DIRECTING LEARNING IN THE HIGH SCHOOL

BY

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PREFACE

THIS volume is a product of the author's experience in giving instruction in methods of teaching and in several other phases of the field of education. This experience has been supplemented by an extended study of the courses for the professional training of teachers in a large number of institutions.[1] The scope of the volume and the general point of view is described in the first chapter and hence need not be given here. The underlying philosophy is eclectic. An effort has been made to present a coherent exposition of the basic principles of teaching as represented by the best of our educational thinking and practice.

In view of the fact that a large number of texts on methods of teaching are available, the publication of a new one requires justification. The recent contributions of educational research probably are sufficient to justify the appearance of a text that makes the results of investigations more accessible to prospective teachers. As will be apparent to the reader, the author has made use of the products of many studies and it is hoped the presentation of these represents a contribution in the field of teacher training. However, in the judgment of the author, there is a more significant justification for the publication of this volume.

In addition to being a treatise on methods of teaching, this volume is one unit of a coördinated series of texts

[1]MONROE, WALTER S. "The Undergraduate Curriculum in Education," *School and Society*, 24: 177-81, August 7, 1926.

in the field of education. For the most part our texts for the three basic courses in the training of secondary teachers—educational psychology, methods of teaching, and principles of secondary education—have been prepared by three groups of writers working independently. Texts on educational psychology have been written by specialists in that field who gave little consideration to the content of texts on methods of teaching; writers in the field of methods have not articulated their texts with those on educational psychology and have exhibited considerable variation in the selection of the topics treated as well as in the elaborateness of treatment; the authors of texts dealing with the principles of secondary education and its organization have invaded both educational psychology and methods of teaching and also have introduced technical administrative topics. Considered separately, a number of the texts possess much merit, but frequently a combination of texts selected for the basic courses exhibits undesirable overlapping in content as well as disturbing variations in terminology and points of view.

The author of this volume—*Directing Learning in the High School*—is also the co-author of the companion texts on educational psychology and principles of secondary education. The scope of each of the three texts as well as the boundaries between them are arbitrary, but the determinations were made after an extended study of the questions involved. There is some overlapping, but some recurrence of topics is desirable. The student needs to connect fundamental concepts and principles. Dynamic knowledge is organized knowledge. On the other hand, indiscriminate overlapping and recurrence is to be condemned and the author believes this has been avoided. In all cases the recurrence of a topic has been planned to fulfill a definite

function. Some topics are treated in two of the volumes and a few in all three, but the discussions tend to be complementary rather than duplications. The authors have endeavored to be consistent in the use of technical terms and to conform to the same general philosophy of education.

Although this volume is intended to represent a unit in a coördinated series, the author has endeavored to make its content such that it may be used in conjunction with other texts on educational psychology and principles of secondary education. References have been made to most of those which are widely used.

The field of methods of teaching includes many topics. Although some grouping is possible, considerable separation is necessary in a text. The students' comprehension, however, should be unified. In order to facilitate the attainment of this objective this volume has been divided into only seventeen chapters. Hence when used as a text for a semester course of three hours, the student's attention will be focused upon the same general topic for approximately one week. Furthermore, Chapters VI to IX and Chapters XI to XIV are divisions of larger units. Numerous cross references are intended to assist the reader in organizing what he learns about methods of teaching, and the final chapter on lesson planning affords the opportunity for a review and application of the preceding chapters.

The reader will observe that the author is heavily indebted to many writers. In addition to the contributions for which specific acknowledgment is made, he is indebted to such writers as Bagley, Charters, Dewey, Parker, and Thorndike for general stimulation and guidance in his thinking. He also acknowledges his indebtedness to the

members of his classes who have stimulated his thinking and who have afforded opportunities for trying out the discussion of various topics, and to his colleagues who have offered criticisms and suggestions. Specific mention should be made of Mrs. Charles Hughes Johnston who read a preliminary draft critically and who contributed a number of the learning exercises; and of Dr. O. F. Weber, University of Illinois, and Dr. J. C. DeVoss, State Teachers College, San Jose, California, who have read the entire manuscript. To Lula R. Monroe the author owes much for encouragement and for labor in preparing the manuscript.

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CONTENTS

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CHAPTER I

INTRODUCTION

What should one learn from the study of methods of teaching?—The following chapters of this volume represent an attempt to answer this question in detail, but it may be noted here that probably the most important item of this phase of the teacher's professional equipment is a concept of the learning process that will function as a pattern for his thinking about questions relating to instructional procedures. This concept should be supplemented by a clear understanding of the nature of the teacher's task.

The learning process characterized by activity.—From the standpoint of the problems of methods of teaching, the most significant characteristic of the learning process is the activity of the learner.[1] Children acquire motor skills, memorized facts, knowledge, ideals, and other controls of conduct as the result of perceiving, thinking, doing, and feeling. A child's mind is not a blank tablet on which the teacher may directly write the things which he wishes

[1]This characteristic of learning is emphasized by: BAGLEY, W. C., and KEITH, J. A. H.—*An Introduction to Teaching*. New York: The Macmillan Company, 1924, p. 28 f. PARKER, S. C.—*Methods of Teaching in High Schools, Revised Edition*. Boston: Ginn and Company, 1910, Chapter XII.

the child to learn. The child educates himself by participating in such activities as reading textbooks, doing exercises in algebra, solving problems, writing themes, listening to explanations by the teacher, observing what goes on about him, describing what he has done or seen, answering questions orally, asking questions, writing examination papers, making a chair in the shop, preparing a meal in the laboratory, playing in the school orchestra, and listening to concerts and other entertainments. It is only through engaging in such activities that the child learns. The teacher cannot communicate skills, ideas, facts, principles, and ideals directly to the student; knowledge is not transferred from a textbook to the learner's mind. Learning is a process of growth. The child is not something to be moulded by the application of external pressure, but is rather a living thing whose mental growth is to be directed largely by the school.

The preceding paragraph is not presented as a definition of the learning processes, but rather to provide a point of view which will be maintained throughout the following chapters. The reader should endeavor to master this point of view, which is sometimes referred to as the "principle of self-activity in learning," because it furnishes the only rational basis for the consideration of problems relating to instructional procedures. The principle of self-activity is generally accepted in theory but not infrequently it is violated in practice.[2] Our pedagogical vocabulary includes many words and phrases whose meanings retain traces of the concept of learning as a passive process in which the teacher rather than the pupil is the active agent. It is not

[1]The principle of self-activity is not a new concept but its present acceptance is due largely to Froebel (1782–1852), Francis W. Parker (1837–1902), and John Dewey (1859–

unusual to read that a teacher "imparts" knowledge and is responsible for "making his subject interesting," that he is expected to "explain" or "demonstrate," that his function is to "communicate" what he knows to his students, that the teacher "adds new knowledge," that the teacher must "prepare" his students for a new topic and then conform to certain principles in "presenting" it. Even such terms as subject-matter, content, textbook, and curriculum are frequently used in a way which implies that learning is at best a process of passive absorption. It is, of course, improbable that any person who has studied modern psychology would agree with these implications if asked explicitly concerning them, but contacts with students in education courses and with teachers have convinced the writer that the blank tablet theory of learning still functions in the thinking of many persons and in much of our educational practice.

The teacher's task.—The concept of the learning process as one in which the student is the active agent, should be supplemented by a clear understanding of the teacher's task as an instructor. If students learn only as the result of their own activities, what is the function of the teacher? The popular concept of the instructional duties of a teacher is indicated by the very general use of "recitation" as the name for the activities of the class period. Since this term is defined as "the rehearsal of a prepared lesson by the pupils before their instructor," the same concept of the teacher's task is expressed when teaching is described as "lesson hearing." Until recently this was a reasonably truthful description and even to-day the activities of many teachers do not extend much beyond the hearing of lessons.

The history of educational practice, especially since

1890, reveals a number of attempts to replace "lesson hearing" by a more efficient instructional procedure,[1] and gradually there has been built up a concept of the teacher's task which is epitomized by saying he is responsible for stimulating and directing children in appropriate learning activities. The teacher's activities in planning recitations or lectures, in conferences with his students, during the periods of recitation or study, and in measuring the achievements of his students are only means to these ends.[2]

The phrase "appropriate learning activities" is significant in determining the meaning of this description of the teacher's task. It is not sufficient to secure any sort of student activity. Two general classes of activities are inappropriate: first, activities that result in the acquisition of wrong habits and other undesirable controls of conduct, and second, those that represent inefficient learning. For example, the memorization of pages of a textbook in history is generally considered an inefficient learning activity because ability to repeat from memory extended passages is not often a valuable control of conduct. A critical analysis of a literary masterpiece is generally considered an inappropriate learning activity for high-school students. Listening to a formal lecture by the teacher is also generally condemned on the ground that children seldom learn much from participating in it.

Participation in learning activities is secured in two

[1]Some of the more significant attempts are commonly referred to by the following titles: object teaching, development method (Herbartian five formal steps), topical method, unprepared lesson, laboratory method, socialized recitation, and project method. See Index for references to descriptions of these procedures.

[2]"The educator's part in the enterprise of education is to furnish the environment which stimulates responses and directs the learner's course." DEWEY, JOHN—*Democracy and Education*. New York: The Macmillan Company, 1916, p. 212.

ways: (1) by assigning exercises, and (2) by discovering what students want to do and guiding their efforts to do these things so that they will engage in appropriate learning activities. The latter procedure is known as the "project method" and the first one may be designated as the "assignment method." In the following chapters it is assumed that most of the educative activity of high-school students is based on assigned exercises.[1] A teacher's success as an instructor depends upon his skill and judgment in devising appropriate learning exercises fully as much as upon his skill in carrying out the subsequent phases of instruction. If one seeks the causes of cases of poor classroom teaching, frequently he will find that a fundamental reason for the condition is the failure of the teacher to assign appropriate learning exercises. He either omits assignments, or assigns only indefinite and general exercises.

After appropriate learning exercises have been devised or selected, the teacher is responsible for stimulating and guiding his students in doing them. It should, however, be noted that "guiding" students does not mean making school work easy. Sometimes direct assistance may be given to the students, but in so far as the elimination of difficulties is accompanied by a lessening of student activity, a teacher hinders rather than facilitates learning. On the other hand, the efficient teacher guides the learner by questions, suggestions, and illustrations so that his efforts will be expended profitably. This does not mean that the learner should be guided so that he will never make a

[1]Authorities in the field of methods of teaching do not agree in regard to the relative efficiency of these two general instructional procedures. See Chapter XIV for the discussion of this question. Some experimental evidence in favor of the "assignment method" is furnished by: GATES, A. I.—"A Modern Systematic versus an Opportunistic Method of Teaching," *Teachers College Record* 27: 679–700, April, 1926.

mistake. Sometimes we learn more from our failures than we do from our successes.

Phases of stimulating and directing learning.—The "stimulation and direction of learning activity" which forms the central topic of the following chapters includes the following phases:

I. Devising and selecting appropriate learning exercises.
II. Assigning these exercises.
III. Motivating the doing of them.
IV. Giving advice and suggestions to students in regard to doing the assigned exercises.
V. Evaluating (testing) student achievements.
VI. Devising and assigning supplementary learning exercises when the evaluation reveals unsatisfactory conditions.
VII. Giving direct assistance when justified.

In the accomplishment of these tasks the teacher asks questions; he answers questions asked by the students; he explains the meaning of words; sometimes he gives a model solution of a problem; he demonstrates how things should be done in the laboratory and shop; he marks written work; he reproves students who are disorderly or negligent; and he commends students who have done well. In the accomplishment of these and all the other things which a teacher does, he employs certain procedures or techniques of teaching. In order to be successful a teacher must become skilful in the application of these techniques and also must learn to do the right thing at the right time.

Related phases of the teacher's task.—Although the analysis of the teacher's task just given emphasizes the central phases, there are certain additional items that deserve mention. It is important that the teacher become

acquainted with the general mental and emotional traits of the students he is instructing. This topic is one of the important problems of educational psychology, a basic course in the training of teaching. For this reason it will receive only incidental consideration in the following chapters of this volume.[1]

It is essential that the teacher have a clear understanding of what his students should learn in the field of the subject in which he is instructing. In the absence of clearly defined objectives, the teacher's efforts to stimulate and direct learning activity are not likely to be efficient. A phase of educational objectives will be considered in Chapter III, but an extended treatment of what high-school students should learn in the different subjects would take us outside the field of methods of teaching.[2]

If learning is to take place on a high level of efficiency, it is necessary that order be maintained in the classroom, that the temperature, ventilation, and lighting be looked after, that apparatus and other materials be secured and properly cared for, and that a course of study be planned and textbooks selected. These things, however, are only prerequisites for the fundamental work of the teacher, the stimulation and direction of students in the doing of ap-

[1]In case the reader has not had a course in educational psychology he will find it helpful to become familiar with a text in this field. *Educational Psychology* by MONROE, WALTER S., and DE VOSS, JAMES C., has been written as a companion to this volume on methods of teaching. Other standard texts on educational psychology are: GATES, ARTHUR I.—*Psychology for Students of Education.* New York: The Macmillan Company, 1923, 489 pp. THORNDIKE, EDWARD L.—*Educational Psychology*, Briefer Course. New York: Teachers College, Columbia University, 1914, 442 pp. CAMERON, EDWARD H.—*Psychology and the School.* New York: The Century Company, 1921, 339 pp. STARCH, DANIEL.—*Educational Psychology*, New York: The Macmillan Company, 1919, 473 pp.

[2]The reader will find a comprehensive treatment of the objectives of the high school in: MONROE, WALTER S., and WEBER, OSCAR F.—*The High School.* Garden City, N. Y.: Doubleday, Page and Company (to be published).

propriate learning exercises. In making the preceding statement and in subordinating the consideration of classroom management in the following chapters, the author does not intend to imply that a teacher should consider this phase of his task relatively unimportant. On the contrary, it is very important. In fact, it has been stated frequently that more teachers fail to achieve success as teachers because they are weak in the management of their classes than for any other single reason. On the other hand, merely managing a class well does not constitute good teaching.[1]

Stimulating and directing learning not a mechanical procedure.—Although the teacher's task has been described in terms of certain activities, it is not in any sense a mechanical procedure. Certain aspects of teaching such as the seating of a class, taking the roll, distributing and collecting materials, marking written work, and the like may appropriately be mechanized; but for the most part the teacher is constantly required to make decisions in regard to what to do and when to do it. We describe the teacher who has mechanized his work by saying that "he has gotten into a rut."

The problem of class instruction.—In our high schools students are assembled in classes, sometimes including thirty or more members. In general, the students who are grouped together for instructional purposes differ in ability to do the learning exercises that the teacher assigns. Some will be able to do them rapidly and with relatively little effort; others will find them difficult; and still others may not be able to do the more difficult. Furthermore, the students will differ with respect to their interest in school work. Some will be immediately interested in doing the

[1]See Chapter XI for the explicit treatment of classroom management.

learning exercises assigned; others will be indifferent or even hostile and the teacher will find it difficult to stimulate effective participation in school work. Some students will profit greatly from the doing of a given learning exercise; others will learn little from the experience. Thus the handling of students in groups necessarily complicates the teacher's task. It is necessary that he adapt his teaching procedures to the needs and characteristics of the various members of his class, even though he is compelled by the organization of his school to work with the group as a whole most of the time.[1]

Teacher activity versus activity of the learner.—We have already pointed out that learning is an active process and that the activity of the teacher is only for the purpose of stimulating and directing students in doing appropriate learning exercises. The things which the teacher does (teacher activities) and the things which students do in learning (student activities) are frequently confused. This is indicated by the erroneous use of "learn" for "teach" in such expressions as, "The teacher did not learn the children anything." This statement does not mention student activity and implies that what children learn is directly dependent upon the activity of the teacher. This implication, which appears to be involved in the thinking of many persons,[2] is opposed to the principle of self-activity stated at the beginning of this chapter.

In considering the problems of instruction it is highly important that there be at all times a clear distinction between these two types of activity. The things which the teacher does are merely for the purpose of stimulating and

[1]The explicit treatment of adapting instruction to individual differences is deferred until Chapter XII.

[2]For example, see the statements of aims quoted from Colvin in Chapter XVII.

directing the learner and are not ends in themselves. The student can learn only as a result of his own activity. Furthermore, the things which the teacher should do are very different from the things which a learner must do.

In the following chapters of this book we shall be primarily concerned with the procedures and techniques of teaching (teacher activity), but, of course, we shall find it necessary to have a clear understanding of the learning process (student activity) in order to make our consideration of teaching procedures something more than superficial. Hence, the discussion at times may relate to the activity of learning but this will be for the purpose of providing a rational basis for considering teaching techniques.

General methods versus special methods.—Learning exercises in algebra differ in many respects from those in history. They differ even from those in geometry. Learning exercises in a foreign language are not like those in a laboratory science or in a course in manual training. Since such differences exist, many of the details of the task of a teacher of one high-school subject will differ in a number of respects from those of a teacher of another subject. For this reason some writers on methods of teaching have expressed the conviction that the consideration of teaching in high schools should be taken up in separate "courses in special methods" rather than in a general course. According to this proposal a prospective teacher would study the techniques of teaching only in one or more special methods courses, each of which deals with the teaching of only one high-school subject. He would not take a course in general methods such as this text is designed for. However, the general practice in teachers' colleges and departments of education is to require a course in general methods which