



THE UNIVERSITY  
OF ILLINOIS  
LIBRARY

370  
I 16  
no. 54-59

~~Education~~

## UNIVERSITY LIBRARY

### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The person charging this material is responsible for its renewal or return to the library on or before the due date. The minimum fee for a lost item is **\$125.00**, **\$300.00** for bound journals.

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University. *Please note: self-stick notes may result in torn pages and lift some inks.*

Renew via the Telephone Center at 217-333-8400, 846-262-1510 (toll-free) or [circlib@uiuc.edu](mailto:circlib@uiuc.edu).


Renew online by choosing the **My Account** option at: <http://www.library.uiuc.edu/catalog/>

---

MAR 08 2006







Digitized by the Internet Archive  
in 2012 with funding from  
University of Illinois Urbana-Champaign

BULLETIN No. 59

---

BUREAU OF EDUCATIONAL RESEARCH  
COLLEGE OF EDUCATION

PROVISIONS FOR MENTALLY  
ATYPICAL PUPILS

By

CHARLES W. ODELL

Assistant Director, Bureau of Educational Research

PUBLISHED BY THE UNIVERSITY OF ILLINOIS, URBANA  
1931





## PREFACE

Under a system of mass instruction, especially when the classes are large, it is difficult for the teacher to give much attention to individual pupils. The assignments, questions, explanations, or other instructional procedures are planned for the average pupil. The conscientious teacher probably always has made some effort to "help" backward pupils, and since individual differences have been emphasized, several fairly well defined procedures have been devised to provide for the mentally superior child, as well as the one who is below average. The general types of adaptation of instruction to individual differences are well known, but in practice there are many variations. For this reason it has seemed desirable to inquire into the provisions for atypical pupils in the state of Illinois.

As the author indicates in the introductory chapter, the purpose of this bulletin is to present a description of current practices. Some of the provisions are probably more effective than others, but there is no attempt to effect a systematic evaluation. It is likely that no one plan would be most effective in all situations. If this hypothesis is true, a superintendent of principal should endeavor to devise a plan of providing for atypical pupils which will meet the needs of his school rather than to adopt a plan used with apparent success in some other school. This bulletin is published in the hope that it will stimulate interest in providing for mentally atypical pupils and that it will be of service in doing this.

WALTER S. MONROE,  
*Director*

June 27, 1931.



## TABLE OF CONTENTS

	PAGE
PREFACE . . . . .	3
CHAPTER I. INTRODUCTION . . . . .	7
CHAPTER II. HOMOGENEOUS GROUPING . . . . .	10
CHAPTER III. SPECIAL ROOMS AND TEACHERS . . . . .	28
CHAPTER IV. MISCELLANEOUS PROVISIONS . . . . .	39
CHAPTER V. GENERAL PROGRAMS TO PROVIDE FOR CHILDREN OF ATYPICAL MENTALITY . . . . .	49
CHAPTER VI. A BRIEF CONSIDERATION OF OBJECTIONS TO PRO- VISIONS FOR CHILDREN OF ATYPICAL MENTALITY . . . . .	59



# PROVISIONS FOR MENTALLY ATYPICAL PUPILS

## CHAPTER I

### INTRODUCTION

**Purpose.** It is the purpose of this bulletin to present in a non-statistical manner the results of a study of provisions for mentally superior and inferior pupils in a number of school systems in the State of Illinois and in addition to offer some suggestions along the same line. The first may be considered the major purpose; therefore the following discussion will give more attention to the description of what systems in the state are doing along this line than to the theoretical statement of what the writer or anyone else believes they should be doing. There will, however, be some more or less critical comments as to actual practices, some suggestions, and finally some discussion of certain objections advanced against some of the provisions frequently employed for this purpose.

**Systems from which data were obtained.** In order to ascertain what special provisions school systems in the State of Illinois are actually making for children of atypical mentality the writer addressed a letter of inquiry to about three hundred and seventy-five principals and superintendents. The systems represented included practically all of those in the state with enrolments of three hundred pupils or more except Chicago, and quite a number, selected at random, of those with smaller enrolments. Responses were received from 165 principals of township or community high schools and superintendents of elementary or elementary and high-school systems. One hundred and seven of these reported that their systems employ some one or more procedures that may definitely be considered special provisions for pupils of atypical mentality, whereas the remaining fifty-eight appear to have nothing of this sort. Some of the latter stated that teachers are encouraged to provide for individual differences among pupils, that supervised-study periods and other provisions are so employed, but since they appear to have no formal or specific provisions for this purpose, they have not been counted as among those answering affirmatively. Although the writer knows that some of the systems from which no replies were received are taking specific steps to provide for children of unusual mentality, it is probable that most of these are not doing much along this line. No tabulation of the responses was

made according to the size of the systems, but from the writer's inspection of them it was apparent that few elementary systems of less than five hundred pupils and high schools of less than three hundred are doing much along this line, whereas a large majority of both enrolling one thousand or more pupils are making some such provisions.

Although the 107 principals and superintendents described the provisions made by their systems in from one or two sentences up to several pages each, it seemed desirable to visit a number of them to secure a more intimate knowledge of what they are doing than was possible by correspondence. The writer, therefore, visited a number of these systems, selecting those which appeared to be doing the best work of this sort, which had something more or less different from most other systems, or which for some other reason it seemed desirable to include on the list. Those visited included ten combined elementary and high-school systems, seventeen township and community high schools, and seventeen systems composed of elementary schools only. About 40 per cent of those visited were within Cook County outside of Chicago, but the other 60 per cent were fairly well scattered over the northern two-thirds of the state extending as far south as Bridgeport and as far west as Rock Island and Moline. In size they ranged from systems enrolling somewhat more than three hundred up to one of over fourteen thousand pupils.

Of the elementary schools reporting some provisions for children of atypical mentality almost two-thirds have some form of so-called homogeneous grouping. This ranges from quite formal and complete schemes to very informal and temporary grouping. More than half of the elementary schools reported one or more special rooms of some variety or other or special teachers who go from room to room or building to building giving assistance to individuals or groups most in need of it. About one-fourth reported miscellaneous provisions of various types not connected with either homogeneous grouping or special rooms or teachers. Of the high schools about two-thirds have some form of grouping, and two-fifths, various other provisions. From these figures it appears that many of the elementary schools are making two or even more types of provisions for atypical children, but that provisions of this sort are not so common among the high schools.

**Plan of the remaining chapters.** The next three chapters of this bulletin will be devoted respectively to homogeneous grouping, special rooms and teachers, and miscellaneous provisions. In each the writer will endeavor to sketch briefly the different procedures followed by systems which replied to the inquiry. In doing so usually he will not

give complete descriptions of all the features found in single school systems but instead will mention together the various practices concerning a particular feature. In addition to accounts of actual practices there will be some comment thereon and some suggestions as to procedure. In Chapter V there will be somewhat more complete accounts of what is being done in a few systems selected as having the most complete programs of this sort or as being for some other reason unusually worthy of mention. This chapter will also contain a few general recommendations not particularly connected with one of the three types of provisions already dealt with. Finally, Chapter VI will present a number of the objections raised to homogeneous grouping, to special rooms, and to other provisions, and an attempt will be made to answer them.

## CHAPTER II

### HOMOGENEOUS GROUPING

**Introduction.** So-called homogeneous or ability grouping of pupils is more commonly employed in Illinois school systems than any other type of formal provisions for children of atypical mentality. Therefore it will be treated at greater length than any other of the plans to be discussed. Before proceeding to discuss it, however, the writer wishes to make two points. The first is that in using the term "homogeneous" he does not mean to imply that the groups to which it is applied are truly homogeneous in the strict sense of the word but merely that they are less heterogeneous than ordinary or complete single-grade groups. The word "homogeneous" is used in preference to some other because it seems to be more commonly employed in this connection than any other. A few writers have made a distinction between homogeneous grouping and ability grouping, but as most persons use the terms they are interchangeable. No distinction, therefore, will be made between the two in this bulletin.

Before beginning the discussion of particular points it seems well to recall that there are certain fundamental differences in the problems and conditions of homogeneous grouping in non-departmentalized elementary schools on the one hand and in departmentalized elementary and high schools on the other. These differences are due to the fact that in non-departmentalized schools a group of pupils almost always retains its integrity and unity in all or practically all subjects, remains in the same room, and is taught by the same teacher for the greater part of its time. Therefore it is usually dealt with as an integral and complete unit in a sense that is not true of a group of pupils in the same grade that carries different subjects with different teachers and in addition often does not remain in any one room for very much of its work. In the following discussion attention will be given to some differences between these two types of situations.

**The number of groups.** The common practice, in so far as any practice can be said to be common or typical of Illinois school systems in this respect, is to place pupils who are homogeneously grouped on three levels—upper, middle, and lower. In some cases there are only two levels, usually upper and lower, but sometimes upper and regular, or regular and lower. In a few systems the classification is carried considerably further than into three or even four groups. There are two ways in which this is done. One is a general classification into



three groups, each teacher ordinarily having a room full of pupils all in the same group, and then within each group a further division into several smaller and supposedly still more homogeneous groups. These latter groups are generally quite informal and their membership is shifted frequently, whenever the teacher in charge thinks best. The other way is to have as many levels as there are groups.

It is much more common in high schools and departmentalized upper grades than in non-departmentalized elementary schools to have more than three levels. When this is true there are usually as many levels as there are instructional groups or sections, the upper twenty-five, thirty, forty, or whatever the desired number may be, constituting the highest group; the next twenty-five or other number, the second group, and so on down.

In many systems the number of levels upon which the pupils are placed is not consistent throughout the system or even throughout a single building or grade but depends upon the judgment of the supervisors and teachers or upon the number of children in a given grade in one building. Thus, not infrequently the lower grades, in which there are more children, are divided into three sections each, and the upper, into two only, or in some buildings there are three sections of certain grades, whereas in others there are two, and perhaps in others, only one.

When there are three levels it is the usual practice that the number of pupils at each is about the same, or else that the number at the middle or average level is considerably larger than that at either of the others. Thus, for example, if there are four groups it is most likely that one is superior, two are average, and one is inferior. In some cases there are four, six, or even more middle groups to one at each extreme.

**Size of groups.** There is often considerable variety as to the size of sections as well as to the number. In some cases no groups are formed unless each is large enough to constitute a whole room full of pupils, whereas in others there may be two or sometimes even more sections in a room. The most extreme case of this found was one system which throughout the lower grades has three sections of each grade in each room, a condition due in part to the fact that there is only one teacher to each grade in each building. In case there are three sections of a grade and two teachers, the upper and lower sections are sometimes placed together under one teacher, and the average, under another. Sometimes the upper section and part of the average

section are under one teacher and the remainder of the average and the lower section are under the other.

In this connection it should be noted that the fraction of the pupils at each level at a given time does not indicate the fraction that actually finishes the complete course at that level. This is especially true when the variance is in rate, since many pupils can keep up with fast sections for a while but not permanently, and likewise many must go slowly for a while but can also make some average progress. One school system, for example, which has a triple-track system through the first five grades, finds that about 15 per cent of its pupils complete the five grades in four years, 50 per cent, in five, and 35 per cent, in six. In one rather large system in which the fast groups cover the eight years' work in seven, the middle groups, in eight, and the lower groups spend eight years on the work of the first six, the per cents of pupils in the three groups are respectively about twenty, fifty, and thirty.

**Times of grouping.** Ordinarily pupils are grouped or regrouped, as the case may be, at the end of the semester or year, whichever is the basis on which the school system is organized, in readiness for the beginning of the next semester or year, or else just at the beginning of a semester or year. Pupils entering the first grade and high-school freshmen, and, although rarely, those in other grades, are often not grouped immediately but at the end of four or six weeks or some other convenient period. In almost all systems there is some shifting of pupils, at irregular times or perhaps at frequent regular intervals, as it appears desirable.

**Grades covered by plan.** Not all systems with homogeneous grouping have it in all grades or even in the same grades year after year. One school system, for example, has the work of only the first five grades organized with different rates of progress; another, that of only the first four. In another system, grouping does not begin until the second grade and continues through the sixth; in still another it covers only Grades III to V and so on in others. Likewise it may exist in the non-departmentalized elementary grades and not in the departmentalized ones and high school, or vice versa.

In some systems that have no formal comprehensive plan of homogeneous grouping there is nevertheless a considerable amount of such grouping being employed. Teachers and principals in accordance with their own judgment organize groups to gain time and cover extra work or else to spend more than the normal time on a unit of work, or to cover only the minimum essentials. Groups thus formed usually remain together for a comparatively short period of time, rarely more

than two years and frequently less, by the end of which they have completed a given amount of work and have either gained or lost a grade, and are then put back into regular classes.

Very few high schools have homogeneous grouping in all or even nearly all of their classes. Homogeneous grouping is most common in English and mathematics, particularly in freshman work in both subjects. Likewise in other subjects there is more grouping of this sort in the lower than in the upper years, apparently partly because the number of pupils enrolled in them is larger and partly because those in the upper years constitute a more select group and have less need of classification. In schools in which the classification in the same subject runs through several years it is not uncommon to have three levels the first year and later to reduce the number to two.

**Bases of placement.** The bases upon which placement of pupils is determined are so many and so varied that it is difficult to say that any one is typical. Moreover, in some systems the method of grouping is not uniform even throughout the elementary school, but varies in different grades or in different buildings, being left more or less to the judgment of the teachers and of the supervisors in charge. Intelligence and achievement test scores, teachers' marks, teachers' opinions of intelligence and probable future success, estimates of health and of social development, previous failure, ratings of such qualities as ambition, enthusiasm, industry, interest, and study habits, and chronological age are among the factors being used for this purpose. Not only are these and others employed, but they are used in many different combinations and with various weights. Indeed, the per cent of systems that employ any single definite basis is very small. In addition to these more or less numerical bases other considerations sometimes enter in. For example, in one, no disciplinary cases, no pupils who are doing poor work because of absence or illness, and no others of this general type are allowed in the inferior sections.

Of all factors the first three of those named, intelligence and achievement test scores and school marks, are the most common, but scarcely any two systems of those studied make use of even these factors in just the same way. Some use the results of a single intelligence test alone, others, those from two intelligence tests. Some employ a general survey test of achievement, such as the Stanford Achievement Examination; others, especially in the primary grades, give tests in reading alone or in reading and arithmetic, or in several but not all subjects. If teachers' marks are employed, sometimes only those for the last semester or year are used, and sometimes those

for a longer period, perhaps including the whole school history of the child; in some instances those in one or more subjects are employed; in others, general averages based on all subjects are used. In cases where the grouping is not carried out until several weeks after the beginning of the semester or year, marks for that period of time are often an important, or even the only, basis. Sometimes the various factors employed are combined on a strictly mathematical basis into an average rating, whereas in other systems they are considered by principals, teachers, or whoever determines placement, and a decision is reached without mathematical exactitude.

Even when exactly the same tests are employed for the purpose of classification the scores are frequently used in quite different ways. For example, in one school system that bases classification on results from an intelligence test pupils with I.Q.'s above 115 may be placed in the superior sections and those with I.Q.'s below 85, in the inferior ones, whereas in another school system using the same test the critical points may be 110 and 90, and in still another, something else. In some systems there are no fixed critical points, but instead the upper 25 or  $33\frac{1}{3}$  per cent or some other fraction of the pupils in a given grade constitute the superior section and a similar, or sometimes a different, fraction of the lowest, the inferior section. Instead of a given fraction a set number may be used; thus the highest thirty-five pupils, for example, may constitute one section and the lowest twenty-five, another.

One rather large high school which has pupils sectioned in practically all of the academic subjects except foreign language has a plan that differs in one or two details from any other. The division into sections of which there are four in the freshman year and two or three in the other years is made at first on the basis of intelligence test scores and elementary-school marks with the grammar mark receiving double weight for English and the arithmetic mark receiving double weight for algebra. Moreover, in order to allow for differences in the general standards of marking in the six different elementary-school districts that send pupils to this high school each elementary mark is divided by the median for the district before being employed for classification purposes by the high school. Three or four times a semester the pupils take quite carefully constructed tests and are given letter ratings according to the results of these tests. Only a comparatively few are shifted into other sections, however, regardless of whether or not their letter ratings agree with the sections in which they already are placed. It is assumed that the original placement was well enough made to be accurate in most cases and that differences between it and the letter

ratings earned on the tests indicate differences between actual achievement and capacity to achieve.

Especially in high schools, but also to some extent in departmentalized upper grades, there is a tendency for a somewhat different basis of grouping to be employed from that common in non-departmentalized elementary schools. This difference consists in the fact that if achievement tests are used as the sole or partial basis of classification they are likely to test pupils in only one or more subjects supposed to be somewhat closely connected with the subjects in which pupils are to be grouped. For example, arithmetic test scores are employed in grouping pupils in algebra, language and grammar test scores, for grouping them in English and perhaps likewise in foreign language, and so on with other subjects. Despite this tendency, however, the most common achievement test basis for grouping high-school pupils at their entrance is probably the Stanford Achievement Test, given either at the completion of the year or semester before they enter high school or just when they do enter.

Several bases of placement are employed in high schools, but are rarely or never employed in elementary schools. One of these is vocational intentions. Schools that use this basis of placement endeavor to ascertain the vocations in which pupils are interested or for which they are best fitted and make use thereof in sectioning them in certain subjects. Usually such sectioning can hardly be said to be on the basis of general mental superiority or inferiority and so seems not to merit further discussion in this publication. In two or three high schools freshmen select certain subjects according to whether or not they intend to go to college, and it is assumed that those who choose foreign language and other college-entrance subjects are the more able. Therefore in the subjects carried by all pupils those who do intend to go to college are gathered together into one or more sections which are considered superior or perhaps superior and average, whereas those who do not begin the college-entrance course form other sections considered inferior or inferior and average. A very few high schools reported that they employ tests intended specifically for prognostic purposes, such as the Orleans Algebra Prognosis Test and the Luria-Orleans Modern Language Prognosis Test. When used these are more likely to be employed alone than in conjunction with other data, but in one school at least the results from them are combined with those from intelligence tests in determining placement.

There is considerable difference of practice as to when tests are given. Usually they are administered either at the beginning of the

semester or year for which the classification is to be made, or at the end of the previous semester or year. The latter is especially common in the case of eighth-grade graduates preparing to enter high school. In some cases they are given at other times of the year than these two.

**Differentiation of work at different levels.** A second point in which there is a great deal of difference between the procedures of various school systems is that of the work done by groups at the different levels. The two general bases of differentiation in the work of the groups is either that of the rate at which the work is covered or the amount and type of work done. Very few systems follow the practice of having all groups do just the same work at different rates, whereas most systems make some difference in the character of the work that the groups do. In quite a number, however, there is also a difference in the rate as well as in the character. If there is a plan of differentiation in rate covering all the elementary grades it is most frequently arranged so that the superior sections cover their work in one year less than do the average sections. In some cases where this is true the inferior sections use one more year, and very rarely two more, whereas in others no difference is made in the time but in the amount of work covered. In many systems there is not a single unified differentiation in rate running through the whole elementary-school course. Instead, a superior group may do three semesters' work in two, sometimes four in three, or rarely even two in one, after which it progresses at a normal rate for a while or else does not retain its organization as a special group longer. The same is frequently true of lower groups. Inferior pupils are placed in sections that spend three semesters covering the work of two or that otherwise go slowly, and afterward the groups either resume normal progress or are broken up.

There are several major plans of differentiating the work covered by groups at several levels. The most common is the provision of three courses, more or less formal, frequently referred to as the minimum-essentials course, the normal or average course, and the enriched course. Sometimes there are only two, the minimum and enriched. In a very few cases sections following these different courses use entirely different texts, but this is not usually true. Instead the courses are generally arranged chiefly by omitting material from the adopted texts or by supplementing them. In some cases the omissions and additions are such that the differences consist almost entirely in amount of work, whereas in others they are largely in type or character of work. For example, in one system visited the lower section of a second grade had barely finished one reader, the average section had finished this

same reader and another quite similar to it, and the upper section had completed these two and several other readers of the same type. On the other hand, in another system the average and upper sections had done somewhat more of the same type of reading than had the lower section but, in addition, the average section had devoted some time and the upper section a relatively large amount of time to dramatizing stories that they had read. In arithmetic the most usual difference is the omission of some of the more difficult topics and more drill and practice on what are supposedly the more important processes by the lower sections; the upper sections use the time saved from drill to cover some of the difficult topics just referred to and perhaps also to carry out group or individual projects involving the use of numerical operations.

As examples from the high-school level, two cases may be cited. One school which has superior, average, and inferior sections in fourth-year English differentiates the work by having the superior section take up advanced composition, which approaches introductory journalism, the weaker sections study chiefly grammar with some letter writing, and the average sections carry the ordinary work, which is mostly literature.

▼ One of the most outstanding examples of differentiation in the content of the work of a particular group was found in the case of an English group in a rather large high school. This group consisted of pupils who had failed the first semester of freshman English from two to four times and were apparently hopeless cases. When the group was gathered together it seemed totally uninterested and unresponsive. It was apparent that ordinary methods could hardly be expected to be successful with it. Therefore the teacher's first effort was to find anything at all that might be connected with English in which the pupils were interested. Unusual methods were employed. Mystery and magic was chosen as the first general topic and was introduced by the performance of tricks in class, by the solution of puzzles, by the discussion of mysterious pictures, and so forth. Gradually, as the interest of the pupils was awakened, English was introduced by making notebooks that dealt with topics having mystery in them, by the study of some of the writings of Houdini and of his life, and so forth. This was followed by a unit on fun and humor which centered around the study of Mark Twain's life and several of his works. Letter writing was next taken up and, following that, other topics that seemed of most interest and practical value.

Another plan of differentiating the work at different levels is that

instead of doing either more work of the same kind or even in the same subject, the middle and upper sections take up other kinds of activities, usually some that are ordinarily very little if at all included in school work. These frequently take the form of class projects in constructing such things as miniature farms or houses and stage scenery, individual projects, such as picture books and other books of various sorts, occasional trips and excursions to places of supposed educational interest and value, and so on. Sometimes in the upper grades superior pupils take up formal school subjects not carried by the others, but this is unusual unless departmental organization prevails. It is perhaps more common in high school than in elementary school for the enrichment of the work to consist in supplementary work rather different from that done by the lower sections than more work of a very similar type. In other words, the upper sections are given the opportunity to broaden out considerably in the scope of what they cover.

X A plan that sometimes exists in elementary schools, although much more frequently in high schools, is what is commonly referred to as the unit or contract plan. This is employed in various forms but all have one characteristic in common, the division of the work to be covered into a number of units with the provision that the pupils in each group cover as many of these units as they can cover satisfactorily. In some cases this differs very little from the three-course plan already mentioned, but in many cases the two are distinguished from each other by the fact that the unit plan prescribes no definite number of units to be completed, whereas the other does. Sometimes a definite number of units is set as a minimum with the expectation that the middle and upper sections and perhaps even the lower one too will finish them in time to do more.

It is not unusual for school systems with homogeneous grouping to differentiate rate in certain grades and amount of work in others in high school as well as in the elementary school. Thus one system has a triple-level plan, with three rates of progress through the first five grades and different courses for the last three. In another a few rather highly selected groups are allowed to gain a semester's or even a year's time, and, rarely, an inferior group takes extra time to cover a certain amount of work. In the main, however, all pupils, unless they are failed, progress at the normal rate and cover different amounts of work. In another the plan is that the highest group of pupils covers the work of the first four grades in three years, and apart from that the differences between the work of the groups consist in amount and



not in rate. Several differentiate in one way in their first six grades and in the other in their departmentalized seventh and eighth grades. Likewise in high school there may be different rates in some subjects and different courses in others.

There is somewhat more of a tendency in high school to vary the amount and type of work than to vary the rate, doubtless because of the fact that it is administratively more difficult to arrange for groups to proceed at different rates. Some high schools, however, allow superior sections to cover three semesters' work in algebra or some other subject in the freshman year. Still more rarely do high-school pupils proceed slowly and spend, for example, three semesters in covering one year's work, but this practice is occasionally found. Thus in one high school visited freshman algebra pupils are divided into sections, of which the first contained approximately the thirty ranking highest according to the basis of placement used, the next section, approximately the next thirty, and so on down. Each section covers the same work, that is, the regular first year's work in the subject, but it does so at its own speed. The fastest sections require at least a year in which to do this, whereas the slower ones may consume any greater amount of time up to two years. No assumption is made at the beginning as to how much time each section will take, but it is left to the judgment of the instructor to regulate it as seems best to suit the particular group.

In two or three of the high schools visited the old and familiar plan of limiting the number of subjects carried by inferior pupils to less than four and encouraging the superior pupils to take more than four is supplemented by a more or less careful division of the pupils into groups which should carry the different numbers of subjects. On the basis of intelligence test results and upper-grade marks pupils are advised how long they should plan to spend in high school. In one high school all that is done is to advise the weakest pupils to spend five years. In another the brightest are advised to plan to complete their high-school courses in three and a half years or, very rarely, in three, and the weaker, in four and a half or sometimes in five years.

**Designation of sections.** A relatively minor point on which considerable difference of practice exists is the terms by which the different groups are designated. This is sometimes done by letters of the alphabet, usually "A," "B," and "C" or "X," "Y," and "Z." Sometimes the terms "fast," "medium," and "slow" are employed, or "superior," "average," and "inferior." Rarely numbers, such as "1," "2," and "3," are found. One system uses Greek letters and another, the names of colors, those employed being "red," "white," and "blue."

In this case, as in several others, the designations were chosen for the purpose of avoiding in so far as possible any intimation as to the relative abilities of the different groups. Another method occasionally used for this same purpose is to employ irregular numbers or letters that in themselves give no clue. In most cases, however, there appears to be no particular attempt to conceal the levels of the various groups.

**Emphasis on differences.** In most systems the possibility of entering a higher group is held up to pupils in groups at the lower and average levels as a stimulus to better work. They are told that, although the original classification may have been made partially or entirely on some other basis, continued retention at a level depends upon the quantity and quality of school achievement and that if they do well enough they will be placed in a group at the next higher level. Likewise those in average and superior groups are told that unless they do well enough to deserve to remain there they will be dropped into a lower group. In a few systems, however, just the opposite point of view is taken: pupils are encouraged to do as good work as possible at their levels but not to strive to be transferred to a higher level nor to feel that they must be careful to avoid being changed to a lower one. In support of this it is argued that a very careful effort is made to place pupils where they belong and that although some are transferred when it appears that their placement is incorrect, yet it is better that pupils should not consider themselves in comparison with those at other levels.

**Assignment of teachers to groups.** There appear to be two chief plans of assigning teachers to homogeneous groups. In some cases the effort is made to assign teachers according to their apparent abilities, interests, or desires. Those who are most sympathetic and patient with pupils and who perhaps are most efficient in the handling of drill work are assigned to the lower sections. On the other hand, those of keenest intellect and broadest culture are assigned to the upper sections. In other systems the plan is to pass the different sections around so that all or at least most teachers in the course of a few semesters or years handle sections on all levels. This procedure is usually based on the argument that few of the teachers wish the inferior sections and most of them prefer the superior ones and that, therefore, the fairest thing to do is to pass them around. In some cases it is considered desirable that during any one given year or semester a teacher have pupils in only one of the groups, whereas others make it a point to assign all teachers at least two different groups.

**Adapting schedules to homogeneous grouping.** In almost all high schools and frequently in departmentalized elementary schools the

grouping of pupils differs in the different subjects. Thus those who compose the upper group in Latin, for example, do not compose it in English nor in algebra. This difference introduces a considerable difficulty in making schedules that provide the possibility of assigning pupils to those groups in each subject to which they seem to belong. In schools in which the number of sections is quite large this difficulty is minimized but in small schools in which there are only a few sections of each subject it is not at all easy to overcome. Most principals consider it impossible to arrange a schedule that will not interfere to some extent with homogeneous grouping which differs for the various subjects. Only a very few of those in charge of small schools are attempting to arrange schedules that present no interference whatsoever with grouping and in only one or two schools now enrolling less than a thousand pupils in either the departmentalized upper grades or in the high school, as the case may be, does this goal appear to be reached. In high schools in which pupils are classified in only a few subjects, perhaps English and mathematics, it is much easier to arrange schedules that will not interfere with the grouping, and this arrangement is more often found in them.

**Suggestions on homogeneous grouping.** In the opinion of the writer it is impossible to lay down in detail or even in more than a few very general features any plan of homogeneous grouping that can be considered best for all schools. Local conditions of many kinds play a part in determining the details of the most satisfactory plan for a particular school system. Nevertheless, there are a number of suggestions which the writer wishes to offer as being more or less generally applicable. He would not for a moment suggest that a school system which has a plan of homogeneous grouping that appears to be functioning efficiently but that differs in some point from these suggestions should hurriedly proceed to change it so as to conform with them. He would, however, suggest that if there are such differences, whether the particular plan is working efficiently or not, it would be well to consider the reasons for using it. In many cases the reasons will undoubtedly be found to be satisfactory, whereas in others they will probably not be so.

In the ordinary school situation, three levels, superior, average, and inferior, constitute the most desirable number. If there are only two it is usually necessary to divide the average pupils, placing the better of them with the superior ones and the lower with the inferior ones, which seems much less desirable than organizing a group that is distinctly average. In schools so small that a single teacher must handle all the groups within one period two groups are probably better

than three. When the number of pupils in the class or grade to be grouped is large enough to form more than three groups, as is often the case in large departmentalized upper-grade schools and high schools, there may well be as many levels as there are groups.

Experience seems to indicate that it is somewhat easier to teach superior pupils and somewhat harder to teach inferior pupils than those of average ability. This points to the conclusion that if the homogeneous groups constitute whole recitation sections those of superior pupils may well be somewhat larger than those of average pupils, and those of inferior pupils, somewhat smaller. Thus in a high school that has twenty-five, for example, as a standard size of class it is suggested that each superior group consist of twenty-eight or thirty pupils, and each inferior one, of only twenty or twenty-two. In elementary schools the standard size of class is usually larger, but about the same ratios should exist between the sizes of groups at the three levels.

The question often arises in non-departmentalized elementary schools whether homogeneous grouping shall prevail in only the more academic subjects or also in such subjects as music, art, manual training, home economics, physical education, and so forth. From the administrative standpoint it is frequently easier to handle homogeneous groups as whole units throughout all the work of the school than otherwise. If this is not the case, however, as when the groups are small enough that two or more may well be combined for the work given by a special teacher or given by the regular teacher, there seem to the writer to be no valid reasons why the grouping should be preserved in those subjects which have low correlations with the so-called book subjects. The ordinary subjects of this type include physical education, music, and art, and, perhaps to a somewhat lesser degree, handwriting, manual training, and home economics.

If, however, as is common in departmentalized elementary and high schools, the grouping differs in various subjects, there seems to be no good reason why groups should not be formed in the non-academic subjects as well as in the academic ones. Indeed, from one standpoint it is probably quite desirable that pupils who may, for example, be inferior in most of their academic work but possess greater ability or interest in some other type of work should become members of average or superior groups therein. Likewise, there are some advantages in having pupils who are superior in the academic subjects but not in others become members of average or inferior sections in the other subjects. This helps to prevent them from gaining a false idea that they are superior in every capacity or ability.

Because of the reasons just given as well as those for such grouping in general, there should, whenever it is practicable, be separate grouping for each subject rather than uniform grouping for all. There is probably less gained by such separate grouping in the primary grades than in the upper grades and less in the upper grades than in high school, but the writer believes it is worth while whenever possible. Furthermore, he knows of no valid reasons why homogeneous grouping should not extend throughout the whole elementary and high-school periods.

Perhaps the most difficult and important point on which to make a definite recommendation is the basis of placement. Various schools use quite different bases with apparently about equal success. Nevertheless some suggestions will be offered. For pupils just entering the elementary school concerning whom practically no previous information is available or indeed for those entering at any level concerning whom this is true, intelligence test scores are probably the best available data for the purpose. It is highly desirable that two good group tests, instead of only one, be used in such cases. If the scores on the two differ markedly it is likely that the higher one more nearly represents the capacity of the individual than the average. The reason is that a child is not likely to make a score that indicates ability much above his true ability unless he has had some previous coaching in the test or in some other way has received illegitimate aid, but, on the other hand, he may easily make a score considerably below his true ability because of the operation of intellectual, emotional, or physical factors. It is still better to give all pupils individual tests, but in actual school practice this is rarely practicable. It is, however, not beyond the scope of reason to expect that this will be done in the case of problem pupils or those for whom the group test results seem for any reason decidedly inadequate.

For pupils who have already spent some time in school a valid and reliable measure of their school achievement is probably the best single basis of prediction. In most cases this is better obtained by using standardized tests than by teachers' marks. However, not only the results from standardized achievement tests, but also those from intelligence tests, teachers' marks, ratings of pupils' health, interest, ambition, and so forth, and any other data that bear on the question, should be considered. Here also, as in the case of the two group intelligence tests, it is best not merely to secure a mathematical average of some sort or other and then let placement be absolutely determined by it, but rather to consider intelligently the different items of infor-

mation about each pupil and on the basis of this consideration decide where he should be placed. In general, if either intelligence test results, achievement test results, or school marks indicate that a pupil may succeed in a superior section, he should be placed there. The same is, of course, true between an average and an inferior section.

If classification is being made for a single subject alone, achievement test scores and school marks in that one subject should receive considerably more weight than general survey test scores or general-average marks. (In many cases the latter need not be considered at all. In the case of high-school subjects not previously studied for which distinctly<sup>1</sup> good prognostic tests exist, these tests probably constitute the best single basis of classification, but it is still worth while to pay some attention to the other data mentioned above.

One of the most important questions that arise in connection with homogeneous grouping is whether the difference in the work of the groups shall consist in their rate of progress or in the amount and kind of work. It seems to the writer that it is well to have some of both. The stimulus of gaining time is one of the best available motives to secure a high quality of school work. Furthermore, as the amount of training for many vocations, especially for the so-called learned professions, is coming more and more to include several years beyond the bachelor's degree it seems quite desirable that for those who are mentally able this long time of preparation should be somewhat shortened. On the other hand, it is recognized that if very bright pupils are pushed ahead as rapidly as they can cover the same school work done by the average or inferior pupils, those who are greatly accelerated are liable to be social misfits in their relations with their school mates. The danger of this if they are only one year, or perhaps two years, accelerated is practically non-existent. Moreover, if inferior pupils are required to go so slowly that they can cover all of the work done by an average group the most inferior will never even reach the upper elementary grades and thus will lose certain values to be obtained from the subjects offered there and from social contacts with others of their approximate age. It is, therefore, recommended that in the ordinary elementary school three-track plan the superior groups should regularly cover the work of the eight grades in seven, the average groups, in eight, and the inferior groups, in nine. A few very exceptional pupils may do the work in six or very rarely in even fewer years, and a few who cannot get through in nine may be able to do so in ten

---

<sup>1</sup>The best prognostic tests available are probably those for predicting success in Latin, modern foreign language, algebra, and geometry.

or more. Along with this difference in rate there should be a difference in curriculum, that is, there should be what are commonly known as the minimum-essentials course, the average course, and the enriched course.

∪ In high school the same general policy is desirable, but in actual practice it is more difficult to provide for the gaining of time. It is usually more or less necessary that classes come out even, so to speak, at the end of the semester or year. This necessitates that fast groups gain at least a whole semester and slow groups lose at least one. Only decidedly superior groups can well cover three semesters' work in two, and very few groups of high-school pupils who can ever do the work are so inferior that they cannot do more than one semester's work in two. It is suggested, therefore, that whenever it is administratively practicable to arrange for superior groups to cover certain units of work in less than the ordinary time, this be done, and perhaps corresponding arrangements be made for slow progress groups. On the whole, however, differentiation of the amount and type of the work done should receive much more attention in high school than should that of rate.

The designations given the different groups are not very important, since, regardless of what they are, most pupils and others interested learn which are the superior and which the inferior groups. Nevertheless, it seems desirable to give them designations that do not unduly emphasize the fact of difference. For this reason such terms as "fast," "normal," and "slow" or "superior," "average," and "inferior" should be avoided and a system of letters, numbers, or words not significant in themselves should be used.

♥ In some elementary systems pupils at the different levels are kept markedly apart from those at other levels, whereas in others there is considerable intermingling in non-academic subjects, on the playground, in extra-curricular activities, and so forth. The writer recommends the latter practice as much preferable. Just as in ordinary life individuals tend to seek their own mental level in certain groups, and in other relationships come in contact with persons of all levels, so in school it seems highly desirable that they do both.

It is recommended that an effort be made to assign those teachers who appear to be best fitted for them to the different groups rather than to pass the groups around from teacher to teacher. As was suggested previously, teachers of inferior groups should possess unusual patience and sympathy, the ability to see pupils' difficulties and to know how to give help in overcoming them, and other similar qualities. On

the other hand, teachers of superior groups need themselves to be superior so that they will be fully as keen and alert mentally as are their pupils, and likewise they need a broad general culture, since superior students themselves acquire a broader culture than do others and tend to lose respect for a teacher who does not have it.

One rather minor point mentioned as a detail of procedure in several systems is that pupils are not placed in superior or inferior sections unless their parents consent. The writer believes that the principle back of this is absolutely wrong. It is, of course, desirable to secure the good will and cooperation of parents in this as in all matters, but school authorities rather than parents are in a position to make the best decisions as to where children should be placed. Parents are not required to consent before children are failed or promoted at the end of a regular year's work, although the question at issue is the same as that concerned in placing them in ability groups, that is, the group to which the children indicate that they belong in the school system.

Finally, one of the most important characteristics of any plan of homogeneous grouping is a high degree of flexibility. By this it is meant that it should be comparatively easy to transfer pupils from one level to another whenever it appears that they are misplaced. The chief prerequisite to insure that this is possible is that the schedule be so planned as to permit it, preferably by having at least one section on each level meeting at each period when there are any at all. This is frequently quite difficult to arrange in small schools, but in those large enough to have three or more teachers of the subjects in which pupils are grouped there should be little difficulty about making such arrangements.

It should perhaps be stated that a high degree of flexibility does not require that pupils should necessarily be transferred to other levels very soon after the first classification has been made. If a pupil whose achievement has been quite superior and who has therefore been placed in a superior section does poor work the first two or three weeks, it is very likely this is caused by some temporary condition and that if his case is properly diagnosed and the proper remedial measures taken he will do well enough to justify membership in the superior section. Likewise, if a pupil with a high intelligence test score does not do satisfactory work in a superior section the likely reason is that he is not interested, does not have the necessary prerequisites, or perhaps does not know how to study the subject properly. Every effort should be made, therefore, to help him to utilize his intelligence so that the application of it to the work in hand will result in a high level of



achievement. In either case, that of high previous achievement or high intelligence-test rating, however, a pupil whose present achievement is poor should not be continued indefinitely in an upper section; when it appears that he cannot be stimulated or helped to do work of sufficient merit to justify his retention there, he should be transferred to a lower section.

**School systems recommended for visiting.** In closing this chapter on homogeneous grouping it seems fitting to name a few school systems in Illinois as among those which school officials or others interested in homogeneous grouping might well visit. The writer does not wish to be understood as implying that the systems named below have the best homogeneous-grouping schemes in the state or even the best of those concerning which he secured information, but merely that in his judgment they are among the best. Furthermore, the fact that they are named does not imply that he approves in detail all that they are doing along this line, but merely that his opinion of their procedures as wholes is decidedly favorable. It perhaps should be added also that although he visited most of them in person his information concerning three was obtained by correspondence and from others. The schools recommended are as follows:

- †Batavia Elementary and High
- ‡Bridgeport Elementary
- ‡Canton Elementary and High
- ‡Deerfield-Shields Township High, Highland Park
- †Dundee-Carpentersville Elementary and Community High
- ‡Elmhurst Elementary
- ‡Joliet Elementary
- †Maine Township High, Des Plaines
- \*Oak Park Elementary
- †Paris Elementary
- †Proviso Township High, Maywood
- ‡Riverside-Brookfield Township High
- ‡Robinson Elementary

Those marked with asterisks differentiate the rate of progress, those with single daggers, the type and amount of work, and those marked with double daggers, the rate of progress and the amount of work.

## CHAPTER III

### SPECIAL ROOMS AND TEACHERS

**Introduction.** The provision of special rooms is the second of the two most common methods of providing for children of atypical mentality in the elementary schools. In high schools such rooms are never provided, although in a few cases special groups of pupils that more or less correspond to such rooms do exist. The discussion in this chapter, however, will be limited entirely to elementary schools.

The term "special room" has been chosen by the writer as being more inclusive than such expressions as "opportunity room," "ungraded room," "utility room," "remedial room," and so on, and therefore as being preferable to them. In the school systems visited the term "opportunity room" is most frequently employed, but all of the others mentioned, and some others also, are in use. Some of these terms are used in different systems with somewhat different meaning, especially in systems which have special rooms of more than one kind and use different names to denominate them.

**A general description.** The typical special or so-called opportunity room, in so far as any room can be said to be typical of Illinois school systems, is a room enrolling from fifteen to twenty pupils from several elementary grades who are having particular trouble with their work either because of mental inferiority, protracted absence, language difficulty, or some other reason. Usually these pupils are all drawn from the building in which the special room is located and remain in the room for all of their work or at least all except physical education and perhaps one or two other special subjects, and spend a period of from a month to a whole year there at a time. The children are usually chosen on the basis of poor school work and intelligence test results. The teacher has ordinarily had only a small amount of training in special methods of dealing with such children but has been chosen because of her interest or supposed ability along this line. The work done by the pupils usually includes somewhat more manual and construction work than is given in the regular grades.

**Number and source of pupils.** There are, of course, many variations in the organization and procedure of special rooms from that of the typical one described. In only a few cases are more than twenty pupils, thirty being the maximum found, allowed in a room which retains them all day, and in several systems the number is limited to fourteen or even to twelve. To some special rooms pupils from only

three grades are admitted, whereas into others those from four or any number up to eight are accepted. If there are two or more such rooms in the same building there is commonly a division on the basis of grade or, less often, of age. One room, for example, receives pupils from the upper grades and the other, from the lower, or one room admits children over twelve years of age and the other, those below that age.

A few systems have special rooms to which pupils come from all buildings in the city. Indeed, in two or three of these there is a whole opportunity or special school consisting of a number of rooms and enrolling all pupils from the whole system who seem to belong there, or for whom there are accommodations. Other systems have a mixed plan; that is, in some buildings there are special rooms that enroll pupils from other buildings, besides those in which they are located, and in others, special rooms which draw only from regular rooms in the same building. For example, one city with about twenty elementary-school buildings has four special rooms for children of low mentality in one building and one in each of six others, and all of these rooms except one draw pupils from two or more buildings. In the building in which there are four they are graded somewhat, there being one for lower-grade boys and girls, one for intermediate boys, one for upper-grade boys, and one for intermediate and upper-grade girls. Some school systems likewise have only partial provisions of this sort; that is, they provide special rooms for the children of some buildings and none for those of others, or only for those of some of the grades rather than for all. When the latter situation exists it is perhaps most common that no provision is made in such rooms for pupils from the primary grades. Thus in several systems no pupils are admitted to the special rooms from the first grade or from the first two grades; in others there is a minimum entrance age of nine, eleven, or some other number of years. Frequently there is a maximum also, usually fifteen or sixteen, with the provision that all pupils in the room who reach that age shall be transferred to the junior high school or departmentalized upper grades, or, very rarely, to the senior high school, at the beginning of the next year.

**Purpose.** The purposes of special rooms are rather clearly indicated by the types of children admitted to them. It was stated that one characteristic of the typical special room is that the pupils admitted to it were having unusual difficulty with their work for some reason or other. In some cases only pupils of low mental capacity are admitted. On the other hand, there are a very few which admit only those who are apparently of at least almost normal mentality, but for some more

or less temporary reason, such as absence or language handicap, are having difficulty in doing satisfactory work. In a few cases children who are disciplinary problems are sent to such rooms regardless of whether the trouble has arisen out of poor achievement or not. In at least two of the systems concerning which information was secured there are rooms of both kinds, that is, some for pupils of definitely inferior mentality and others for pupils who, if given special help, have a fair chance of going ahead with their classes or at least of losing comparatively small amounts of time. In a minority, though not an extremely small minority, of the special rooms some children of superior mental ability are to be found. These are almost always pupils who are being allowed to skip a grade and are placed in these rooms to receive help in doing so. Sometimes, however, they are pupils who seemingly cannot be interested in the work or for some other reason are doing unsatisfactory work. In no case was a whole room for such pupils reported, but in one system visited a rather large room was found in which there were two teachers and two groups of pupils, one enrolling pupils of inferior mentality and the other, pupils of superior mentality.

From another standpoint also there is considerable variation in the objective of those in charge of special rooms. Four different aims may be identified, with, of course, degrees and combinations thereof. One is to have the pupils cover as much of the regular grade work as they can; another is to develop in them the "habit of success"; a third is to teach them practical, especially manual, skills; the last, which is usually more implicit than explicit, is to relieve other teachers of the presence of troublesome pupils and to keep these pupils pleasantly busy.

In a few school systems the specific purpose and type of membership in special rooms changes from time to time, their general purpose being to meet the most pressing need apparent. Thus, in one elementary-school building which enrolls about one thousand pupils there has been a special room and teacher for a number of years, but there has been no uniform policy as to the type of group dealt with. Sometimes it is a primary group having unusual difficulty in getting started, sometimes, an upper-grade group of greatly retarded pupils, for one year at least, a group of pupils being helped to gain time, and at the time the writer visited the school, a group of about thirty rather heterogeneous boys who for a number of different reasons were considered problem cases. Their I.Q.'s ranged from quite low up to about 120, their ages, from nine to sixteen, and their achievement was at the level of Grades II to IV.

**Basis of selection.** The selection of pupils for special rooms naturally depends to a considerable extent upon which of the four aims just stated prevails. The selection is made by almost as many means as are used as bases for placing pupils in homogeneous grouping. Of these, however, three appear to be definitely more commonly employed than the others. These are intelligence test results, usually those from an individual test or from both individual and group tests; recommendations of teachers based upon poor achievement and other difficulties; and over-ageness. Achievement tests play a rather minor part but are sometimes employed. When intelligence test results are used for this purpose they are usually transmuted into intelligence quotients. In some systems it is considered that any pupil with an I.Q. below 70 is a fit subject for a special room, in others the critical point is 75, and in others, 80. In a few there is a lower limit—any pupil with an I.Q. below 50, for example, is considered to possess mentality of too low a degree to profit by such a room and is, if possible, placed in a special institution. If over-ageness or retardation is the criterion, two years is usually employed, although sometimes the number is three or four. In many systems pupils are not placed in such rooms without the consent of their parents. A few schools provide for complete clinical examinations of children whom they are considering placing in special rooms. These are sometimes carried out by members of their own staffs and sometimes through cooperation with such organizations as the Institute of Juvenile Research in Chicago.

**Work done by pupils.** This also is closely connected with the purpose. There is quite a wide range of difference in the work offered in special rooms. In a few such rooms the pupils follow the regular course of study with no apparent deviation except in rate, whereas at the other extreme are those in which comparatively little attention is paid to most of the academic subjects, although of course there is always some reading, arithmetic, language, spelling, and so forth, and a large amount of attention given to manual and creative work of various sorts. Frequently the older pupils at least have access to manual-training shops and kitchens and sewing rooms used by junior or senior high schools and often make considerable use of them. If not, there are likely to be a few benches in the special room itself or in some adjoining space; perhaps also there is a stove and even a sewing machine for the use of this room alone. The non-academic work, however, is by no means limited to formal manual training and domestic science. In many such rooms there is a great deal of individual and group construction involving many kinds of material, such

as paper, cardboard, cloth, wood, metal, and so forth. In some cases the object of this is apparently rather general, merely to keep the pupils happy and busy and perhaps to give them the habit of success, whereas in others it is quite definitely intended to develop skills that will be of practical value in their after-school life. These skills consist chiefly of the things that the ordinary man or woman in poor, or at best moderate, circumstances needs to do about the home. In some of these rooms much emphasis is put on such phases of training for citizenship as seem to come within the comprehension of the pupils.

**Instructional organization.** In most special rooms the pupils are organized into several, usually two, three, or four, groups for instructional purposes. These groups frequently vary for the different subjects and tend to be more informal than in regular rooms. In a few cases the rooms are handled almost entirely on the individual basis, and except for some of the special subjects and group projects there are no class groups called.

Although in the typical special room the pupils assigned thereto remain the whole day or practically all of it there are a number of systems which have rooms to which children go for shorter periods. In two or three cases this period is a half day, but usually it is a single recitation period. Thus the teacher of such a room has a different group of pupils each period and in the course of the day may have almost any number of different pupils, the numbers actually found ranging from about forty to about one hundred and sixty. In the first case no one group was larger than six; in the last some groups consisted of twenty pupils. The pupils sent to such rooms are rarely regarded as at all hopelessly inferior mentally but are rather those who, it is hoped, can, with some special help, advance at the regular rate of progress, be retarded only a small amount, or, in some cases, gain some time. It is common for such groups as those just mentioned to report to the special room for only a few weeks or months rather than for a whole semester or year and then to resume their places in the regular grades or rooms and allow other more needy groups to come to the special room.

The daily program at the time the writer visited one system is typical of such special rooms. According to it the teacher dealt with the following groups during the day:

- First-Grade Reading, Section I
- First-Grade Reading, Section II
- Second-Grade Numbers
- Sixth-Grade Arithmetic
- Fourth-Grade Arithmetic
- Seventh-Grade Arithmetic

Fifth-Grade Reading  
Third-Grade Reading  
Eighth-Grade Arithmetic  
Eighth-Grade English  
Sixth-Grade Arithmetic

**Special teachers.** In a few school systems there are special teachers provided rather than special rooms. In other words, instead of having teachers in charge of rooms to which the pupils are sent, the teachers go from room to room or from building to building giving special help to individuals or to groups. For example, one such teacher covers three elementary buildings with a total enrolment of over two thousand pupils and is usually giving help three times a week to each of about fifty children at any one time. Much of this help is given individually, though sometimes two or three children are instructed at once. She is also a trained psychologist and tests all children recommended to her care before giving them special instruction. In other cases such teachers go from building to building working with groups instead of with individuals. If there are no available classrooms, principals' offices, corridors, and other unoccupied rooms are employed for this purpose. In some cases the work is even done in the regular room, if possible, when there is no other recitation being carried on therein.

**Suggestions on special rooms.** It is perhaps somewhat easier to give general suggestions for special rooms than is true in the case of homogeneous grouping, but even here it is not at all desirable that there be uniformity in the various developments having to do with such rooms in different systems. The following suggestions are those that the writer considers more or less generally applicable.

From the standpoint of giving the desired help to pupils who are in special rooms the membership in such rooms in which the same pupils remain the whole day should not be allowed to exceed twenty. An even smaller number may be theoretically more desirable, especially if the average intelligence is unusually low, but it is doubtful if the high per capita expense of maintaining such a room for only twelve or fifteen pupils can be justified in view of the other demands upon the financial resources of most school systems. From the standpoint of relieving regular class teachers of pupils who require so much attention as to hinder seriously their regular work it is sometimes desirable in a particular practical situation to allow a membership that exceeds twenty.

The proportion of all pupils in a system that should be in such special rooms is of course largely dependent upon their exact purpose.

If they are planned to care for only those who are quite inferior mentally it is probable that from 1 to 2 per cent of the pupils in the average school system should be in them. If they are also intended to take care of pupils having difficulties due to absence and other temporary difficulties they should probably be prepared to accommodate at least 4 or 5 per cent. If they are designed to help superior children who are gaining time an additional 1 or 2 per cent should be included.

With regard to the question of whether it is best to have a single special room in each building or to have a group of two or more rooms in one building serving several buildings, a system which requires many of the pupils to come considerable distances, there are good arguments on both sides. It is undoubtedly undesirable to have elementary-school children come unusual distances to school unless transportation is provided, in which case, of course, the expense is increased. On the other hand, there are also undoubted advantages in gathering together enough children for several special rooms so that the membership of each room can be made somewhat less heterogeneous than is necessary when there is only one room for all such children. On the whole, therefore, the writer recommends that, whenever possible, groups of such rooms in a single building be formed to serve several other buildings as well and that transportation be provided. If transportation is not provided he would not recommend requiring the children in such rooms to come any longer distances to school than do other elementary children. He does not believe that it is wise to follow the practice of the few systems which devote whole buildings to pupils of inferior mentality. The objection is that this tends entirely too much to prevent such children from having contacts with normal and superior children and that as has already been pointed out in another connection such contacts have a social value that should not be lost.

Although the writer believes that special rooms are justified merely for the relief they offer to teachers of regular rooms by removing pupils who require unusual amounts of attention, he does not believe that this should be their only or even their chief purpose. Instead, those in charge should have very definitely in mind as an aim the preparation of pupils of inferior mentality to become as satisfactory members of the community as possible. In other words, none of their activities should be carried on merely for the sake of keeping them happy and busy but all should be of value in obtaining the objective just stated. The effort should be made, therefore, to determine those portions of the ordinary work of the schools and such other work



as it is practicable to give which these pupils can master sufficiently well to be worth their time and which at the same time will be most helpful to them after they have completed their school work. In general the work they should cover includes certain fundamentals in the traditional subjects, and certain habits, attitudes, and items of information of value for good citizenship, for home making, and for self-support.

It seems to the writer that the question as to which of the several purposes should be served by special rooms depends largely upon the size of the school or group of schools each serves. There should be, if possible, a special room in every elementary building in which there is at least one regular teacher for each grade. Assuming that the school population is of average mentality, such a room can hardly be justified in the smallest building included by the specification above, that is, one with only eight regular grade teachers, unless it includes in its membership not only the pupils of decidedly inferior mentality but also those having temporary difficulties and probably those being allowed to gain time as well. In a building or group of buildings served by a group of special rooms, in which there are enough pupils of definitely inferior mentality to constitute the membership of one room, it is better to collect them therein and to place those whose difficulties are only temporary in one or more other rooms. In addition, there may well be still another room for superior children who are being allowed to gain time. Although rooms of this latter type are quite rare the writer believes that they are desirable features of school systems.

In the selection of mentally inferior pupils to be placed in special rooms an individual intelligence test should be employed in addition to group tests. Indeed, it is still better to have a complete clinical examination, but if this cannot be done results from the Stanford Revision of the Binet-Simon Scale, or some other good individual intelligence test, may be used. This should, of course, be given by trained examiners, and every school system, no matter how small, should have at least one member of its staff prepared to administer such a test. If the system has no part-time or full-time tester by the title of school psychologist, school psychiatrist, or so forth, it is probably as good a plan as any to expect the teacher in charge of each special room to be well enough trained to give the tests. Pupils should be recommended to her by principals and teachers, either as a result of their poor achievement or as a result of scores on group tests, and after the individual test has been given decisions should be reached as to whether they should be placed in the room or not.

There are several agencies and organizations from which school systems that do not have their own trained child examiners may secure clinical examinations. Of these the Institute for Juvenile Research, 907 South Lincoln Street, Chicago, is probably the outstanding one. This provides psychiatric, medical, psychological, social, and other types of service, including the examination of children at the institute itself and also through its extension services elsewhere where there are groups of children in need of such examination. When children are referred to the institute itself or to one of its branches no charge is made for examinations. When a group of examiners spend some time in a particular community carrying on a clinic, the local school system or some other local organization is expected to pay travelling and hotel expenses. Under no circumstances are any charges made for the actual services of the staff of the institute. A somewhat detailed report of the activities of the institute may be found in its annual report.<sup>1</sup>

Teachers should recommend individual pupils and groups of pupils suffering from temporary difficulties, and the teacher in charge of the special room and the principal or the supervisor together should decide which groups are most in need of attention and which should, therefore, be admitted to the room. There are probably some groups of this sort that should spend practically their whole time for a few weeks in the special room, whereas others may well go there for a single period per day. In the case of pupils to be helped to gain time, it is desirable but not highly important that an individual intelligence test be given. If pupils, either by the high quality of their achievement or by high scores on group intelligence tests, indicate that they might well be allowed to gain time they should be considered by the teacher of the room and by the principal or supervisor for admission thereto, and as many of the most promising be admitted as can be conveniently accommodated.

It does not seem desirable to set any definite I.Q. as the critical point below which individuals shall be placed in special rooms for inferior pupils and above which they shall not. In general the lower the proportion of all pupils that can be accommodated in special rooms, the higher will be the I.Q. that determines whether they are admitted or not. Thus, if there is one special room to serve one thousand pupils, enough children of inferior mentality to fill it may be found by setting the critical point at 70, whereas if the room served only five hundred

---

<sup>1</sup>Adler, H. M. *Twelfth Annual Report of the Criminologist*, July 1, 1928, to June 30, 1929. Department of Public Welfare. Springfield, Illinois: Journal Printing Company, 1930. (Printed by authority of the State of Illinois). 104 p.

it may be set at 75 or some other higher point. In any instance all pupils with I.Q.'s below 70 should certainly be in special rooms, whereas those with I.Q.'s above 80 should not be there merely because of mental inferiority.

It is probably best to handle pupils enrolled in special rooms by a combination of group and individual methods. In such rooms, as elsewhere in the school system, it is more economical to combine pupils into groups for purposes of instruction. Furthermore, there are, to be obtained from group work, certain values that do not come from individual activity. On the other hand, it is impossible to help pupils in such rooms as much as may reasonably be expected unless individual methods are employed to some extent. This is perhaps especially true with regard to the non-fundamental subjects or portions of subjects. Particularly in these it is highly desirable that inferior pupils find something at which they can work with comparative success and that they develop their ability along this line.

It is highly desirable that all teachers of special rooms have appropriate training for this kind of work in addition to their general professional training. Unfortunately, there are not many institutions in which such training can be obtained, but enough exist that all such teachers should be required to have at least a whole summer's training of this sort. In addition to this the teachers placed in charge of such rooms should be patient and sympathetic, should be able to direct pupils in various types of manual and creative activities, and should not be easily worried or disturbed by discouraging and more or less unpleasant occurrences in the school room.

Whether or not children should remain permanently or practically permanently in special rooms or should be expected to return to regular rooms after some time in a special room depends on the reason for their being in the special rooms. If the reason is inferior mentality as represented by I.Q.'s below 75 or thereabouts it is probable that pupils should remain in special rooms permanently. An exception may be made to this in case there are some homogeneous sections organized to make very slow progress. If, on the other hand, pupils are in the special room because of temporary difficulties it should be expected that they return to their regular rooms as soon as these difficulties are overcome. Ordinarily this will probably be a period of comparatively few weeks, although in some cases it may require a semester or even a longer period of time. Superior pupils who are in special rooms to be helped in gaining time should likewise be returned to regular rooms as soon as they have received enough help to enable them to make the amount of gain planned.

The same arguments apply in the case of parents' consent being required to place children in special rooms as in the similar situation with regard to homogeneous grouping; therefore the conclusion is the same. Desirable though it is that parents see the wisdom of placing pupils in special rooms their consent should not be required to do so.

**School systems recommended for visiting.** For those who wish to visit or otherwise secure information concerning special rooms for children of inferior mentality in particular Illinois school systems it is suggested that among those worthy of attention are those in Bloomington, Cicero, East St. Louis, Elgin, Joliet, Peoria, and Springfield. For rooms whose chief purpose is to assist pupils in temporary difficulties rather than those of inferior mentality the special room at Lombard and the utility rooms in some of the buildings at Moline are suggested. Batavia, Canton, Hinsdale, and La Grange provide good examples of systems which have special teachers rather than rooms. The room in the Washington School at Decatur well illustrates the type in which the character of the group changes somewhat from time to time and in general is rather heterogeneous, especially with regard to mental ability.

## CHAPTER IV

### MISCELLANEOUS PROVISIONS

**Introduction.** There are about a dozen types of miscellaneous provisions for pupils of atypical mentality in various elementary and high schools in Illinois, of which only about half appear to merit treatment in this bulletin. Some of these have more or less but not necessary connection with plans of homogeneous grouping and with special rooms. Others may be thought of as adaptations or uses of administrative and of other provisions not intended primarily for this purpose. Since some of these are comparatively little used and others are so commonly employed and understood as to need little discussion they will be treated rather briefly in this chapter.

**Differentiated assignments.** This plan is one of the miscellaneous provisions most frequently found in Illinois school systems, especially in high schools. Although, as was mentioned in Chapter II, it is sometimes connected with homogeneous grouping, it is frequently used in regular class groups in which no such grouping at all has taken place. The essential feature of the plan is that the assignments made to the class are on several, usually three, levels. Sometimes pupils choose the levels they will undertake, with of course some help or advice in this matter from the teacher. In other cases all pupils attempt the assignment at the lowest level, some go on to the next, which is supplementary to it, and some of these in turn go on to the highest, which is again supplementary.

Probably the most common form in which the plan of differentiated assignments is used is the unit or contract plan, frequently called the Morrison Unit Plan because of the part played by Professor H. C. Morrison, of the School of Education of the University of Chicago, in developing and advocating it. This plan, with somewhat varying details, was found in use in a number of high schools and in a few elementary schools. Some of these varying details are given below.

As used by some of the teachers in one high school there are four levels. The lowest of these demands only mastery of fundamentals; the next calls for higher additional reading in the same or related fields plus written work of an assembling and tabulating nature; the next requires reading, evaluating, and comparing additional material; and the highest demands creative work. The assignments are given by units, and pupils must pass rigid examinations over these units before being allowed to go on to the next ones. Those who pass the exami-

nations over the lowest level only cannot earn marks above 80, those who pass the examinations over the next level, 85, the next, 90, and the highest, 95. This plan is typical of that used in several schools, except that there are usually not four levels but only three, or rarely two.

Another plan of differentiating assignments by the unit method is that in which the work is divided into units just as in the last plan, without, however, uniform assignments over these units, except at the lowest level. Pupils who complete the lowest or minimum-essentials level before the time for a given unit is up are given individual assignments which they do in order to receive higher marks or, in a very few cases, additional credit. When such plans are in operation it is usually required that whatever additional work is done be completed by the time set for the completion of the unit. For example, one history teacher visited had the work divided into seven units, each covering approximately five weeks' work; whatever work was undertaken by pupils who had completed the general assignment over a unit had to be completed before time to begin the next unit.

One point on which there is more or less difference of practice in the unit plan is the length and size of the units. The case just referred to, in which there are only seven units per year, has almost as long units as were reported by any school. One or two have only five or six in the year. At the other extreme are a few schools in which the units are so small that the average time for them is a week or less.

A few teachers use the differentiated assignment plan, but not the unit plan, by means of daily assignments on each of several levels. Thus, one Latin teacher visited maintains three informal groups, all meeting in the same room during the same class period, and makes three assignments every day. Group A, for example, might be held responsible for translating the easiest half of the sentences in the lesson; Group B, for a few of the harder ones; and Group C, for still more of the harder ones, while at the same time some of the easiest ones were omitted from the assignments to Groups B. and C. In this case also another rather unusual procedure is followed. The work is handled in a two-day cycle, on one day of which each of the three groups is seated together in the classroom and works mostly by itself, and on the other of which the three are seated as a single class and recite together with each, however, responsible only for its own assignment.

**Special promotion.** The practice of providing for superior pupils by giving them special promotions or allowing them to skip grades is such a time-honored and well-known practice that it scarcely needs

discussion. Some details as to how some schools facilitate it will, however, be given.

In connection with skipping a number of systems make some definite provision for helping pupils to cover the most important parts of the work in the grades skipped. In some the programs of the two teachers affected are so arranged that the pupils for a while carry the more important subjects with both teachers at once. Thus a pupil being promoted from the fourth grade into the sixth may carry fifth-grade arithmetic as well as sixth. Two systems have this plan so well worked out that the pupils carry all their major subjects in two semester grades at once and thus gain a semester by making what is called a "skip without a skip." One of these two does so with the traditional organization, that is, with pupils remaining under one teacher for all of their regular work, whereas the other which does so has Grades II to VIII organized upon the platoon plan. In the latter system Grades II A, III B, and so on, constitute one platoon and II B, III B, and so on, the other; thus pupils are enabled to carry all of the academic subjects in both platoons at once. To do this it is necessary for them to leave out most of the special work, such as physical education, music, art, and so on.

In some systems pupils receiving special promotions are given some individual help either by the teacher of the grade which they are entering or of that which they are skipping. As has already been stated in the last chapter, pupils who are gaining time are sometimes sent to special rooms for some help when so doing.

There are various provisions in Illinois school systems regulating how much time may be gained by special promotions and when special promoting may be done. Most systems organized on the semester basis do not allow more than one semester to be skipped at once, and practically all of those on the annual basis limit the skip to one year. Many systems require that after a semester or a year has been skipped the pupil remain a certain length of time, perhaps one or two years, with a regular class before being allowed to skip again. Some systems allow no pupils to skip enough to complete the eight years of the elementary school in less than seven, and a few set six as the limit. Those which place no limit allow few pupils to gain more than one year and practically none, more than two.

In some cases pupils are allowed to skip certain grades only. Thus in one system no pupil may skip the first grade or the eighth, in another no pupil above the sixth may skip, in still another no one above the fifth. Sometimes pupils are allowed to skip only alternate grades—

that is, they may skip the second, fourth, or sixth, but not any other, or they may skip the third, fifth, or seventh, and no other.

**Individual instruction and progress.** It is well known to educators that a number of school systems, of which that of Winnetka is undoubtedly the outstanding illustration in Illinois, have more or less individualized instruction and progress. None of those visited by the writer nor answering his letter of inquiry are among the few that do so. Partly because of this reason and partly because of the large amount of publicity which the Winnetka plan has received and the consequent familiarity of administrators, supervisors, and teachers with it, the writer will not include a discussion of the plan in this publication.

It should perhaps be mentioned here, however, that several of the school systems included in the study are making some use of individual instruction in special rooms, or elsewhere with small groups, although none of them have adopted individual instruction as a general policy. This use of it is frequently in connection with some other plan, such as that of differentiated assignments, for example, and is generally incidental thereto rather than adopted for its own sake.

**Pupil guidance.** Since the purpose of educational and vocational guidance is to adapt the work carried by pupils and their vocational choices to their capacities, interests, and characteristics, it follows that guidance is a means of providing for children of unusual mental ability. Since, however, educational and vocational guidance is much broader than that and constitutes an important part of school procedure in itself rather than a mere detail in connection with providing for atypical children, it, as well as individualized instruction, will not be considered at length here. A number of high schools and a few elementary schools in the state are taking serious and in many cases apparently effective steps to guide pupils in their choice of subjects. In so far as this guidance affects superior and inferior pupils especially, it consists largely in advising the superior ones to take more subjects and subjects that are supposedly rather abstract and academic in their nature, and inferior pupils to carry less work and that of a so-called practical nature. Thus in a number of schools superior pupils are advised to take all subjects required for college entrance, whereas inferior pupils are advised to omit foreign language and perhaps the usual high-school mathematics.

Apart from more or less formal provisions for guidance there is informal guidance in connection with practically all differentiated assignment plans. Rarely are pupils left to their own individual initiative to decide the levels at which they will attempt to work. They are



practically never compelled to try the work on levels which they do not wish to attempt but, on the other hand, if they appear to be going to choose levels that are definitely too hard or too easy for them they are usually advised to make a different selection.

**Special periods.** Although the plan of providing special periods for helping atypical children is in a sense similar to that of having special rooms, it seems well to consider the plan separately. This provision is most often found in high or departmentalized upper-grade schools. The usual arrangement is that such periods are provided before regular recitations begin in the morning or after they close in the afternoon. In a few cases when the first or last period of the day is used for this purpose it is not a period before or after the regular school day but a part of it, and pupils not receiving special help spend the time in regular study halls or assembly rooms. In some schools the special period is not at the first or last of the school day but is inserted sometime during the day and those pupils not receiving special help then are at study or perhaps in some of the special subjects. One or two schools use a portion of the noon period for this purpose.

In some cases these periods differ little from mere compulsory study halls for those doing poor work; in others they are practically equivalent to additional class recitations in the particular subjects; and in others they are almost anywhere between these two extremes. Usually pupils who are below a given mark, which may be the failing point or may be somewhat above it, are required to attend, although attendance is sometimes voluntary and sometimes some of the better pupils come as well as the poorer ones. One school, for example, requires that all pupils doing very poor work in English come two extra periods and those who are less inferior, one extra period each week. During this time they are given special help over the fundamentals by the regular English teacher. In some cases pupils who have been absent for a specified time are required to attend special help periods until they have made up the work missed during absence. In some cases attendance at special periods is practically permanent, that is, the weak pupils attend them regularly, whereas in others it is temporary, pupils being required to come only for a few days or perhaps even a day at a time.

Several schools endeavor to handle such special periods so that they will in no way be felt as an added imposition or stigma. For example, some of them provide an official school day of nine periods and allow those whose work is above a certain level to be excused the

last period rather than provide an eight period day and require those below the same point to remain an additional period.

Perhaps reference should be made to supervised study under this head of special periods. The reason is that in some instances the supervised-study period is devoted primarily to helping a comparative few of the most needy pupils rather than in giving assistance to the class as a whole. It goes without saying that the provision of supervised-study periods, whether the emphasis is that just mentioned or not, facilitates providing for pupils of atypical mentality by offering a better chance for teachers to assist them with their work.

**Coaching by superior pupils.** One plan found in some schools is that of having superior pupils assist or coach backward ones. In the few schools that employ this method it is not used throughout the system but only in certain grades or subjects. It is carried out in several ways. In one system elementary-school pupils are divided into groups of six or seven with a superior pupil in charge of each group. These groups are quite informal, and the pupils work in them only a portion of the day and in certain subjects. In a high-school Latin class visited the groups are much smaller, each consisting of one of the better pupils and one or two of the poorer ones. The two or three pupils in each group sit together and carry on what may be considered a miniature class recitation with the better pupil acting as teacher. When visited, ten or twelve groups were reciting in the same room at the same time, but the pupils had become so used to the method that they did not seem to disturb one another. The teacher went from group to group giving help as it seemed to be needed.

**Other provisions.** Other means by which schools provide for children of atypical mentality seem scarcely worth discussing here. This does not mean that they are of no merit but rather either that, as is the case with one or two already mentioned in other connections, providing for children of unusual mentality is not their main purpose but only an incidental result, or that there are scarcely enough details about them to merit discussion. These include such administrative and other provisions as more frequent promotion periods, semi-annual rather than annual, and in a very few cases even more frequent; special courses or subjects offered during the second semester by high schools organized on the annual basis chiefly for the benefit of those who have failed or those who may well carry extra subjects; regulation of the amount of extra-curricular participation by individuals according to their apparent ability; the provision of summer work by

which pupils who have failed may have the opportunity of making up their failures and others, the opportunity of doing extra work.<sup>1</sup>

**Suggestions concerning miscellaneous provisions.** The writer is very much in favor of the use of differentiated assignments regardless of whether there is also homogeneous grouping or not, and believes that the so-called unit or contract plan is probably the most workable of those used. Therefore he recommends that this plan be adopted, especially in high school. In using this plan it is probably best to require all pupils in the class to cover the original or minimum-essentials assignment on a unit. As to the additional work, he would suggest that some of it be uniform for all those who attempt to do it, but that some of the supplementary assignments be adapted to individual interests and thus not be uniform for all members of the class. In most cases each unit of work should cover a period of at least two or three weeks; in some subjects at least five or six weeks are not too many.

The amount of special promotion or skipping advisable in a school system depends to a considerable extent upon other provisions for taking care of unusual pupils. If homogeneous grouping is in effect, particularly if there is a difference in the rate of progress, comparatively few special promotions should be necessary. In any system that does not have absolutely individual progress, however, there are some pupils who cannot be properly taken care of unless they are allowed to skip one or more grades. In a normal school population the proportion of pupils who may well be allowed to gain some time during the eight years of the elementary school is probably about 20 per cent; hence the difference between this fraction and the fraction who gain time through membership in accelerated groups represents the approximate per cent that should at some time during their elementary-school career receive special promotion.

When pupils are given special promotion it is quite desirable that arrangements be made for them to carry some of the work in two grades at once, to report to a special room or teacher, or in some other way to receive some help on the work they are skipping. Furthermore, the courses of study in most systems are such that there are certain grades which it is easier to skip than others, and this should be taken account of in giving special promotions. On the whole, it is probably better to allow pupils to skip a primary or an intermediate grade than

---

<sup>1</sup>Summer work in Illinois elementary and high schools has been discussed and advocated by the writer in the following bulletin:

Odell, C. W. "Summer Work in Public Schools," *University of Illinois Bulletin*, Vol. 27, No. 34, Bureau of Educational Research Bulletin No. 49. Urbana, Illinois: University of Illinois, 1930. 42 p.

an upper grade. The amount skipped at one time should not be more than the smallest possible unit of work, usually either a semester or a year, and the total amount in the elementary school should not exceed one year except for quite a small per cent of pupils; for practically none should it exceed two years.

As a universal procedure the plan of individual instruction and progress does not seem desirable. On the other hand, the writer is in agreement with those who maintain that there are certain subjects or portions of subjects, almost entirely in the first six grades, which can be taught more efficiently by the individual method and in which such practice involves no loss of valuable outcomes through the absence of group work and contact. There are, however, other subjects and portions of subjects in which the interchange of thought and other group activity is an important factor in securing the desired outcomes. Therefore what should properly be called a modified individual method or a combination of the individual and the group methods is a desirable form of procedure.

As to the guidance of pupils, it goes practically without saying that they should receive as helpful advice as possible and that their work should be adapted to their individual aptitudes and interests. It is, however, very easy to be too dogmatic in giving such advice to pupils. It should always be borne in mind that even the most expert advice is not infallible, since the data upon which it must be based are not thoroughly valid and reliable. Furthermore, it should be remembered that, on the whole, negative advice is generally safer than positive advice; that is, it is usually easier to find fairly valid and reliable evidence that a pupil will not do well in some subjects or courses than to find equally good evidence that he will do well in others.

The provision of special periods for helping children is a very desirable one that the writer believes should exist in every school. The arrangements for these periods should be such that they are not felt in any sense as burdens or penalties but rather as opportunities. It is suggested, therefore, that at least some such periods be scheduled at times when all pupils are expected to be in school. Those not receiving the special help can spend the time in ordinary study. In addition to this, however, it is frequently well to have other periods, either before school in the morning or after school in the afternoon, for the same purpose. During the special periods help should be given not only to pupils who are having difficulty with their work but also to those who are skipping a grade, or doing additional work. In other words,

the special periods should be considered as times at which all pupils who for any reason need special help should receive it.

The writer does not believe that a formal plan of coaching inferior pupils by superior pupils is desirable. On the other hand, some informal help of this sort can well be given. The chief danger is that the superior pupils will not be sympathetic with the difficulties of the inferior ones and will not have enough skill as instructors to give them the needed help, but instead will tend to do the the work for them and perhaps fail to see many of their difficulties.

As to the other miscellaneous provisions mentioned, there is some value in all. The writer believes that summer work should be offered, that participation in extra-curricular activities should be adapted to individual ability, that in fairly large schools there should be semi-annual rather than annual promotions, and that in high schools organized on the annual basis special second-semester courses should be given. In these provisions, as well as in all others, sight should not be lost of the fact that superior pupils as well as inferior pupils are to be provided for.

**School systems recommended for visiting.** The school systems which the writer recommends as worth visiting for the study of the provisions dealt with in this chapter are as follows:

Differentiated assignments

- Argo Community High
- Elmhurst-York Community High
- La Salle-Peru Township High
- Lincoln Community High
- Mt. Pulaski Township High
- Princeton Township High

Special promotion

- Bloomington Elementary
- Canton Elementary
- Dundee-Carpentersville Elementary
- Silvis Elementary

Individual instruction and progress

- Argo Community High (bookkeeping and typewriting)
- Des Plaines Elementary (upper-grade reading)
- Winnetka Elementary

Guidance

- La Salle-Peru Township High
- New Trier Township High, Kenilworth
- Paris High
- Thornton Township High, Harvey

Special periods

- Argo Community High
- Bloomington Elementary

Bridgeport Township High  
Evanston Township High  
Fairfield Community High  
Forest Park Elementary  
Lincoln Elementary  
Lincoln Community High  
Princeton Township High  
Proviso Township High, Maywood  
Riverside-Brookfield Township High  
Coaching by superior pupils  
Dundee-Carpentersville Community High (Latin)  
La Salle-Peru Township High (mathematics)

## CHAPTER V

### GENERAL PROGRAMS TO PROVIDE FOR CHILDREN OF ATYPICAL MENTALITY

**Introduction.** The last three chapters have been devoted to separate discussions of certain methods of providing for children of atypical mentality. A discussion of the whole question, however, is not complete unless some consideration is given to these different provisions comparatively and jointly. The first part of this chapter will, therefore, contain a short discussion of this sort. Following that there will be fairly complete descriptions of what five systems are doing along this line so that a comprehensive idea of their entire programs will be given.

**A desirable point of view.** For the consideration of what provisions are to be made for children of atypical mentality a general point of view is important. The writer, therefore, wishes to suggest what he considers two important elements in such a point of view. The first is that any organization or administrative provision of this sort should be regarded merely as providing better opportunities for effective instruction and learning and not as something that in itself will increase the efficiency of a school system. It is probably true that some of the provisions mentioned in previous chapters do merely of themselves bring about some increase in efficiency. For example, it seems reasonable that by collecting pupils who present the most difficult problems in special rooms the efficiency of the work in the regular rooms will be automatically increased. In the main, however, this is not true to any considerable degree. Therefore when any type of provision is inaugurated it should be accompanied by a careful study of what use is to be made of it. For example, homogeneous grouping should not be introduced unless it is accompanied by the provision of different rates of progress or different courses of study, nor should special rooms be introduced unless the instruction therein is to be better adapted to the pupils placed therein than is that in regular rooms.

The second element referred to has to do with the attitude of the teaching staff. There is some evidence, although it is not very objective or very conclusive, that teachers do better by the use of inferior methods and devices in which they believe, and therefore, about which they are enthusiastic, than with superior ones toward which their attitude is definitely hostile or even only neutral. It is, therefore, important that before any new provisions for atypical children are

introduced the teaching corps should be brought to understand them and to feel at least somewhat favorable toward them. Preparation for their introduction should be made by disseminating information concerning the contemplated provisions among the teachers and discussing them in teachers' meetings. Indeed, instead of the adoption of a plan by the board of education or by the superintendent or principal, it is better that the plan be allowed to grow, or at least to appear to grow, more or less out of study and discussion by the teachers themselves. A skillful superintendent or principal can with due preparation frequently lead his teaching staff to accept his ideas in such a way that they feel that the ideas are largely their own. Although it may delay the inauguration of the contemplated plan for a semester or year and involve a considerable amount of extra labor the writer believes very strongly that the results are worth the cost.

**Suggestions for a general program.** Most of the chief provisions dealt with in Chapters II to IV may exist at the same time in the same system. They are not mutually contradictory and exclusive, but in many cases they tend to be definitely interrelated and supplementary to one another. The writer believes, therefore, that a complete program of this sort should include a number of them. The chief points of such a program as he believes it should be are in general as follows. There should be a three-track plan of homogeneous grouping with details such as were set forth near the end of Chapter II. Accompanying this should be special rooms, preferably some for children of inferior mentality, others for those having temporary difficulty, and perhaps even some for superior pupils receiving special promotions, as described near the end of Chapter III. In addition, differentiated assignments should be employed, particularly in departmentalized elementary and high schools; a few special promotions should be given; within groups pupils should work more or less individually upon certain portions of the work; careful guidance should be provided; there should be at least one special help period daily; summer work should be offered; the number of extra-curricular activities allowed should be adapted to the individual; and other minor provisions should exist. Most of these can be put into effect at no extra cost, and for the others the expenditure required represents a comparatively small per cent of the total spent upon the school.

**Descriptions of all provisions for children of atypical mentality in five school systems.** The five systems described below were chosen for fairly complete description partly because they have more of the different types of provisions than do most systems studied and



partly because the author believes they are carrying out those they have rather well. None are included that were not visited in person.

### Argo Community High School

This school has homogeneous grouping with differentiated assignments and different rates, differentiated assignments without homogeneous grouping, special periods, and individual progress. In a number of the subjects there are groups on two or three levels—the basis of grouping differs from subject to subject. Scores on intelligence and achievement tests, school marks, and teachers' judgments are used in varying ways. In differentiating assignments some teachers use the unit or contract plan; others follow what is practically the conventional type of assignment. For more detailed illustrations of what is done, the plans followed in a number of subjects will be given below:

In commercial work both three-level assignments and individual progress are employed. The former is used in bookkeeping, and the latter, in the laboratory period of bookkeeping and in portions of the typing work. There is also a special period after school during which pupils who are having difficulty in bookkeeping are given help. In the shorthand classes material is dictated at different rates of speed for pupils of varying capacities.

The assignments in English are on four levels of difficulty. The lowest level requires only mastery of fundamentals and pupils who master these fundamentals satisfactorily may earn a mark of 80. The next level, by mastering which pupils may earn a mark of 85, requires further reading in the same field as the lowest one or in related fields and also written work that involves assembling and tabulating material. To secure a mark of 90 pupils must read still other material and in addition evaluate and compare it. The highest level requires some creative work and allows a grade of 95 to be made. In addition the department has a special class for weak pupils. The very weakest spend two periods a week in this class and others, one period. The whole work of the department is organized on the unit basis, and each pupil is required to pass a regular examination on one unit before passing to the next.

In history the triple-level assignment by the unit method is employed. The additional work for the two higher levels consists of such things as book and other reports, summaries, term papers, charts, diagrams, maps, talks to the class, and so forth.

In first-year Latin pupils receive higher marks for doing more or less original work in addition to that assigned to the whole class. This

work consists of the study of derivations, the writing of original stories or conversations in Latin, the construction of posters, the study of Roman history, and so forth. In second-year Latin some time is given every day to special help for the weaker pupils.

In mathematics there is more or less of what may be called the double differentiated assignment system. In addition to a uniform enriched course for the superior pupils, individual assignments to the very best of the group are also made. Especially in geometry the best pupils are left largely to their own resources, whereas much help is given to the weaker ones. However, some individual attention is given to superior pupils who seem particularly able to profit by it. In algebra a test is given at least every week, and all pupils who do not pass it attend a special session to receive help.

In the science classes there is one period a week devoted to problems and written work which is used for giving individual attention to pupils who need it. In addition, all pupils and particularly the inferior ones are encouraged to come for individual help after regular school hours. In science, as in several other subjects, additional exercises and problems are done by the stronger pupils who, therefore, earn higher marks.

In Spanish superior pupils work out special projects similar to those described above under Latin. Individual help is given inferior pupils after school in the afternoon. As a stimulus to do superior work only those pupils who do so are allowed to hold office in the Spanish club.

### **Bloomington Elementary and High Schools**

In Bloomington there are to be found an opportunity school for the whole system, special periods, special promotion, homogeneous grouping chiefly in the upper grades and high school with differences in both rate and work done, and differentiated assignments not connected with homogeneous grouping.

What is known as the junior-primary class is practically equivalent to an inferior section of the first semester's work. Its work is similar in many ways to that of the upper kindergarten plus some reading. Beginning pupils with I.Q.'s below 90 are likely to be in it, and those who during the first few weeks of the semester do not give evidence of being able to do regular first-semester work satisfactorily. The junior-primary classes are not organized until several weeks after the beginning of the semester. They are handled by the regular I B teachers in the same rooms with the I B pupils. Provision is made for shifting pupils from the junior-primary to I B, and vice versa, when-

ever it appears desirable. About one-fourth, or slightly less, of the beginning pupils are in the junior-primary. Most of them remain there only one semester, but a very few are kept longer.

The particular feature of the six lower grades is the "skip without a skip." Pupils whose capacity and achievement seem to warrant it are allowed to carry the major subjects in the next higher grade as well as in the grade they are in and if successful they receive credit for completing both grades at the end of the semester. Pupils are encouraged to do this twice and thus gain a full year's time but are rarely allowed to gain more than this. Approximately 1 per cent of the pupils earn extra promotion by this method each semester.

In the seventh and eighth grades, which are departmentalized, there are some slow sections. These, however, do not exist in all buildings. In freshman English and algebra there is also homogeneous grouping. In English, pupils over sixteen years of age with I.Q.'s below 100, who have been repeaters in the elementary grades, are placed in slow or retarded sections. These groups do only the minimum essentials and use different textbooks from the regular classes. However, at the end of the year they receive the same amount of credit if they pass. In algebra all do the same work but at different rates. These rates are not determined in advance, but each group goes ahead at the rate that seems appropriate to it. In some cases two years are required to cover the year's work, and apparently the work is never covered in less than one year. The division in algebra is made primarily upon the basis of the work done in class during the first four weeks during which all pupils are kept together in random groups. After the division is once made pupils are rarely shifted from one group to another.

The opportunity school consists of two rooms in one of the elementary buildings. It draws pupils from the whole system. Enrolment is limited to twenty-eight. The pupils admitted range in I.Q. from 50 to 70 with occasionally some up to 80, and in age from eight or nine to sixteen years. Pupils are recommended by teachers, and sometimes by parents, for admission to the opportunity school. Frequently the evidence concerning them secured at the child guidance clinic is the deciding factor in whether or not they are placed in this school. Parents' consent must be secured, and so far only a few parents have refused it. The opportunity school has available a small shop and a kitchen in which the pupils do a considerable portion of their work. Emphasis is placed on teaching them whatever will make them better homemakers and citizens. When pupils in this school reach the age of sixteen they commonly go to high school if they con-

tinue in school at all and there they are allowed to take only such work as they seem able to do profitably.

Throughout the elementary school there is one remedial period per day in each room during which the teacher gives attention to those who need help most. Elastic assignments are also largely used in the grades, although in rather informal fashion.

### Canton Elementary and High Schools

There is a considerable amount of homogeneous grouping throughout the Canton school system with both differentiated rate and differentiated work. There are also special promotions and a special teacher. The homogeneous grouping is based upon intelligence test results and teachers' opinions. There is an approximation to a double plan of such grouping throughout the elementary school. In the first six grades the practice is to form a fast group whenever there appear to be enough children on the same level in one building to warrant it. Sometimes this group is quite small, consisting of not more than three or four children, whereas in other instances it includes a whole roomful. The fast groups usually cover three years' work in two but sometimes do five years' work in four. Frequently the small fast groups do not meet as separate groups continuously, but meet with regular groups working at their level for a while. For example, a group that is to do five years' work in four may go rapidly enough to gain one semester of the year to be gained, then may work for a while with a class at its level, and then may be separated again to gain the other semester. A few very bright pupils are allowed to cover seventh- and eighth-grade work in one year.

In addition to the fast groups just described there are groups, usually at three levels, formed throughout the lower six grades and six groups, in the seventh and eighth grades. The difference in their work is in the amount and type of subject-matter covered. This is especially true of the two lowest sections in Grades VII and VIII, in which much stress is placed upon citizenship, the dignity and value of labor, home-making skills, arithmetic computation rather than reasoning, and so forth. It is assumed that the pupils in these lower sections, who are ordinarily at least sixteen years of age when they complete the eighth grade, will not usually go on to high school, and that, therefore, the work in the seventh and eighth grades should prepare them for life in so far as it is possible.

In general no elementary-school pupil is failed often enough to be more than sixteen years of age before he completes the eighth grade. Pupils who are passed because of this provision, when according to

ordinary standards they would not be passed, are said to be "socially promoted," and especially in the upper grades these pupils do not do work entirely on the grade level at which they are nominally classified. Thus some of these pupils who are ostensibly in the seventh grade may be doing fifth-grade arithmetic, fourth-grade reading, and so on. In such cases they work often largely as individuals rather than as members of a group. In history, geography, literature, and some other subjects they attend class with regular seventh-grade pupils and gain whatever they can. The comparatively few who continue into high school are given what is intended to be as practical work as possible; correct usage rather than grammar is emphasized, certain phases of public speaking, vocational subjects, and so forth are given, and the regular high-school mathematics and foreign language are omitted. The very few who earn enough credits for high-school graduation receive industrial-course diplomas rather than those for college entrance.

There is homogeneous grouping in freshman English and algebra and to a lesser extent in other subjects. This grouping is largely determined by whether or not pupils take Latin, which in turn depends largely upon their seventh- and eighth-grade records. At the end of about six weeks those who appear to have been placed in the wrong grades are shifted.

There is a small amount of skipping in the elementary grades to take care of individual pupils or groups too small to form accelerated groups. Some of this skipping occurs between the eighth grade and high school. A few of the best eighth-grade pupils carry high-school algebra instead of eighth-grade arithmetic, and a still more limited number who have completed the first semester of eighth-grade work are at once admitted to several high-school subjects and thus can be graduated in three more years.

A special teacher is provided who goes from building to building giving help to pupils who seem most in need of it. This help is primarily intended for individuals or groups having temporary difficulties rather than for those of very inferior mentality.

### **Dundee-Carpentersville Elementary and High Schools**

This system, especially the high school, has one of the most complete schemes of homogeneous grouping found by the writer. In addition, there are a number of special promotions because of the fact that the different groups progress at the same rate.

A few weeks after the beginning of the year pupils in the first grade are divided into three groups according to their achievement to date. This plan is continued through the second grade but from the

third grade on through the elementary school there are only two groups instead of three in each grade. In addition to the general enrichment of the work done by the upper group the most superior pupils do still more by way of supplementary reading and individual projects and also in a few cases tutor or coach pupils having special difficulties. About 10 percent of the elementary-school pupils skip one grade sometime during the course, and a very few skip two grades.

High-school pupils are tested with an intelligence test at the beginning of each semester of their freshman and sophomore years and are then grouped on the basis of the results. During the junior and senior years grouping continues but no additional tests are given; instead the results of those already administered are employed. This grouping is in effect in all subjects except physical education and those in which the number of pupils is so small that there can be only one section. The number of levels is the same as the number of sections in each year's work of each subject. The largest number is six in freshman English and the smallest, two, found in a number of instances. Whenever a pupil's achievement indicates that he is doing markedly better or worse than the intelligence test results predicted, he is shifted to a higher or lower section. So much attention has been given to planning the schedule that it is claimed that all such desirable shifts can be made. Sometimes doing so involves shifting a pupil in more than one subject at the same time. The various groups do different amounts of work, each doing all that it can, but at the end of the semester or year all pupils who pass receive the same amount of credit. As an example of the kind of differentiation first-year German may be cited. The work is essentially the same until well along in the second semester. At this time the pupils who are superior take up special topics, plays, rapid reading, and so forth, whereas the inferior ones continue to spend their time on the fundamentals. Another example of differentiation, which has already been described elsewhere, is found in second-year Latin. The class is divided into groups, each of which consists of one of the better pupils and one or two of the weaker. Each group works together, particularly on the translation, with the superior pupils assuming some of the responsibilities of the teacher. All the groups recite in the same room at once but apparently are not troubled by the seeming confusion. The teacher goes from group to group giving help where it appears to be needed.

#### **Princeton Township High School**

In this school there is no uniform plan of dealing with pupils of atypical mentality but practically every teacher is doing something

definitely intended for this purpose. Homogeneous grouping with differentiation in the amount and type of work, differentiated assignments, and special periods, are the three most common plans. The following details concerning a number of the subjects serve to illustrate how these are applied.

Algebra pupils are grouped on the basis of cumulative scholastic records and intelligence test scores. All cover the minimum essentials, some do additional work common to the group, and a few are also asked to work out different solutions from those commonly obtained and to do exercises from college texts. Inferior pupils are given more board work than others and are to some extent helped by the superior pupils as well as by the teacher while doing this.

In bookkeeping the contract method is used with three levels. C pupils must do a certain number of written exercises, B pupils, a larger number, and A pupils, a still larger number.

The chemistry instructor attempts to provide for differences in ability through term papers. All pupils write them but they are adapted in difficulty to their supposed abilities.

In English the contract plan with assignments on three levels is largely used in both composition and literature. In the former all pupils must write the same number of themes. In rewriting them the inferior ones pay most attention to grammatical and rhetorical points, the average pupil in addition centers attention upon originality and interest, and the superior ones not only rewrite their own themes but read those of other groups, mark the errors, and suggest improvements. In connection with the contracts there is a system whereby specific units of work count so many points each, and a pupil's mark is determined by the number of points earned. For example, on the study of one classic a pupil is passed if he earns 12 points, receives C for 15 points, B for 18, A for 20, A+ for 22, and AA for 24. These points may be earned in a number of ways. The required work is reading the book, which counts one point if done in four days; passing an examination, which counts two points for a grade of 70, three for one of 80, and four for 90; and outlining the book, which counts two points. The other work consists of a list of fourteen items, counting from one to fourteen points each, from which pupils may choose and do as many as they desire.

In French all pupils are held together for the first semester. During the second, however, each reads ahead as rapidly as he can or will. In the second year an A, B, C system of requirements is in effect.

In general science a contract plan with three levels is being used.

Provisions in geometry consist of a special class before school in the morning for inferior pupils and the requirement of more original thinking, more elaborate constructions, and the solution of extra problems by superior pupils.

History is another subject in which a three-fold assignment plan is employed. The differences between the three levels are of two kinds, both in amount and type of work. For example, a C pupil is expected to read fifteen pages on the particular topic, a B pupil, twenty pages, and an A pupil, twenty-five pages and likewise to have a corresponding difference in the completeness with which the topic is covered in his notebook. In addition, superior pupils are expected to prepare and present reports on special topics, to illustrate what they have written up in their notebooks, and to do other additional work.

In home economics the work is adapted to the interests and abilities of the girls, and in addition each pupil in sewing goes at her own speed.

Latin is another subject in which the triple-assignment plan is used but the details differ somewhat from those already mentioned. Each group is responsible for a certain portion of the work in the book. There is some overlapping, but the assignment of each group does not include everything assigned to the group below it. Thus the Group B assignment includes some harder sentences for translation than does that of Group A and also some but not all of those assigned to the lower group. The same is true between Group C and Group B.<sup>1</sup> The work of the class is planned largely on a two-day cycle, on one day of which each group is seated by itself and works as a unit and on the other of which the three groups recite together as a single class with each responsible only for its own assignment. Sometimes members of the C groups coach those in the A groups.

In music pupils in harmony receive special attention that amounts to almost private lessons of about ten minutes apiece every day. Each then proceeds at his own rate. This of course is only possible because of the small number of pupils enrolled.

At the beginning of the work in typewriting all pupils are kept together but as soon as noticeable differences begin to appear this no longer holds. The inferior pupils are assigned remedial work and the superior ones, extra work. The same general plan is followed in shorthand with differentiation, especially in speed. By the end of the second year inferior pupils are expected to be able to do eighty words per minute and superior pupils, one hundred words with the same degree of accuracy.

---

<sup>1</sup>It will be noted that in this case Group C and not Group A is the superior group and accordingly Group A, the inferior one.



CHAPTER VI  
A BRIEF CONSIDERATION OF OBJECTIONS  
TO PROVISIONS FOR CHILDREN OF  
ATYPICAL MENTALITY

**Introduction.** Throughout the preceding five chapters the assumption that provisions for children of atypical mentality were desirable has been more or less implied. Since, however, some serious objections to such provisions, especially to homogeneous grouping, have been raised, it seems that a bulletin on the subject should not close without considering them. It is not the writer's purpose to consider them at great length, but he does wish to offer quite briefly what seem to him valid answers to a number of these objections. Those to be answered include a few of the more fundamental ones raised by critics and, in addition, all those given by Illinois principals and superintendents who complied with the writer's request to state their objections.

In general, the objections advanced may be divided into two chief groups. One includes what may be called theoretical objections, that is, objections derived from a supposedly logical consideration of the matter. The other group may be called experimental, because they are derived from experiments intended to ascertain the worth of such provisions as are being considered or from study of such provisions in operation. In many cases the two overlap, but, on the whole, it is rather easy to classify objections as one kind or the other.

**Keliher's objections to homogeneous grouping.** Perhaps the most carefully considered adverse criticisms of homogeneous grouping are those of Keliher.<sup>1</sup> She made critical analyses of what seemed to her the basic implied assumptions involved in homogeneous grouping and in the use of measurement as a basis for grouping, and as a result of her thinking she arrived at a number of conclusions which she considered were fairly certain and others less certain but in accord with evidence. The assumptions which, she stated, seem to be fundamental to homogeneous grouping as commonly carried on are as follows:<sup>2</sup>

1. Intelligence is so adequately measured by verbal intelligence tests that the results may serve as bases for action which concerns the whole individual.

---

<sup>1</sup>Keliher, A. V. "A Critical Study of Homogeneous Grouping," *Teachers College, Columbia University Contributions to Education*, No. 452. New York: Bureau of Publications, Teachers College, Columbia University, 1931. 165 p.

<sup>2</sup>These assumptions are quoted by permission from pages 49, 66, 71, 77, 85, 91, 96, 101, 131, 140, 142, and 147 of Keliher's discussion.

2. Learning, as measured by standardized achievement tests, is an adequate and relevant basis for action which involves the whole individual.

3. The Educational Age and varying weightings of I.Q., M.A., and Teacher's Judgment form a sound basis for certain courses of action concerning the individual.

4. An individual is so consistent in his performance in specific traits that homogeneity of grouping is possible.

5. Homogeneity of grouping reduces the range of variations within a grade.

6. Homogeneity of grouping tends to bring superior learning results.

7. Homogeneity of grouping tends to provide superior provision for individual differences.

8. Homogeneous grouping provides for better attitudes in pupils.

9. The legitimate next step to grouping is the arrangement of a multiple-track curriculum, differentiated in number of years, or scope of curriculum, or both.

10. The common essentials in education are those learnings upon which grouping is made, the academic skills.

11. Differences in ability to create and ability to appreciate aesthetic values vary concomitantly with "intelligence" and (in some interpretations) high ability in each is limited to those of high intelligence.

12. The classification and segregation of children in our schools does not adversely affect society since a like segregation exists in democratic society.

Her general conclusion is that these assumptions are more or less invalid and therefore that homogeneous grouping is undesirable.

After a critical examination of the assumptions just given the writer is unable to see how any one familiar with the situation can believe that some of them are implied in homogeneous grouping at its best, nor does Keliher make this claim; therefore, it seems to him that in general the conclusion to be drawn therefrom is not that homogeneous grouping should be abolished but rather that it should be improved until it is more in accord with the best practice. In the second place, the writer radically disagrees with Keliher in her belief that some of the assumptions which she gives are false in thinking that the weight of evidence favors them. With this general introduction he will proceed to discuss briefly each of the assumptions given above.

*1. Intelligence is so adequately measured by verbal intelligence tests that the results may serve as bases for action which concerns the whole individual.*

All careful students of intelligence tests recognize that they are far from yielding perfect measures of intelligence, and the number of teachers and others who still regard them as perfect, or practically so,

is constantly decreasing. At the same time, there is considerable evidence that they do measure to some extent certain capacities and characteristics that tend to make for better achievement in school, particularly in the so-called academic or book subjects. Unless all group instruction and activity in school is to be abandoned in favor of individual work, there must be grouping upon some basis or other. In grouping pupils by grades the attempt is made to get together those who are at an approximately similar stage with regard to achievement. Homogeneous grouping within the grade is merely an attempt to carry the same process one step further, and if intelligence test scores correlate sufficiently well with the achievement they may well be used to assist in doing so. As should be evident from the discussion of the bases of grouping in Chapter II the writer found very few systems in which intelligence test results alone are used for this purpose and in those opportunity is provided for shifting pupils if their achievement indicates that it is desirable to do so. It is true that the school in a sense deals with the whole individual. This fact, however, is not in itself an argument against grouping, but instead merely one that the school should recognize in dealing with children after they have been grouped.

2. *Learning, as measured by standardized achievement tests, is an adequate and relevant basis for action which involves the whole individual.*

The answer to this is practically the same as to the previous statement. There is, however, the difference that standardized achievement tests measure more directly the results of instruction and, therefore, in a sense are more appropriately used for the purpose indicated. It is true that they do not measure all phases of desired learning in the school subjects and very few outside of the subjects, but this fact does not condemn their use. Instead, it merely reminds us to remember that there are these other desired outcomes of the school.

3. *The Educational Age and varying weightings of I.Q., M.A., and Teacher's Judgment form a sound basis for certain courses of action concerning the individual.*

To this the answer is very much the same as to the two previous statements. It is necessary to take some action concerning pupils, and it is better to have this action based upon as much objective evidence as possible than to allow it to be entirely subjective. Therefore, although the factors mentioned do not form a completely sound basis for action, they, in conjunction with other knowledge about the pupil, provide a sounder basis than if they were not included.

4. *An individual is so consistent in his performance in specific traits that homogeneity of grouping is possible.*

As was explained near the beginning of Chapter II the expression "homogeneous grouping" is not understood by anyone familiar with the situation to signify that the grouping is strictly homogeneous but rather that it is less heterogeneous than it would be otherwise. It is recognized that pupils do not exhibit the same quantity and quality of achievement in the various school subjects. On the other hand, there is ample evidence to show that positive correlation exists among their achievements in most subjects and that in cases where the correlation is not definitely positive it is rarely negative but rather approaches zero. Thus, if a reasonable degree of homogeneity is secured in one or more subjects or important phases thereof the tendency is for it to be accompanied by a decrease in heterogeneity in other subjects.

5. *Homogeneity of grouping reduces the range of variations within a grade.*

This assumption is true even though the reduction of range of variation is less than has frequently been supposed. Published and unpublished evidence from various sources indicates that at the best the range of variation within each level in a three-track system of homogeneous grouping is about one-half of that in the whole grade. In common practice it is somewhat greater than one-half. Burr<sup>3</sup> has collected considerable data on this point and finds that on the average it is not far from four-fifths as great. The writer believes, however, that in systems where homogeneous grouping has been carefully carried out and comparatively easy transfer from group to group is possible it will rarely be found to be as much as this. Moreover, he believes that such reduction of variation is desirable for reasons mentioned in the discussions of other of the assumptions.

6. *Homogeneity of grouping tends to bring superior learning results.*

Whether this assumption is true or not is to be determined by experiment and study. Keliher summarizes the evidence available as hardly conclusive but as indicating that heterogeneity is favorable to learning. The writer is unable to see how anyone who has studied thoroughly the reports of experiments and studies along this line can arrive at this conclusion. The best summary of the results with which he is familiar is that of Turney.<sup>4</sup> Turney's conclusions upon this point are as follows:

<sup>3</sup>Burr, M. Y. "A Study of Homogeneous Grouping." *Teachers College, Columbia University Contributions to Education*, No. 457. New York: Bureau of Publications, Teachers College, Columbia University, 1931, Chapter II.

<sup>4</sup>Turney, A. H. "The Status of Ability Grouping," *Educational Administration and Supervision*, 17:21-42, 110-27; January, February, 1931.

4. The experimental literature indicates that more often than not pupils do better in homogeneous groups than in heterogeneous groups.

5. There is a fairly strong indication that when efforts are made to adapt the means and materials of instruction to the needs of different levels of ability, better achievement occurs in homogeneous than in heterogeneous groups.

6. In the experimental situation where there is no special effort made to adapt content or method the average and lower groups appeared to benefit more often than the higher groups.

7. There is some evidence, not conclusive, that ability grouping promotes motivation of the pupils to increased effort.

These conclusions are essentially the same as those the writer has reached from a study of the same question. In addition, however, at least one more seems evident. It is somewhat connected with the second one quoted from Turney but is not just the same. It is that markedly better achievement has been secured in enough instances by the use of homogeneous grouping to indicate that when it is employed at its best it is superior to heterogeneous grouping and, therefore, to indicate that by improving homogeneous grouping as generally practiced similar results can be secured more generally.

*7. Homogeneity of grouping tends to provide superior provision for individual differences.*

This is another assumption that the writer believes is true. Keliher states her fear that homogeneous grouping tends to cause teachers to be less alert to detect and to provide for individual differences. From the writer's experience with homogeneous grouping under his own control, from his observation of it in many school systems, and from the literature on the subject, it appears quite evident to him that just the opposite result usually takes place, that more attention rather than less is centered upon individual differences. Moreover, the mere fact that there is homogeneity of grouping tends in itself to make partial provision for such differences.

*8. Homogeneous grouping provides for better attitudes in pupils.*

Keliher submits some data on this point which she interprets to mean that the assumption is not true. She believes that homogeneous grouping offers more likelihood that inferior pupils will be discouraged and superior pupils, conceited than does heterogeneous grouping. The writer admits that this result may possibly ensue but not that it usually does in actual practice. In many cases with which he has been familiar teachers and others have reported that when inferior pupils were grouped by themselves and thus were not brought into direct comparison with superior pupils their attitude became much better and their discouragement much less. The reason given is usually

that by comparison with their fellows in homogeneous groups they do not appear to be very inferior and that they have more frequent chances of ranking well in their group. Similarly, superior pupils are reported to be less conceited when they are in a whole group of similar pupils and therefore do not stand out in the group to which they belong so markedly as when they are in a group of which the majority are average and inferior pupils. It is true that in some cases an undesirable stigma is attached to inferior groups, but by skillful handling on the part of teachers and others in charge this can almost always be avoided. For example, the writer some years ago had occasion to visit quite frequently a large elementary school in which the slow sections had acquired the epithet of "dumbbells" and were ridiculed considerably by the other pupils. The principal and teachers, however, took the matter in hand and within two or three years had changed the situation so that no such attitude was longer apparent, and the pupils in the slow sections were undoubtedly happier in their work than they would have been in ungrouped sections.

9. *The legitimate next step to grouping is the arrangement of a multiple-track curriculum, differentiated in number of years, or scope of curriculum, or both.*

This also is an assumption that the writer believes is true despite the fact that the slogan of "educational determinism" has been hurled against it. As others have pointed out before, it is not true democracy to provide the same educational opportunities for all pupils regardless of whether they are best suited to them or not. Rather each should be provided with those opportunities which are best adapted to his capacities and interests. It goes without saying that errors will be made in providing such differentiated opportunities, but it is better to attempt to provide opportunities and make some mistakes than to make no such attempts.

10. *The common essentials in education are those learnings upon which grouping is made, the academic skills.*

This assumption seems to the writer partially, but not wholly, true. As the term "minimum essentials" is commonly employed it refers to what are considered the more important portions of the common academic subjects. At the same time there is an increasing tendency to recognize that there are other fundamentals having to do with such matters as citizenship, character, and so forth, which it is highly important that all children acquire. Still further, there is a growing tendency to realize that children in lower groups should be provided with opportunities in what may be called creative work so that teachers

may discover the types of activity in which they have most ability and interest, and consequently provide opportunities for achievement therein.

11. *Differences in ability to create and ability to appreciate aesthetic values vary concomitantly with "intelligence" and (in some interpretations) high ability in each is limited to those of high intelligence.*

This has been partially at least considered in discussing the previous statement. There is probably some correlation between intelligence and creative and appreciative ability, and it seems to the writer that comparatively few plans of homogeneous grouping are so administered as to imply that the correlation is nearly perfect. It is, of course, true that in a certain sense children of inferior mentality do not have the same opportunity to develop their capacities as do those who are superior, but this can hardly be avoided if all spend the same amount of time in school work. Those who work more slowly than others cannot by any procedure be made to accomplish as much as those who work more rapidly.

12. *The classification and segregation of children in our schools does not adversely affect society, since a like segregation exists in democratic society.*

In Chapter II and also still more in Chapter III the writer has already made the point that he believes homogeneous groups should not be entirely segregated from other children. Just as outside of school individuals tend to seek their own levels so it is natural that in school also the same process should occur. The levels sought outside of school differ in the different phases of an individual's life and therefore it is desirable that the same be true in school. For this reason the writer has already recommended that at least in the upper grades as well as in high school grouping differ for the several subjects rather than be the same for all, and furthermore that children of one level have the opportunity of associating with those at other levels in various social activities.

**Objections to homogeneous grouping offered by Illinois superintendents and principals.** The objections received from Illinois principals and superintendents, in so far as they differ from those of Keliher, are as follows:

1. Good teachers do not need homogeneous grouping to do efficient work.
2. Homogeneous grouping places too much emphasis on subject-matter.
3. Homogeneous grouping makes too much work for teachers.
4. Teachers do not want to handle slow sections.

5. Teachers are not trained for the plan.
6. Suitable textbooks for differentiated courses do not exist.
7. More pupils fail than when there are no homogeneous groups.

1. In answer to the first objection, that good teachers do not need homogeneous grouping to do efficient work, the writer readily admits that under almost any conditions good teachers do efficient work with their pupils. He believes, however, that the school should endeavor to make conditions as favorable for good teaching as possible and that homogeneous grouping is one means of doing this. In other words, it makes it easier for all teachers, regardless of their ability, to do good teaching.

2. As to the statement that homogeneous grouping puts too much emphasis on subject-matter, the writer does not believe that this is true. Indeed, he is totally unable to see any inherent connection between the two. Subject-matter may be over-emphasized at the expense of the child in any school, whether or not homogeneous grouping exists. It seems, however, that there is a tendency for homogeneous grouping to have the opposite effect, that is, to center more attention upon the individual and his needs, and therefore upon subject-matter as a means of meeting these needs rather than as an end in itself.

3. It is true that it is slightly more work for a teacher to handle two or three sections than to keep all her pupils in one section. However, the additional amount of work is not so great that teachers should feel it is an imposition upon them to have to do it if, as the writer believes, the educational procedure that demands it is sufficiently better than that which does not demand it. If, as is sometimes true, the homogeneous groups are large enough that all the pupils in one room belong to a single group there is no additional work at all.

4. There are many teachers who do not wish to handle the lower sections. On the other hand, there are some teachers who do. In his own experience as a principal and superintendent, the writer had teachers request that they be given charge of pupils having the most difficulty with their work. If in any system there are not enough teachers who wish to teach the lower sections and who seem peculiarly well adapted to do so the sections can be passed around among many or all of the teachers and thus no teacher will feel that she is being unduly imposed upon.

5. It is, of course, highly desirable for teachers who are handling homogeneous groups to have some special preparation therefor. Most teachers, however, who have had their professional work in education within the last few years have learned something about the plan, and



this preparation, supplemented by the proper preparation in teachers' meetings and otherwise, should be sufficient.

6. There are, it is true, comparatively few textbooks that are definitely prepared for use at several levels. Well trained supervisors and teachers, however, should have no great difficulty in making such eliminations as seem best from textbooks or in providing supplementary assignments thereto. After this has once been done it is necessary only to revise what has been already prepared somewhat from time to time in order to continue using the material.

7. The objection that there are more failures with homogeneous grouping than without it was offered by two high-school principals. The writer does not believe that such a result has any inherent connection with homogeneous grouping. Indeed, in many cases evidence has been offered to show that the number of failures is less. It is possible that if inferior groups are placed under teachers not well adapted to handle them the number of failures may increase from this cause. However, in any case, the number of failures depends upon the standards set, and it is probable that the reason for the increased number of failures in these two schools was some unconscious change in standards. Another possibility is that there was a change in the quality of pupil material, but this is less likely than the other reason.

**Other discussions of homogeneous grouping.** Although other lists of objections to homogeneous grouping and arguments against it have appeared the writer will not consider them here. For the benefit of those interested, however, what is probably the most complete list of arguments against homogeneous grouping and likewise of those in its favor may be found in the *Ninth Yearbook of the Department of Superintendence*.<sup>5</sup> Furthermore, the writer wishes to call attention to what is in his opinion the best general defense of homogeneous grouping that he has seen. In it Symonds<sup>6</sup> considers the arguments advanced by Burr and Keliher, to which reference has already been made earlier in this chapter, also those of McGaughy,<sup>7</sup> and of others. In addition, the treatments of the subject by Purdom,<sup>8</sup> Ryan and Crecil-

---

<sup>5</sup>"Arguments for and Against Homogeneous Grouping," *Ninth Yearbook of the Department of Superintendence*. Washington: National Education Association, 1931, p. 121-26.

<sup>6</sup>Symonds, P. M. "Homogeneous Grouping," *Teachers College Record*, 32:501-17, March, 1931.

<sup>7</sup>McGaughy, J. R. "Homogeneous Grouping," *Childhood Education*, 6:291-96, March, 1930.

<sup>8</sup>Purdom, T. L. "The Value of Homogeneous Grouping," *University Research Monograph No. 1*. Baltimore: Warwick and York, 1929. 100 p.

ius,<sup>9</sup> and Hollingshead<sup>10</sup> are among those worth mentioning. Furthermore, a bibliography<sup>11</sup> prepared by the present writer and also a portion of that in the *Twenty-Fourth Yearbook of the National Society for the Study of Education*<sup>12</sup> may be found helpful.

**Objections to special rooms.** In comparison with the objections and arguments advanced against homogeneous grouping comparatively few have been raised in opposition to special rooms and the other provisions for children of atypical mentality dealt with in this bulletin. The outstanding objections to each will, however, be briefly considered.

The usual first argument advanced against special rooms is their cost. If, as is desirable, the number of pupils in such rooms is considerably smaller than the number in regular classrooms the per capita cost for the pupils in special rooms is necessarily rather high. This is sometimes slightly increased by the fact that in order to get teachers who are fairly well trained school systems must pay somewhat better salaries than they pay to regular elementary-school teachers. If pupils are brought to special rooms from other buildings than those in which they are located the cost of transportation may also need to be met. In some cases, the school system also bears the expense of noon lunches. There are two possible answers to the objection of added cost: the first and best is that if the system can possibly afford it special rooms are or should be worth the cost; the second is that by placing a somewhat larger number of pupils in such rooms than is best the per capita cost can be reduced until it is not very much greater than that for the system in general. The latter procedure is not recommended, but it is probably better to do this than not to have such rooms at all.

Another objection brought against special rooms is that it is difficult to get adequately trained teachers for them. There is some truth in this assertion, but on the other hand there are a number of teacher training institutions that give courses intended to prepare teachers for just such work. Usually when the provision of such rooms is con-

---

<sup>9</sup>Ryan, H. H., and Crecelius, Philipine. *Ability Grouping in Junior High School*. New York: Harcourt, Brace and Company, 1927. 223 p.

<sup>10</sup>Hollingshead, A. D. "The Use of Certain Educational and Mental Measurements for Purposes of Classification," *Teachers College, Columbia University Contributions to Education*, No. 302. New York: Bureau of Publications, Teachers College, Columbia University, 1928. 63 p.

<sup>11</sup>Odell, C. W. "An Annotated Bibliography Dealing with the Classification and Instruction of Pupils to Provide for Individual Differences," *University of Illinois Bulletin*, Vol. 21, No. 12, Bureau of Educational Research Bulletin No. 16. Urbana: University of Illinois, 1923. 50 p.

<sup>12</sup>"Adapting the Schools to Individual Differences," *Twenty-Fourth Yearbook of the National Society for the Study of Education*, Part II. Bloomington, Illinois: Public School Publishing Company, 1925, p. 317-29.

templated several teachers already in the system can be found who are willing to secure a summer's training in the methods used in such rooms and then to take charge of the rooms. Especially if these teachers are given slightly more salary than other elementary teachers is it easy to find some willing to do this. Although more than one summer's special training is desirable, some successful teachers of special rooms have had no more than this amount.

Another objection advanced against special rooms is the same as one of those raised in connection with homogeneous grouping: that pupils placed in them become discouraged as a result of the social stigma of being there. The answer to this is the same as in the other case, that although this may happen, it need not. The testimony of most teachers and others closely connected with such rooms is that pupils are less discouraged and happier in them than in the regular grade groups where they would otherwise be.

It is sometimes claimed that no improvement is shown by the pupils in special rooms. The writer believes that this objection is usually based on the fallacious hope that such pupils will do about as well as average pupils in regular grades. Instead, the achievements of pupils in special rooms should be compared with their own achievements in regular rooms or with those of others of similar ability who are in regular rooms. Many cases can be cited of pupils whose achievement in regular-grade rooms was almost zero who, when placed in special rooms, made marked improvement.

**Objections to differentiated assignments.** The chief objections to differentiated assignments appear to center about two major points, that handling such a system requires too much work of teachers and that it is non-democratic. It is undoubtedly more work for a teacher to provide and check up on assignments on several levels than if uniform assignments are employed. If the work is carefully systematized, however, the added labor should not be great and, as has already been suggested in another connection, teachers should be willing to do it in view of the educational value of such a system.

The second objection, that such a plan is non-democratic, has already been answered in connection with the similar objection to homogeneous grouping. True democracy consists rather in offering each pupil the educational opportunities best suited to him and by which he can profit most than in giving all pupils the same opportunities.

**Objections to special promotions.** The common objections to skipping or special promotion are that it leaves gaps in the pupil's work which have undesirable later effects and that pupils who are allowed

to gain time in this way reach high school and college when still too immature. The writer believes that there is some truth in the first objection, but that the gaps are much less serious than has frequently been supposed. Most elementary-school courses are such that in the upper grades the pupils review or repeat most of what they have had in the lower grades. Thus pupils who skip portions of the work are offered an opportunity to cover them later. On the other hand, as was stated in discussing special promotions in Chapter IV, the writer believes that it is desirable whenever possible to provide means whereby pupils who are receiving special promotion need not entirely skip a semester's or a year's work, but by carrying the work of two grades at once or by receiving special help may actually cover most of it.

The argument that pupils may reach high school or college at too early an age has already been referred to in connection with homogeneous grouping. Since, on the whole, pupils of superior mentality are also possessed of superior social development, are above the average in height, in weight, and in other phases of physical development, the writer does not believe that when they are accelerated only one year there is any appreciable danger of their being socially immature for the groups in which they are placed. If they are accelerated two years there is some danger that this may be true, and if they are accelerated three or more years the danger is so great that, as already stated, the writer would allow very few pupils to gain this much time.

**Objections to individual instruction and progress.** There are perhaps three chief objections to individual instruction and progress. One is the same as the first given above in the paragraph on differentiated assignments, that the plan requires too much labor on the part of teachers. The answer to it is the same as that given above supplemented by the fact that there are more and more self-helping and self-testing materials being made available by means of which pupils can work individually with a minimum of attention from teachers.

The second objection is that if pupils work individually certain values are lost which cannot be secured save through group activity and cooperation. In the discussion of individual instruction and progress in Chapter IV this objection was recognized as having some validity, and therefore it was recommended that instruction and progress should in any case be only partially individual and partially group.

The third objection is the same as one raised in connection with special rooms, that teachers are not trained to handle the plan. The answer is the same as in the other case, that although there may be somewhat of a shortage of teachers so trained it is possible to secure

them and that a good teacher with a summer's training in this work is usually at least fairly competent to direct individual work.

**Objections to guidance.** The one important theoretical objection to guidance is that it is impossible to offer advice that is valid and reliable enough to justify giving it and that because it is not highly valid and reliable many undesirable consequences ensue from following it. The answer to this is that any one who understands the situation realizes that the best guidance that can be given is far from perfect and that, therefore, it is offered merely as advice rather than as something which must be followed. Moreover, pupils have to reach decisions concerning what subjects they will take, what vocations they will enter, and so forth, and it is far better for them to reach these decisions with the help of the best advice that can be given them than to choose without this advice.

In addition to this theoretical objection, there are two practical ones. These have to do with the cost of a satisfactory guidance program and the difficulty of getting competent advisors. The cost, however, need not be excessive even in a large high school. One full-time member of the staff can fairly adequately direct such a program, if he has the assistance of a number of the teachers, each of whom gives a small portion of his time to the work. With regard to the difficulty of securing competent advisors the situation is just the same as in the case of competent teachers for special rooms and for individual instruction.

**Objections to special periods.** Practically the only objections raised to providing special periods are that such provision entails extra work for the teachers and that pupils required to attend them tend to be somewhat stigmatized. In this case as in several others already mentioned the extra work should be asked of teachers if the results have sufficient educational value. Moreover, by providing time at which teachers may help some of their most difficult pupils more effectively than during ordinary class periods, the special periods tend in a manner to lighten teachers' loads.

As to the stigma attached to required attendance at special periods, suggestions have already been made as to how this may at least partially be avoided. In at least some of the schools which the writer visited there certainly appears to be no such stigma felt by the pupils who receive help in special periods.

**Objections to coaching by superior pupils.** The objections raised to this are that superior pupils cannot help inferior ones so well as can teachers, that it is difficult to arrange for such help to be given, and

that the giving of such help is not so educative for the superior pupils as some other activities which they might take part in. The first of these objections was referred to near the end of Chapter IV and, as indicated there, the writer believes it has some validity. It is, however, possible to guide superior students in the help they give inferior ones so that it will be of distinct value. Moreover, a number of superior students working with one or a few inferior pupils each can give more help than can a single teacher who must deal with a comparatively large group.

It is sometimes difficult to make satisfactory arrangements for the giving of such help but in many cases this can be done during a portion of the class period and always during a supervised-study period if one exists. As has been shown by an example taken from actual practice, there is not an insuperable objection to having a number of groups each composed of one superior and one or more inferior pupils working together orally in the same room at the same time.

The third objection, that superior pupils may employ their time more profitably to themselves, has some truth in it. Too great an amount of coaching or helping inferior pupils is undesirable from this standpoint. On the other hand, it is the testimony of many teachers that they learned a subject much better when they taught it than when they were studying it. If this is true there should be at least some of the same effect in the case of superior pupils helping inferior ones.

**General summary and conclusion.** This chapter, which has been devoted to considering some of the objections and arguments against the various provisions for children of atypical mentality considered in this bulletin, leads to at least two general conclusions. One is that many, perhaps most, of the objections raised appear upon analysis to be really objections to certain features of the provisions discussed rather than to the provisions themselves. In many cases these features are generally recognized as undesirable by experts in the field and are not in accord with the best practice.

The second conclusion is that although, as just stated, many of the objections and arguments against such provisions are not in accord with the best practice, they do point out very common practices. In other words, many, probably most, school systems that make provisions for mentally atypical children would do well to modify these provisions so that they eliminate certain features thereof that are not in accord with the best practice. In this phase of the educative process, as in any other, the provisions offered should be subjected to critical scrutiny in the light of the best available knowledge and should not be

continued in effect unless reasonable justification for them exists. In all too many cases systems have introduced provisions of one type or another merely because they were popular or because they seemed to work well in other systems without giving any thoroughgoing consideration to the philosophy underlying them, their implications, and consequences. On the contrary, these should be thoroughly examined and considered. The writer believes that they will be found to be such as to justify homogeneous grouping, special rooms, and most of the other provisions dealt with in this bulletin.





I 26

no 59

# UNIVERSITY OF ILLINOIS BULLETIN

ISSUED TWICE A WEEK

VOL. XXIX

SEPTEMBER 18, 1931

No. 6

[Entered as second-class matter December 11, 1912, at the post office at Urbana, Illinois, under the Act of August 24, 1912. Acceptance for mailing at the special rate of postage provided for in section 1103, Act of October 3, 1917, authorized July 31, 1918.]

LIBRARY OF THE UNIVERSITY OF ILLINOIS

BULLETIN No. 59

BUREAU OF EDUCATIONAL RESEARCH  
COLLEGE OF EDUCATION

## PROVISIONS FOR MENTALLY ATYPICAL PUPILS

By

CHARLES W. ODELL

Assistant Director, Bureau of Educational Research



PRICE FIFTY CENTS

PUBLISHED BY THE UNIVERSITY OF ILLINOIS, URBANA  
1931

The Bureau of Educational Research was established by act of the Board of Trustees June 1, 1918. It is the purpose of the Bureau to conduct original investigations in the field of education, to summarize and bring to the attention of school people the results of research elsewhere, and to be of service to the schools of the state in other ways.

The results of original investigations carried on by the Bureau of Educational Research are published in the form of bulletins. A list of available publications is given on the back cover of this bulletin. At the present time five or six original investigations are reported each year. The accounts of research conducted elsewhere and other communications to the school men of the state are published in the form of educational research circulars. From ten to fifteen of these are issued each year.

The Bureau is a department of the College of Education. Its immediate direction is vested in a Director, who is also an instructor in the College of Education. Under his supervision research is carried on by other members of the Bureau staff and also by graduates who are working on theses. From this point of view the Bureau of Educational Research is a research laboratory for the College of Education.

BUREAU OF EDUCATIONAL RESEARCH  
College of Education  
University of Illinois, Urbana

UNIVERSITY OF ILLINOIS  
THE STATE UNIVERSITY  
URBANA

HARRY WOODBURN CHASE, Ph.D., LL.D., President

---

*The University includes the following departments:*

**The Graduate School**

**The College of Liberal Arts and Sciences** (Curricula: General with majors, in the Humanities and the Sciences; Chemistry and Chemical Engineering; Pre-legal, Pre-medical, and Pre-dental; Pre-journalism, Home Economics, Economic Entomology, and Applied Optics)

**The College of Commerce and Business Administration** (Curricula: General Business, Banking and Finance, Insurance, Accountancy, General Railway Administration, Railway Transportation, Industrial Administration, Foreign Commerce, Commercial Teachers, Trade and Civic Secretarial Service, Public Utilities, Commerce and Law)

**The College of Engineering** (Curricula: Ceramics; Ceramic, Civil, Electrical, Gas, General, Mechanical, Mining, and Railway Engineering; Engineering Physics)

**The College of Agriculture** (Curricula: General Agriculture; Floriculture; Home Economics; Smith-Hughes—in conjunction with the College of Education)

**The College of Education** (Curricula: Two year, prescribing junior standing for admission—General Education, Smith-Hughes Agriculture, Smith-Hughes Home Economics, Public School Music; Four year, admitting from the high school—Industrial Education, Athletic Coaching, Physical Education. The University High School is the practice school of the College of Education)

**The College of Law** (three-year curriculum based on a college degree, or three years of college work at the University of Illinois)

**The College of Fine and Applied Arts** (Curricula: Music, Architecture, Architectural Engineering, Landscape Architecture, and Art and Design)

**The Library School** (two-year curriculum for college graduates)

**The School of Journalism** (two-year curriculum based on two years of college work)

**The College of Medicine** (in Chicago)

**The College of Dentistry** (in Chicago)

**The School of Pharmacy** (in Chicago)

**The Summer Session** (eight weeks)

**Experiment Stations and Scientific Bureaus:** U. S. Agricultural Experiment Station; Engineering Experiment Station; State Natural History Survey; State Water Survey; State Geological Survey; Bureau of Educational Research; Bureau of Business Research.

The Library Collections contain (July 1, 1931) 832,643 volumes and 221,000 pamphlets (in Urbana) and 45,241 volumes and 7,875 pamphlets (in Chicago)

For catalogs and information address

THE REGISTRAR  
Urbana, Illinois

BULLETINS OF THE BUREAU OF EDUCATIONAL RESEARCH,  
COLLEGE OF EDUCATION, UNIVERSITY OF ILLINOIS,  
URBANA, ILLINOIS

(BULLETINS OUT OF PRINT ARE NOT LISTED)

	Price
No. 1. Buckingham, B. R. Bureau of Educational Research, Announcement, 1918-19	.15
No. 5. Monroe, Walter S. Report of Division of Educational Tests for 1919-20.....	.25
No. 6. Monroe, Walter S. The Illinois Examination.....	.50
No. 7. Monroe, Walter S. Types of Learning Required of Pupils in the Seventh and Eighth Grades and in the High School.....	.15
No. 13. Monroe, Walter S. and Foster, I. O. The Status of the Social Sciences in the High Schools of the North Central Association.....	.50
No. 15. Monroe, Walter S. The Constant and Variable Errors of Educational Measurements.....	.25
No. 16. Odell, Charles W. An Annotated Bibliography Dealing with the Classification and Instruction of Pupils to Provide for Individual Differences.....	.50
No. 18. Streitz, Ruth. Teachers' Difficulties in Arithmetic and Their Correctives.....	.30
No. 19. Odell, Charles W. The Progress and Elimination of School Children in Illinois	.50
No. 21. Monroe, Walter S. (Director). A Survey of the City Schools of Marion, Illinois	.50
No. 22. Odell, Charles W. Conservation of Intelligence in Illinois High Schools.....	.30
No. 24. Seybolt, Robert Francis. The Evening School in Colonial America.....	.50
No. 29. Odell, Charles W., assisted by Blough, John H. An Annotated Bibliography Dealing with Extra-Curricular Activities in Elementary and High Schools...	.50
No. 30. Monroe, Walter S. The Duties of Men Engaged as Physical Directors or Athletic Coaches in High Schools.....	.25
No. 31. Monroe, Walter S., assisted by Clark, John A. The Teacher's Responsibility for Devising Learning Exercises in Arithmetic.....	.50
No. 33. Monroe, Walter S. and Herriott, M. E. Objectives of United States History in Grades Seven and Eight.....	.30
No. 34. Odell, Charles W. Are College Students a Select Group?.....	.25
No. 35. Ojemann, R. H. The Constant and Variable Occupations of the United States in 1920.....	.25
No. 39. Monroe, Walter S., Hindman, Darwin A., and Lundin, Roy S. Two Illustrations of Curriculum Construction.....	.50
No. 41. Monroe, Walter S. and Herriott, M. E. Reconstruction of the Secondary-School Curriculum: Its Meaning and Trends.....	.50
No. 42. Monroe, Walter S., Odell, Charles W., Herriott, M. E., Engelhart, Max D., and Hull, Mabel R. Ten Years of Educational Research, 1918-1927.....	1.00
No. 43. Odell, Charles W. A Selected Annotated Bibliography Dealing with Examinations and School Marks.....	.50
No. 44. Monroe, Walter S. How Pupils Solve Problems in Arithmetic.....	.50
No. 45. Odell, Charles W. A Critical Study of Measures of Achievement Relative to Capacity.....	.50
No. 46. Odell, Charles W. The Use of Scales for Rating Pupils' Answers to Thought Questions.....	.50
No. 47. Herriott, M. E. Attitudes as Factors of Scholastic Success.....	.50
No. 48. Monroe, Walter S. and Engelhart, Max D. Experimental Research in Education	.50
No. 49. Odell, Charles W. Summer Work in Public Schools.....	.30
No. 50. Monroe, Walter S., Hamilton, Thomas T., Jr., and Smith, V. T. Locating Educational Information in Published Sources.....	.50
No. 51. Monroe, Walter S. and Engelhart, Max D. Stimulating Learning Activity....	.30
No. 52. Odell, Charles W. Predicting the Scholastic Success of College Students....	.30
No. 53. Members of the Senior Class, University High School, 1930. A Project in Fourth-Year English Composition—A Description of the University High School.....	.30
No. 54. Proceedings of the Annual Conference of the Faculty of the College of Education, University of Illinois, with the Superintendents of Schools of Illinois. Urbana, Illinois, November 20, 1930.....	.30
No. 55. Gregg, Russell T., and Hamilton, Thomas T., Jr. Annotated Bibliography of Graduate Theses in Education at the University of Illinois.....	.50
No. 56. Hendrix, S. Gertrude. Teaching Devices on the High-School Level.....	.30
No. 57. Clevinger, Arthur W. and Odell, Charles W. High-School Libraries in Illinois	.30
No. 58. Monroe, Walter S. and Engelhart, Max D. A Critical Summary of Research Relating to the Teaching of Arithmetic.....	.50
No. 59. Odell, Charles W. Provisions for Mentally Atypical Pupils.....	.30













UNIVERSITY OF ILLINOIS-URBANA



3 0112 065081959