs to collect certain information about each student. He should have at hand at least the following facts: (1) chronological age, (2) record of previous school work, (3) measure of general intelligence, (In most cases the score yielded by a group test will be sufficient. When there is reason to believe that this score is not reliable, an individual test should be applied.), (4) an estimate of the pupil's capacity to do school work made by previous teachers, (5) a statement of his interests, (This might be expressed in terms of his favorite subjects and the ones which he likes least.), (6) educational plans, (Does he expect to complete high school? Does he expect to attend college? If so, what sort of college?), (7) vocational plans, (8) economic status of the home from which he comes, (9) health.

The counselor should be acquainted with the various elective subjects offered by the school. He should know something of their content and particularly of the type of students for which they are planned. He needs to have at hand a mass of information with reference to vocations, their requirements for success and the possibilities for advancement. In a large city the accumulation of this information is in itself a big undertaking. He should be prepared also to advise those students who expect to continue their education after graduation from high school. They may need assistance in their choice of a higher institution, especially if they are interested in technical schools or in universities having special colleges, as of agriculture, engineering, or commerce.

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Policies of educational guidance. There seem to be three fairly distinct policies of educational guidance. The first may be called one of enlightenment, the emphasis being placed upon making the pupils acquainted with the opportunities and requirements of vocations which they may enter and of other adult activities. There is also an effort to explain to them the nature of the subjects which they may undertake. Class instruction is sometimes given in the ninth grade in vocational and occupational civics. Students in the eighth grade in some schools make a study of the courses offered in the high school. This study may be supplemented by a visit to the high school in case the students have not already become acquainted with its plan of organization and the nature of the work given. Certain high-school teachers may be asked to talk to eighth-grade classes about the various subjects offered in the high school.

Under a monitory system of educational guidance students are warned with reference to their probable success or failure in pursuing certain subjects. Such a plan of educational guidance involves the use of educational tests, particularly those for measuring general intelligence. Some authorities recommend that the results of these tests be explained to the pupils in order to point out to them their own weakness or strength, and thus aid them in formulating their plans. The writer, however, is doubtful of the advisability of this plan and feels that unless it were used with extreme tact it might have a disastrous effect upon the student. Advice, however, should not be based exclusively upon the information secured by means of such tests. A student's previous school record, as well as his interests, should be considered. The nature of such guidance makes necessary provision for individual conferences with pupils. After they have been advised with reference to their program of study they should be given an opportunity to talk it over with their parents before a final decision is required.

Under the "pigeon hole" policy of guidance pupils are definitely assigned to certain courses on the basis of information in the hands of the counselor. Such a policy of guidance prevails more frequently in connection with the division of courses into sections than in respect to the choice of subjects. The consensus of opinion seems to be that no child should be deprived of the opportunity for at least a reasonable trial in any subject which he wants to study. There are

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many cases on record in which a pupil of mediocre ability, as shown by a general intelligence test, succeeded because of his intense interest in the work and his desire to keep up with the class. After a pupil has had a reasonable trial arbitrary adjustment may be justified.

Limitations of standardized tests in guiding students in electing school subjects. The coefficients of correlation between intelligence test scores and school grades extend over a wide range. A few are above .60. On the other hand, a considerable number are below .50. Some are much lower. These facts mean that the relation between a pupil’s intelligence test score and his school success is not close. There are certain general tendencies which should be recognized, but numerous cases have been found of pupils having average or even below average intelligence who, because of their intense interest or of other reasons, succeed in difficult subjects. The relation between test scores and vocational success is also far from perfection.

The most extensive study of the relation between levels of intelligence and occupational success is given in a report of psychological examining in the United States. From a study of this report and other similar investigations it appears that success in a given occupation is not likely by one whose general intelligence is below a certain level. However, there are a number of occupations corresponding to most levels of intelligence. We can not, tho, even if we know a pupil’s intelligence quotient, advise him definitely with reference to the particular occupation he should enter; we can say only that his success is unlikely in those occupations for which the average level of intelligence is materially above his own. The particular occupation he should enter should depend in part upon his interests and other factors.

We should keep in mind that when predicting the future success of a student either in school or in a vocation, we are dealing only with probabilities and not with certainties. This prediction is based upon certain assumptions in regard to ability or capacity to learn, interests and other traits. It is also, as we have just indicated, based upon relationships which are not close. We must expect even under an efficient system of educational guidance that some predictions will not be reliable. However, there is evidence that the number of mis-

fits in both school and vocations can be materially reduced by an in-
telligent system of advising students in regard to the courses which
they should pursue.

Classifying students into sections for instructional purposes.
Certain school subjects are required of all students or will be elected
by students on widely different levels of intelligence. If the students
taking such courses are assembled in heterogeneous groups for in-
structional purposes and the same assignments given to all, the
bright pupils will not find in the work a challenge worthy of their
capacity, while the dull ones will find the subject very difficult and in
many cases fail to pass it successfully. One method of dealing with
these individual differences is the classification of students into sec-
tions according to their capacity to learn.\(^8\) There is some scientific
evidence in favor of this method and it has attained considerable
popularity.

The usual procedure is to divide the students into sections largely
on the basis of their intelligence test scores. In any case where there
is reason to doubt the reliability of the test score the previous school
record and the judgment of former teachers should be given consid-
erable weight. After the division has been effected it should be generally
understood that transfers will be made whenever there is justifica-
tion. No student should be kept in a “slow” section when he has
demonstrated his ability to do the work of a higher section, nor should
one placed in a “fast” section be kept there unless he does the work
with reasonable success. It is not possible at the present time to say
that this method represents the best plan of providing for individual
differences. It is not unlikely that the most efficient procedure will
be found to be some combination of this with other methods.

Limitations of intelligence test scores for classification of stu-
dents. Individual scores yielded by group intelligence tests are sub-
ject to both constant and variable errors. The constant errors are
the same for all pupils of a given group but frequently are unexpected-
ly large. The variable errors, as the term implies, differ for different
pupils; for a few they are relatively large; for most they are reason-
ably small, but it is not generally possible to know in the case of an

\(^8\)This is only one method of providing for individual differences. There are others.
See Odell, Charles W. “Provisions for the individual differences of high school pupils.”
individual pupil concerning the magnitude of the variable errors of his score.

The limitations produced by the variable errors of measurement are indicated by the inaccuracy of classifications of pupils on the basis of test scores. Geyer\(^9\) gave the Otis Group Intelligence Test and the Illinois General Intelligence Scale to 120 pupils in a junior high-school grade of the Chicago Normal School. The scores yielded by the two tests give a coefficient of correlation of .642. The author states, however, that “if these 120 pupils had been divided on the basis of their intelligence scores of one test into four class sections of the ordinary size, 51 percent of them would have been in the wrong section according to the other test and 31.8 percent of them would have been out of place by an amount equal to half the range of such a class section.” Breed and Breslich\(^10\) in their experiment used the Chicago Group Intelligence Test, Form A, the Otis Group Intelligence Test, Advanced Examination, Form A, and the Terman Group Test of Mental Ability, Form A. In the case of a group of seventh-grade pupils, they state that if the pupils were classified into three sections according to the scores yielded by one test, 30 percent would be found out of place according to either one of the other tests. In the ninth grade the percent displaced was found to be slightly greater.

**Administration of an educational guidance program.** The responsibility for the administration of an educational guidance program should be assigned to some one person or at most to a small committee. In high schools enrolling several hundred children a trained counselor should direct this work. The principal, provided he has had appropriate training, may act as director, but usually the duties and responsibilities of the principalship will make it necessary to employ another person. In any case the chief counselor should have the assistance of a number of teachers in the high school and also in the eighth grade. In a six-three-three type of organization provision should be made for guidance in the sixth and seventh grades but probably the most important work will be done in the ninth grade.

Among the duties of the chief counselor are the following: (1) direction of the testing program, (2) training assistant counselors,

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(3) collecting vocational information to place at their disposal, (4) making them acquainted with the nature of the elective subjects offered in the high school, (5) establishing an efficient system of records, (6) reviewing difficult cases of guidance, and, finally, (7) studying the results of the educational guidance program for the purpose of improving it.

In most cases the best results will be obtained by giving the standardized tests in April or May. The information collected will then be available for use in guiding pupils the following September. For students who are entering high school other data which will be needed should be collected either during April and May or the summer vacation. If a monitory system of educational guidance prevails several meetings should be held with those pupils completing the eighth grade in order to acquaint them with the high school in general and the particular subjects which they will be eligible to undertake. As indicated previously, a visit to the high school, unless they are well acquainted with it, is advisable.

An adequate system of records is necessary. There should be an individual record blank for each student. This blank should provide space for the student’s name, his chronological age, nationality, the economic status of his parents, health, previous school experience, scores on standardized tests, educational plans, vocational ambitions, and the subjects which he would like to pursue in high school. The records should be kept up to date. A clerical force adequate for this purpose should be provided by the school. It is false economy to require this work to be done by the chief counselor or by teachers.

Many details of the actual procedure for dealing with students will depend upon the particular policy of educational guidance adopted. Usually, however, it will be necessary to arrange for individual conferences with pupils in addition to meetings with groups. In any case there should be definite provision made for carrying out the program of educational guidance decided upon. It should not be thought of as something extraneous, but should be considered a vital and integral part of the school’s activities.
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