

22413 11.0

DEPARTMENT OF THE INTERIOR  
BUREAU OF EDUCATION

BULLETIN, 1924, No. 15

THE DAILY SCHEDULE  
IN THE HIGH SCHOOL

By

J. B. EDMONSON  
UNIVERSITY OF MICHIGAN

WARREN E. BOW  
TEACHERS COLLEGE, DETROIT

IRVIN VAN TASSELL  
EASTERN HIGH SCHOOL, DETROIT



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1924

ADDITIONAL COPIES  
OF THIS PUBLICATION MAY BE PROCURED FROM  
THE SUPERINTENDENT OF DOCUMENTS  
GOVERNMENT PRINTING OFFICE  
WASHINGTON, D. C.  
AT  
5 CENTS PER COPY

303270

APR 23 1926

111  
AG  
1924  
15-23

## THE DAILY SCHEDULE IN THE HIGH SCHOOL.

### Chapter I.

#### SOME PROBLEMS INVOLVED IN SCHEDULE MAKING.

The making of the daily schedule of classes is a problem of no mean importance. In fact, the solution of this problem requires much knowledge and skill on the part of an administrator. It not infrequently happens that an administrator loses the confidence of his teachers through an attempt to substitute a "sketched" daily schedule for one that should have been worked out in accordance with the best principles of schedule making. In such a case the principal is wasting much of the time of his teaching staff. It is therefore vital that the principal understand the principles underlying the construction of the daily schedule of classes.

An investigation of the literature on schedule making reveals the fact that very little has been written on this subject. This lack of material may be due to the too common belief that there is no best procedure to follow in solving the problem. Or it may be due to an impression that schedule making is a comparatively easy task. Anyone, however, acquainted with the problems of high-school administration is fully aware that the problem of schedule making is as complicated as any administrative problem. Some of the difficulties involved in solving this problem are revealed in the following set of questions relating to issues involved in building the daily schedule of classes.

1. Does the principal secure adequate information at any early date out of which to construct the daily program?
2. What determines the subjects and number of sections offered in the schedule?
  - (a) Consolidation of subjects, requested by present and prospective students for their anticipated programs; or
  - (b) Based on the experience of previous semesters or years; or
  - (c) Arbitrary assignment of subjects and sections.
3. How do the pupils of your school make a selection of studies?
  - (a) Pupils make their own selections; or
  - (b) Selections made in consultation with principal, assistant principal, grade principal, house principal, department head, faculty advisor, and vocational counselor; or
  - (c) Selections made by the home or legal guardians of the pupil.

4. What provision is made for the lunch period of pupils and teachers?

- ✓ (a) Single session ends so that pupils may go home for lunch; or
- (b) Session is suspended for — hours at noon so that all pupils and teachers may lunch; or
- (c) Vacant periods are arranged so that pupils and teachers may lunch while the school session continues; or
- (d) They lunch at home with a time allowance of — minutes; or
- (e) They lunch at school with a time allowance of — minutes.

5. How are vacant periods in a pupils' program provided for?

- (a) No vacant periods in pupils' program; or
- (b) Study room; or
- (c) Library; or
- (d) No assigned place.

6. What is your method of avoiding conflicts?

- (a) By placing sections of the same subject in different periods; or
- (b) By placing subjects for pupils of a grade in different periods; or
- (c) By making out a program for each pupil and assigning classes before the new term.

7. How are subjects placed with reference to teacher assignment?

- (a) With no regard to teacher assignment; or
- (b) So that a teacher may have — sections of the same subject and course; or
- (c) So that vacant periods make a break in a teacher's program.

8. How are classes equalized?

- (a) By assigning to classes the pupils indicated by the individual schedules before the new term; or
- (b) By shifting from class to class during the first days of the term.

9. How is room assignment provided for?

- (a) So that a teacher may have one room for all his sections; or
- (b) So as to allot rooms best fitted for certain subjects to those subjects.

10. Do you take into account individual differences in pupils?

- (a) By assigning them to sections according to: Intelligence, school grade, standing in subject matter, judgment of teacher, or choice of career.

11. Have you a plan whereby the time of recitation for a section is changed from an early hour one day to a later hour on another day and vice versa?

Such questions if answered will reveal the extent to which a principal recognizes the existence of problems in the field of schedule making.

## Chapter II.

### HOW THE DAILY SCHEDULE IS MADE IN CERTAIN SCHOOLS.

The authors are indebted to certain high-school principals for giving detailed accounts of their actual procedure in schedule making. These were secured during the school year 1921-22. Among those submitted, the following are selected as offering many splendid suggestions to other principals:

Principal Thomas M. Dean, of the high school at Decatur, Ill., describes his system as follows:

In the Decatur high school we have 60 teachers. Sixty students help in the registration. The election of courses having been previously made, the students whose names begin with the letters A to M meet in the forenoon of the opening day of the first semester. Those whose names begin with the letter from N to Z come in the afternoon. Vice versa for the second semester.

The programs are made out with the advisers. About two-thirds of the superior teachers of the school are advisers, and each one is responsible for 30 to 50 students. The program is made out in consultation with the teacher, and then the student passes to the corridor where are seated 60 students representing the 60 teachers. In the forenoon, when a class roll is half filled, the student is sent back to the adviser where a new program is made out, so that he may take the subject in another class.

In the afternoon the second group comes and the second half of the class is filled. At the end of the day each teacher is given his class roll, with a fairly accurate class list. The few remaining adjustments which have to be made are made by the principal and the assistant principal. The adjustments that are necessary are caused by the unexpected students, or those coming in from outside of the system.

I may say this plan works very well and facilitates the making out of programs as far as the administration is concerned. If we were dealing with homogeneous grouping this might be a little more difficult but, on the other hand, if the advisers had the names of the students who are to be in the different classes the same plan would work.

Principal R. R. Cook, of the high school, Topeka, Kans., outlined his system as given below:

1. Pupil makes election of subject in consultation with faculty adviser by the end of the fourteenth week.
2. Office assistants check cards for mistakes, tabulate number of enrollments for each subject, and give totals to principal, fifteenth week.
3. From tabulations, the number of sections of each subject is determined by the principal and the program built by assigning subjects and sections to periods and teachers, sixteenth week. In assigning sections to periods, I avoid many conflicts in pupils' programs by first assigning subjects that continue

into the next semester to the same hour that they have been, then place new beginning subjects on the program at hours left vacant by subjects just completed.

4. Pupils' program cards, written by office assistants and principal, seventeenth to twentieth week, ready for use the first day of the new semester. One assistant tallies on large program sheet as others write pupils' programs, thus enabling them to equalize classes as they go. (Seldom necessary to do much equalizing of classes after this is done.)

5. We have five 60-minute periods with a 35-minute lunch period preceding the fourth class period for half the school and following the fourth period for the other half. The location of the fourth period determines the pupil's lunch time.

6. Incoming pupils' programs are made out at the same time as the others if they come from our own elementary schools. Such pupils make their election of subjects by the end of the fourteenth week in consultation with their school principals. Incoming pupils from outside the district meet the principal and complete their registration when they come.

7. Failures are disregarded until Thursday of the twentieth week. Adjustments of pupils' programs are made on Friday and Saturday.

8. On first day of new semester pupils make copy of new program in the rooms of their advisers, then go to classes for short periods. On the second day periods are held.

Principal E. P. Nutting, of the high school, Moline, Ill., gives the following method in high-school schedule making:

Our first step in making the program for the coming semester is to secure from all teachers a preliminary estimate of failures, number passing, and names dropped. A compilation of totals from these reports gives me the data needed for estimating number of sections in all subjects, except beginning electives. This report is secured at the beginning of the last month of the semester, and is a very accurate forecast.

Next I send out sheets of registration instructions to teachers of certain required subjects in each year of our course, and have them secure the registration of their students. In this way all the students of the school are reached, and all except the most irregular registrations are secured. The irregulars consult me, or my assistant, at the office as opportunity offers during the month.

By means of a large tally sheet the elective subjects are taken from the registration slips and accurate estimates of numbers in those classes secured.

I now build my general program, assigning sections to each teacher with due regard to number of preparations (usually 2), the spread of the load, preference in subjects, supplying study rooms, hall supervisors, etc.

The general program is now carefully checked over to see that the subjects of any one semester (1A, 2B, etc.) are so spread over our eight periods that conflicts and crowded sections are not likely to result.

We now transfer the subjects and names from the registration slips to the tops of student daily program cards, using abbreviations and letters (1B, 1A, etc.). These cards are then sorted into general groups 1A, 2B, 2A, etc. "Irregular" cards are saved out for special attention by the office force, but the regular student sees that the card studies are spread over the card, so as to make a good program for the student and that no sections or lunch periods are overcrowded.

This work is completed by the end of the semester, so that revisions can be made for unexpected failure, or for change of elections due to failure.

These completed program cards are now copied, and the copies issued to the students the morning of the first day of the new semester. Sections meet that morning on a 10-minute schedule to get assignments, and regular work begins the second day.

There are 28 high schools in New York City, all of which have a similar method of working out their programs, due to the fact that there is a director of high-school organization in that city who dictates the policy to be followed in such problems. The authors secured a statement of the methods of the Washington Irving, Boys' High of Brooklyn, and the Flushing High School. The system used in New York is as follows: The administrative background into which the program fits is a system of set mid-term and final examinations (or better known in New York as regents) and a policy of making students' schedules, not on the basis of probabilities but on the basis of actual attainment—that is to say, the final execution of the program is delayed until every student's final rating in each subject is made and recorded.

However, the preparatory steps of creating the school programs are begun as early as the last week in April. The chairman of the program committee obtains figures showing total registration in each grade of each subject. On the basis of past performances, the probable registration for the succeeding term is calculated; division by the normal size of classes in each subject determines the number of sections.

Then the actual classes are determined by name in accordance with a definite numbering system, so arranged that physical training, around which the numbers rotate, is graded and is left unchanged throughout. Of course, at this point, mention need be made of the necessity of so adjusting the period numbers that every student program becomes possible. This problem is difficult where single classes are to be found.

The information as to the number of sections is then placed on a distribution sheet for each subject and given to the chairman of each department. He proceeds to distribute the classes to his teachers. The sheet is returned to the program committee and with it the chairman proceeds to plot the master program. This master schedule is the largest single item of program making. It plans every teacher schedule, subject schedule, and room schedule. It represents the entire school in every detail of its curricular activity.

All the information on the master program must be translated into a state of usefulness and intelligibility for the class officers and students, upon whom the duty devolves of actually forming the outlines of the student programs.

On the Tuesday following the week of examination, (regent's week) every student is given his report card, showing his final standing.

He then records on what is called "subject section cards" his choice of subjects for the next term, and by definite instructions of class officers under supervision of program committee the student also records the appropriate period numbers. All of this is checked by the class officer with permanent record sheets.

The cards are then turned over to the program committee, who proceed to assign the definite classes to be attended. This is done by a plan of period table committees of two men each, attended by a sorting and resorting of the cards by subjects, until every subject has been recorded. This work is completed by Friday of that week.

---

### Chapter III.

#### AN ACCOUNT OF SCHEDULE MAKING IN A DETROIT HIGH SCHOOL.

---

##### SUGGESTED SCHEDULE ROUTINE.

The plan outlined herewith has been used in the preparation of a general schedule for the Detroit Southwestern High School for five semesters. The use of this plan was brought about by crowded conditions, necessity for maximum teacher load, and the change from eight 45-minute periods to seven 60-minute periods with supervised study:

1. Pupils make their election of subjects in consultation with faculty adviser by the twelfth week. A blank is used divided in two by perforation. One-half has space for studies of the present semester, with a division at the bottom for the indication of subjects for the new semester with columns for periods and room numbers. The other half of the blank is the pupil's schedule form or class certificate. Having conferred with the faculty adviser, the pupil writes his proposed subjects on the blank and fills out a class card for each period of the school day, indicating thereon the subjects (gymnasium, study, or lunch, as the case may be). Each card contains data in the order as follows:

Name SMITH, JOHN.

Class ENGLISH I.

201.

The number indicates the pupil's home room. These cards are attached to the pupil's blank with a paper fastener. A pupil will hand to his adviser his blank with attached cards, and if the school session is one of seven periods there will be seven cards, one for each



of the following as a typical case: English, 2; algebra, 2; history, 2; shop, 2; gymnasium; lunch; study. If there are any subjects which do not meet five times a week more than one card is used to complete the period.

2. Home-room teachers tabulate and consolidate proposed subjects and send the same to office by the end of the fourteenth week.

3. From office a survey is made to ascertain the number of incoming pupils. Consolidation of tabulations for the school is made and the number of sections for each subject is determined. The general schedule is then laid out on a schedule frame. The frame is very similar to the so-called post-office filing frames. It contains openings or boxes large enough to receive class cards. Each period is represented by a horizontal row of openings, the first row being the first period, the second row the second period, and so on. (For compactness the arrangement may be reversed and the periods represented by vertical rows.) Under each opening a card is stuck giving subject and course number for the class to be represented.

4. Home-room teachers, at their convenience, using the general schedule frame, assign periods to the pupils' proposed subjects on the pupils' blanks. As each subject, study, or lunch is assigned, the proper class card is filed in the class box. Teachers are directed to keep sections even, if possible, and confer with the assistant principal in case difficulties are encountered. The assistant principal marks any section receiving its full number of cards closed and makes any changes if such are deemed necessary in the arrangement of the schedule. Room numbers may be indicated on the board so that they may be recorded on the pupil's schedule at this time. Home-room teachers are instructed not to assign sure failures but to use their judgment in doubtful cases. All this is completed by the end of the sixteenth week.

5. Teacher assignments are made by the end of the seventeenth week, and if room assignments have not been made they are also made at that time. It is best to make teacher and room assignments at the same time. It is the practice to assign teachers and rooms the seventeenth week because if there is any manipulation on the general schedule board periods only are affected. After teacher and room assignment, a copy of the general schedule by subjects, alphabetically arranged and showing period and room numbers, is given to each teacher. The home-room teacher usually has pupils transfer to the class certificate from the proposed subject division of the blank the subjects with assigned periods. The pupils then can copy from the general schedule the proper room number for each section.

6. Incoming pupils' schedules are made out the twentieth week.

7. Semester examinations terminate on the third day from the end of the semester. Teachers are required to hand to each home-room teacher a list of the failures in the group by 9 a. m. of the day next to the last day of the semester. Home-room teachers have that day to adjust failures. Late the same day, the teachers assemble and are given the class cards from the schedule frame so that each teacher has data for class lists.

8. Classes run one-half periods the first day of the new semester and on the second day full periods are held.

To summarize the steps:

Step 1. Pupil makes his election of subjects in consultation with faculty adviser by end of twelfth week.

Step 2. Home-room teachers tabulate and consolidate elections and send same to principal's office, fourteenth week.

Step 3. Survey of incoming pupils. From tabulations, the number of sections for each subject is determined and the program built by assigning subjects and sections to periods, fifteenth week.

Step 4. By a "pigeonhole" system (using the classification and a card with pupil's name and home room on it for each subject) pupils are assigned to classes, classes are equalized, and conflicts adjusted, sixteenth week.

Step 5. Teacher and room assignments are made on the program, seventeenth week.

Step 6. Room assignments are made on pupils' classification and the pupil's program is ready for his use the first day of the new semester.

Step 7. Incoming pupils' programs are made out the twentieth week.

Step 8. Failures are disregarded up to the end of the twentieth week, when adjustments are then made.

Step 9. Classes run on half-hour periods the first day of the new semester, and on the second day full 60-minute periods are held and continue throughout the semester.

## Chapter IV.

### AN ACCOUNT OF SCHEDULE MAKING IN A DETROIT INTERMEDIATE SCHOOL.

The method of schedule routine used in the Barbour Intermediate School of Detroit is workable where it is possible to divide the pupils into groups electing the same subjects. The Barbour plan may be divided into several quite distinct steps. The steps listed below are not necessarily carried out independently of each other:

Step 1. The school territory is surveyed to ascertain the number of entering pupils. This survey gathers information of three types—numbers, grades, and sex. This survey is made by studying the enrollment of the schools which contribute pupils to the intermediate school.

Step 2. The choice of school courses is ascertained from the pupils who will advance in the school—for instance, the eighth and ninth graders. The pupils' choices are made based on talks explaining courses, literature bearing on the subject, and parental advice. A separate card is made out for each pupil which contains his name, age, grade, and choice of courses. These cards are then sorted so as to place all pupils making the same choice of courses into the same general group.

Step 3. The general groups are divided into class groups, by the use of intelligence tests and teacher judgment. The groups are called 7B1, 7B2, 7B3, etc., where the 7 designates the grade, B the class, and the last number the section.

Step 4. The number of teachers needed for each of these activities is ascertained. Since each group, for example, has a social-science class each day, the number of social-science classes reciting during the day is equal to the number of groups in the school. And since, furthermore, each social-science teacher is expected to hear five classes per day, it is easy to calculate how many social-science teachers will be needed for this school. Likewise, the number of teachers needed in each of the other activities is calculated.

Step 5. A schedule board or form is made. This contains two distinct parts: the one part which shows the program of the pupil groups, the other the program of the teachers.

Step 6. Pupil groups are assigned to home rooms.

Step 7. Pupil groups are assigned to home-room teachers. So long as the pupil group is intact it is best to assign a given pupil group to the same home-room teacher each successive semester.

Step 8. Assignments are made to all groups first where two or more groups meet for the same activity. The activities at Barbour require such assignments as auditorium, health education, and lunch. This step is necessary because it seems wise to choose certain groups to mingle together in these activities.

Step 9. Taking one group at a time, the remaining classes are assigned. The classes are assigned to teachers in this same procedure. By assigning teachers as the program proceeds the situation of assigning a mathematics class to a group and having no mathematics teacher available at that particular hour is avoided. Furthermore, when all the assignments are made for pupils, the same will have been done for the teachers.

Step 10. The schedule should be as flexible as possible in order to overcome irregularities. Since there are no study halls, and the pupils have no vacant hours, this is not an easy task. This may be done in large measure, however, by schedule. For example, have a 7B history class each hour of the day, a 7B mathematic class each hour of the day, etc., for each of the grades.

Step 11. From the large school program the teachers make out individual pupil programs, all pupils in a given group having approximately the same program. If this work is completed before the first day in the new term, it will be possible for the school to open its full and operate a complete schedule on the first day of the term.

## Chapter V.

### A SUMMARY OF PRACTICES IN SCHEDULE MAKING.

The following questions are answered on the basis of the returns from 21 high schools, enrolling approximately 1,000 students each.

#### SCHOOLS REPORTING.

- Cicero, Ill., J. Sterling Morton High.
- Chicago, Ill., Joseph Medill High.
- Decatur, Ill., Decatur High.
- Denver, Colo., East Side Denver High.
- Des Moines, Iowa, North High.
- Detroit, Mich., Eastern High.
- Detroit, Mich., Southwestern High.
- Detroit, Mich., Barbour Intermediate.
- Fon du Lac, Wis., Fon du Lac High.
- Grand Rapids, Mich., Central High.
- Grand Rapids, Mich., South High.
- Grand Rapids, Mich., Union High.
- Highland Park, Mich., Highland Park High.
- Janesville, Wis., Janesville High.
- Kalamazoo, Mich., Central High.
- Kenilworth, Ill., New Trier Township High.
- Moline, Ill., Moline High.
- Muskegon, Mich., Muskegon High.
- Muskegon, Mich., Hackley Manual Training School.
- Rock Island, Ill., Rock Island High.
- St. Joseph, Mo., Central High.
- St. Louis, Mo., McKinley High.
- Toledo, Ohio, Woodward Technical High.
- Topeka, Kans., Topeka High.

*What administrative heads or others are responsible for the planning and making of the program?*

The following were reported responsible in the indicated cases:

**Ten schools—the principal.**

Seven schools—the principal, assistant principal, and department heads.

One school—the principal and assistant principal.

One school—the principal, assistant principal, and director of manual training.

One school—the principal and department heads.

One school—the principal and a committee of two teachers.

*At what time in the school calendar is the program prepared for the next semester, term, or year?*

One school reported 10 days before the end of the semester.

One school reported 1 to 5 weeks before the end of the semester.

One school reported 2 weeks before the end of the semester.

Four schools reported 5 weeks before the end of the semester.

Six schools reported 4 weeks before the end of the semester.

One school reported 4 to 5 weeks before the end of the semester.

One school reported 4 to 6 weeks before the end of the semester.

One school reported 6 weeks before the end of the semester.

One school reported 8 weeks before the end of the semester.

One school reported 8 weeks before the end of the first semester and 6 weeks before the end of the second semester or year.

One school reported 4 weeks before the end of the first semester and 3 weeks before the end of the year.

One school reported 4 weeks before the end of the first semester and 12 weeks before the end of the year.

One school reported 2 or 3 weeks before the end of the year.

*What determines the subjects and number of sections offered in the program?*

Fourteen schools reported that the subjects and number of sections offered were based on a consolidation of subjects requested by present and prospective students for their anticipated programs.

Five schools reported that offerings were based on the consolidation of requests and were also based on the experience of previous semesters or years.

One school reported that the offerings were based on the experience of previous semesters or years.

One school reported that a general program ran from semester to semester and that pupils conformed to it, but that the program was modified by the number of pupils electing any subject.

Four schools—faculty advisers.

One school—faculty adviser and approval from home.

*What provision is made for the lunch period of pupils?*

The following schools reported that the session was suspended at noon, so that all pupils and teachers might lunch. The time for lunch is indicated for each school: One school—25 minutes; 1 school—60 minutes; 1 school—80 minutes.

One school reported that the session was suspended for one-half hour while some lunched. For others vacant periods were arranged so that they might be at home, with a time allowance of 60 minutes.

The following schools reported that vacant periods were arranged so that pupils and teachers might lunch while the school session continued. The time allowance and place for lunch are indicated as follows:

Four schools—no time or place indicated.

One school—90 minutes (home); 45 minutes (school).

One school—45 or 90 minutes (home); 45 minutes (school).

One school—60 minutes (home); 30 minutes (school lunch room).

One school—35 or 60 minutes (home); 35 minutes (school).

One school—50 minutes (home); 25 minutes (school).

One school—40 minutes (home); 40 minutes (school).

One school—45 minutes (school).

Two schools—30 minutes (school cafeteria).

One school—25 minutes (school).

One school—60 minutes (home).

*How are vacant periods in a pupil's program provided for?*

The schools reported as follows: Fourteen schools—study room; 4 schools—study room or library; 1 school—no vacant periods; 1 school—library; 1 school—study room and rear seats in classrooms.

*What is your method of avoiding conflicts?*

One school did not report.

Seven schools reported methods (1) by placing sections of the same subject in different periods; (2) by placing subjects for pupils of a grade in different periods; (3) by making out a program for each pupil and assigning classes before the new term.

Four schools reported that they used the first and second means given above.

Five schools reported that they used the first means given above.

One school reported that the first and third means were used.

One school reported using the first and second means.

One school reported using the third means.

One school reported that as the program or schedule was made out first, pupils were not allowed to select conflicting subjects.

*How are subjects placed with reference to teacher assignment?*

One school did not answer.

One school reported that the wishes of the teachers were given consideration.

Two schools reported no reference to teacher assignment.

Three schools reported teacher assignment; that a teacher had two to five sections of the same subject and course.

Fourteen schools reported that reference was made so that vacant periods made a break in the teachers' schedules. Ten of the same

schools reported that the number of preparations for each teacher was considered.

*How are classes equalized?*

One school reported that classes were equalized by assigning pupils the first day of the new semester.

Sixteen schools reported that equalization was obtained by assigning to classes the pupils indicated by the programs before the new semester. Nine of the same schools reported that shifting from class to class, the first days of the semester, was used when necessary.

Four schools reported that classes were made equal in size by shifting from class to class during the first days of the semester.

*How is room assignment provided for?*

One school did not answer.

Four schools reported that assignments were made as far as possible so that a teacher might use the same room for all his classes.

One school reported an endeavor to keep teachers on the one floor.

Eight schools reported assignment of the same room to a teacher and the allotment of rooms best fitted for the respective subjects.

One school reported assignments according to the fitness of the rooms for the subjects.

Six schools reported endeavors to assign the same room for all a teacher's subjects, to keep teachers from moving from floor to floor, and to allot rooms best fitted for certain subjects.

*Do you take into account individual differences?*

One school reported that it did not take into account the individual differences of pupils but that it occasionally formed a special section for very slow pupils.

Twenty schools reported assigning according to difference as indicated below:

Two schools—intelligence, school grade, standing in subject matter, judgment of teachers, and choice of career.

Two schools—intelligence.

Three schools—intelligence and school grade.

One school—intelligence, school grade, and judgment of teachers.

One school—intelligence and standing in subject matter.

One school—intelligence, standing in subject matter, and judgment of teachers.

One school—intelligence and choice of career.

Three schools—intelligence and judgment of teachers.

One school—school grade.

One school—school grade, standing in subject matter, and choice of career.

One school—school grade and choice of career.

One school—school grade and judgment of teachers to some extent.

Two schools—judgment of teachers.

*To what extent or through what grades is the policy indicated in the above question followed?*

Five schools did not answer the question.

Ten schools indicated that the policy of grouping according to the intelligence was followed in certain subjects in the lower grades in most cases to a limited extent.

One school reported the policy in respect to intelligence was followed through the ninth, tenth, eleventh, and twelfth grades.

One school reported according to intelligence in the tenth and eleventh grades in English and mathematics.

One school reported according to intelligence in all subjects where there are four or more sections.

One school reported mental grouping in first year English and algebra. Freshmen may take modern languages and dull pupils may not begin Latin the first year.

One school reported grouping throughout the school life of the pupil according to school grade and choice of career.

One school reported grouping according to school grade throughout the school life of the pupil. This while not indicated is most likely also true in all the schools reporting.

*Have you a plan whereby the time of recitation for a section is changed from an early hour one day to a later hour on another day?*

All schools answered, "No."

*How can students be advised to best advantage?*

The first step in schedule making is to secure information from the pupils concerning their elections for the next semester. To secure dependable information on this point it is necessary that teachers and pupils and parents be given much information concerning courses, curricula, college entrance requirement, cultural and vocational values in courses, etc.

One of the authors devised the following material in order to give a summary of the information needed for an intelligent choice of subjects.

So many of the high-school subjects are elective that it behooves students to relate their elections to their vocational plans. In order to assist students in this planning, the following suggestions have been prepared:

1. In addition to our required units in English and mathematics, pupils interested in any field of engineering should include in their high-school course the following elective subjects: Algebra 2; solid geometry, manual training 1, 2; physiography; geometry 1, 2; chemistry; physics; and two years of a foreign language.

2. Students interested in medicine or dentistry should take these electives: Botany; chemistry; geometry 1, 2; physics 1; algebra 3; solid geometry and two years of Latin.

3. Students interested in forestry, agriculture, or horticulture should include these electives: Botany; physiography; chemistry; geometry 1, 2; physics; alg-



bra 3; solid geometry; one year of manual training and all the agricultural work.

4. Students interested in law, journalism, diplomatic service, or public life should take three units of history; geometry 1, 2; considerable work in the language and some of the commercial courses.

5. Girls preparing to teach in the rural schools or to enter one of the normal colleges should include botany; home economics; geometry 1, 2; physics and music.

6. Students with indefinite vocational plans are advised to include in their course before the senior year at least two years of a foreign language, one year of history, one year of science, and one year of the manual arts' work.

7. All of our courses are given part or full credit by the leading normals, colleges, and universities. However, if you plan to enter a particular school, get acquainted with their requirements at once and plan your course with the advice of the principal.

8. Very few universities, colleges, or normal schools will admit pupils who have not completed 15 units including three years of English, two years of a foreign language, algebra, plane geometry, and one year of laboratory science.

9. If you are planning to take a college course, you should read and reread this sentence taken from the instructions issued by the University of Michigan: "It is expected that the principal will recommend not every graduate, but only those whose ability, application, and scholarship are of such superior grade that the school is willing to stand sponsor for their success at the university.

This material has the advantage of being brief and concise and also that of raising the question of the value of the different school studies.

There are also numerous ways of aiding students in choosing their subjects of study as is shown by the following returns from 21 large high schools.

Two schools reported that pupils make their own selections.

Two other schools reported that pupils make their own selections to some extent and where choice is easy, that selections were made in consultation with the principal or assistant principal occasionally when the cases were difficult, that the pupils also consulted faculty advisers, and that to some extent selections were made by the home or legal guardians of the pupils.

The following schools reported that pupils made their selections in consultations with the indicated parties:

One school—principal, assistant principal, and grade principal.

One school—principal, assistant principal, faculty adviser, and home or legal guardian.

Two schools—principal and faculty adviser or home-room teacher.

One school—assistant principal.

One school—assistant principal and faculty adviser.

One school—assistant principal and home.

Two schools—house principal.

One school—grade principal, faculty adviser, vocational counselor and home.

One school—grade principal, faculty adviser, and home (sometimes).

One school—grade principal and faculty adviser.

Four schools—faculty advisers.

One school—faculty adviser and approval from home.

In the smaller systems the chief administrative officers of the high school, either the principal or the superintendent, must act as the principal adviser of the pupils. Of course, the teachers can assist and the parent's help should be sought even though it may be of little or no value. Some principals send an open letter to parents inclosing a copy of printed material relating to the work offered in the high school. This is an excellent practice, and is likely to pave the way for a better understanding of the high school by the parents.

## Chapter VI.

### ANNOTATED BIBLIOGRAPHY.

Byrne, Lee. A book on the high-school schedule. *Educational Administration and Supervision*, 7: 533-38, December, 1921.

Gives a review of Mr. Richardson's monograph. His suggested terminology is fitting. The writer discovered the lack of a common terminology among high-school administrators in making investigations for this paper. Mr. Byrne's terms, "general schedule" and "pupil's schedule," in place of "program of studies," of "program of classes," have been accepted in this writing. Mr. Byrne gives the following as essential for good schedule making: "(1) A general schedule providing all legitimate curriculum combinations or a maximum number of these statistically most in demand, (2) a perfect equalization of sections, (3) availability for immediate operation of all classes the first day of the term."

James, Alice M. Scientific program making. *School Review*, 25: 504-11, September, 1917.

An account of the procedure followed in the Central High School, of Grand Rapids, Mich.

Johnson, Franklin W. The schedule of recitations. *School Review*, 29: 216-28, March, 1921.

Advocates a committee of teachers to draw up a tally sheet showing the number of pupils electing each course for the next semester. This tally sheet would indicate the subjects and courses and numbers of divisions in each course to be offered. The schedule committee would have the assistance of session-room teachers or advisers.

Mr. Johnson recommends that the technical task of making the schedule be done by one person familiar with all the varying factors which enter into the problem. The following determining factors are mentioned: (1) Number of classrooms available; (2) available study-room space; (3) number of teachers and their adaptability to the classes to which they are assigned; (4) length and number of periods; (5) laboratory and shop periods; (6) classes meeting fewer than five times a week; (7) subjects with only one section; (8) factor of fatigue; and (9) assembly period.

Marsh, John. Making a high-school program. Educational Administration and Supervision, 6: 202-14, April, 1920.

This article gives the author's method, based on 15 years' experience in the English High School, Boston. His schedule provides for rotation of periods, with five periods of varying length.

Meler, A. G. Semester reorganization and program making in the Central High School of St. Paul, Minn. School Review, 26: 249-58, April, 1918.

A good description of the procedure followed in the Central High School of St. Paul, Minn.

Rasey, Lee C. A program arrangement for mental groups. School Review, p. 608-11, October, 1923.

An account of the practices followed in one school in solving some of the difficulties in schedule making arising from homogeneous grouping.

Richardson, M. W. Making a high-school program. New York, World Book Co., 1921.

Describes and details, in part, his methods used in the Girls' High School, of Boston. Mr. Richardson as headmaster has from all indications a homogeneous body of pupils as compared with the pupils of most of our metropolitan high schools.