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# TEACHING CHILDREN TO STUDY

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# PREFACE

THE problem of teaching children to study, towards the solution of which this volume is offered, was presented before a class in Teachers College, Columbia University, during the year 1905–06, by Dr. Frank M. McMurry, Professor of Elementary Education. It is largely due to his particular encouragement and assistance that the author undertook the special investigation of the problem of teaching children to study. To Professor McMurry, and also to Professors G. D. Strayer and Henry Suzzallo, both of Teachers College, a great debt is due for counsel and direction freely given during the years which this study has occupied.

The attempt to solve this problem necessitated the employment of philosophy on the one side, to establish the nature and function of study, and the use of experimental and psychological method on the other, to determine the ability of pupils to study logically and also the possibility of training them into correct habits of study. Schoolroom visitation and the *questionnaire* were also employed to throw light upon the teachers' ideas of

study, present practice in training pupils to study, and the ability of children to study. The field to be covered proved to be a very broad one, but interest grew as the work proceeded, not only because an entirely new light was thrown upon schoolroom procedure, but also because of the attitude of the teachers themselves towards the problem. Many expressed the earnest wish that results might be worked out which would bring help to them in their efforts to teach their classes.

To meet the needs of these teachers and others, the original report, "Systematic Study in the Elementary Schools," has been rewritten in fuller and simpler form so as to make it more usable and helpful; the present book is the result. It carries the author's greetings to her companions of the schoolroom.

Those who desire details in regard to the experiments and *questionnaires*, and who care to consult the tabulated results, are referred to the book "Systematic Study in the Elementary Schools," Bureau of Publication, Teachers College. Other books bearing upon special phases of the subject are referred to in the text.

L. B. E.

# EDITOR'S INTRODUCTION

*The failure of the reactionary*

THERE is a feeling that our schools are over-burdening our children with subjects for study, and that a kind of superficial training results. Many believe that we ought to return to the simple curriculum of our colonial fathers, to fewer subjects and more particularly to those which are sometimes called "fundamentals," — reading, writing, arithmetic, and the like. This species of discontent has been noticeable for more than a decade. Yet in spite of every form of opposition, the newer subjects of the course of study persist. The reactionary has failed to make any considerable headway. New aspects of training, even, have been added to the school's functions.

*The latest conscious function of the school*

Of the new functions which the school is consciously assuming, there is one which promises to be epoch-making in the development of teaching methods. The deliberate effort to teach children to study is more than an addition to the school's tasks; it is a change in the emphasis of

school instruction. Hitherto the teacher has spent most of his time in transmitting to the child the symbols of language and the facts of knowledge. To teach the child to read, to write, to figure; to make him memorize the important facts of history, geography, and literature, — such were the functions of the elementary schools till within recent years. Hereafter the school bids fair to devote its best energies, not to memorization, but to teaching the child how to think, how to direct his own conduct intelligently, how to study without constant dependence on the teacher. In the old school the teacher did the thinking and most of the talking, while the child did the memorizing. In the new school the child will do the thinking and most of the talking, while the teacher will restrict himself to a thoughtful stimulation and direction of the process.

*Its effect on the crowded curriculum*

To those who would loudly decry the addition of a new function to the school, it may be said that such an addition does not imply a new burden for the child and the teacher. In the specific case of teaching children to study it implies relief from the over-crowding of school life, rather than further congestion. If a child learns how to

direct his observations, to read his books, to organize his facts, and to apply his knowledge, the school is no longer responsible for teaching him every fact for which life will call. He has power equal to his needs as they confront him in life. Now that he knows the uses of his mind and his books, he can make up any chance defect. His days of learning do not end with graduation from school. Under such conditions as these the demand of the course of study will be less for all the facts of a subject than for the typical ones. The independent qualities of mind required to understand and comprehend them will provide the rest.

### *Purpose of this monograph*

The newness and the importance of the movement for teaching children to study require that teachers and parents be competent to supervise the learning process. They will need to know the nature of independent thinking, its various modes, the conditions favorable to its development, and the methods by which it may be strengthened as a personal power. The monograph here presented will be of large service to all who are interested in the problem. It is based upon extensive investigations of children's habits of mind under

classroom conditions. It is rich in suggestions as to concrete ways in which pupils may be brought to a high degree of ability in the self-direction of their intellectual inquiries. It should, more than any other document now in print, aid teachers in their efforts to train self-reliant men and women.

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# I

# THE NATURE OF LOGICAL STUDY

## 1. *The universal necessity for study*

THROUGH the whole course of our lives we are confronted with situations the successful mastery of which compels mental effort. Whether the tasks laid upon us are assigned in school or outside of school, and whether we wish to do so or not, we must struggle mentally. In the sense that it gives us frequent occasion to study, life itself may be called a school. In this school all are enrolled, from the youngest child to the wisest philosopher. Whittier indicated a few of the out-of-school lessons in his poem, "The Barefoot Boy": —

> "Knowledge never learned of schools,
> Of the wild bee's morning chase,
> Of the wild-flower's time and place,
> Flight of fowl and habitude
> Of the tenants of the wood;
> How the tortoise bears his shell,
> How the woodchuck digs his cell,
> And the ground-mole sinks his well;

How the robin feeds her young,
How the oriole's nest is hung;
Where the whitest lilies blow,
Where the freshest berries grow,
Where the ground-nut trails its vine,
Where the wood-grape's clusters shine;
Of the black wasp's cunning way,
Mason of his walls of clay,
And the architectural plans
Of gray hornet artisans!"

Some thousands of years ago a number of problems in the form of a series of questions were proposed which the scientists and philosophers have not yet worked out to a final conclusion. The series begins thus: "Where wast thou when I laid the foundations of the earth? declare, if thou hast understanding. Who hath laid the measures thereof, if thou knowest? or who hath stretched the line upon it?"[1]

The present age is full of problems, some of them inherited, and some peculiar to itself. We find people occupied in determining how to reach the north pole, how to navigate the air, how to prevent and cure diseases, how to earn a living, how to keep expenditures within the bounds of one's income, how to train and educate children, how to square conduct with ideals, and how to

[1] Job xxxviii.

solve innumerable other puzzling questions of varying importance.

2. *The inadequacy of instincts to solve problems*

Because human beings are not born with a full set of fixed instincts which control their activities in every circumstance when action is required, it is clear that people must often think about what they do. They must determine how they shall act and what associations of ideas they shall make. For example, there is no instinct which will carry us inevitably into our life-work, nor which, when we have chosen our careers, will determine the means by which we shall pursue them successfully. Neither does instinct settle the general question as to whether honesty or dishonesty is better on the whole, or which of the two is better in some particular case. We are all compelled to be students since we cannot dismiss our problems at will and lead that careless existence which is something less than real living.

3. *The need of learning how to study*

Among the subjects of study with which people might profitably occupy themselves, there is one of great importance which, as yet, has received little consideration, and that is the process of

studying itself. Unless by nature we study in the right way, we must either be taught to do so, or else there will be waste of energy, loss of time, and sometimes either incorrect results, or no results at all. Investigation shows that neither children nor adults naturally study as they should. The right method must be learned in some way, if it is acquired at all. Individuals must either work out a method for themselves, more or less consciously, or they must be taught how to study by others who have already learned.

### 4. *The nature of study*

We are confronted, then, by these two conditions: (1) that all people have occasion to study, and (2) that people on the whole do not study as well as they should. If we attempt to meet the situation by teaching people how to study, we at once find that we must be acquainted with the nature of the process before we can teach it. We need to know the basis of it and the various steps involved in it before we can train others in its use. This is the problem which confronts parents and teachers, since they are the ones who must teach children how to study, and it is for parents and teachers that this book is mainly intended.

First of all, some definition of the term *study* is

necessary in order that misunderstanding may be avoided and that we may know our problem definitely. Studying in its highest sense is the process of assimilating knowledge, of reorganizing experience. As ordinarily employed, the term studying often means much less than this, and includes any mental activity directed towards the accomplishment of some end, whether that end be the memorizing of facts in a geography lesson, the learning of a story in reading, or the mastering of a list of words in spelling. In this common usage of the word it includes the mind's activity that is directed towards the acquisition of ideas, whether these ideas become an organic part of knowledge or not. Learning dates in history, and committing poems and definitions to memory do not always involve the assimilation of knowledge, yet teachers call the effort to accomplish these tasks by the same name that is applied to the mental efforts of a philosopher who is engaged upon some weighty problem. The two kinds of studying are quite different. The one is more mechanical than the other and results largely in accretion of facts. The other is organic and results in rearrangement and assimilation of ideas; in short, it involves thinking. It is this latter form of mental activity, which is generally acknow-

ledged to be of a higher type than the first, that is the object of investigation and discussion in this book.

When teachers are asked what they think studying is, many of them say that studying means to imagine, to memorize, to apperceive, to think. In other words, they mean that studying is a psychological process. But these answers do not furnish much of a clue to the proper method of teaching people how to study because they do not show when or how one shall imagine, memorize, apperceive, or think. There must be some other explanation of the process than an enumeration of the psychological states that may or may not be involved, if we are to understand it fully and to be able to teach it intelligently. This explanation we shall now seek.

### 5. *The kind of thinking employed in studying*

It has been said that proper study involves thinking. The thinking which is employed in studying is reflective or purposive as distinguished from spontaneous thinking. In the latter sort, the ideas are not controlled by the thinker. They come and go at random. But in reflective or purposive thinking, there is a definite end in view and the ideas are selected and controlled so as to

accomplish this end. When a person gives the rein to fancy and lets his thoughts wander where they will, his thinking is of the spontaneous kind; but when he sets himself to accomplish some task, to solve a problem, or to find the way out of some difficulty, he controls his thoughts and chooses or rejects the ideas which come into consciousness, taking as the basis of his choice the bearing which these ideas have upon the end he is trying to reach.

### 6. *The origin or source of the problem*

It is just this consciousness of some end in the form of a problem which causes the thinking and governs its course. In the determination of this problem lies the logical basis of study; hence it is important to know whence and how it is derived, and by whom it must be felt as a problem if it is to influence thought.

#### a. *Failure of habitual modes of thought and action*

Problems frequently arise because for some reason our habitual ways of acting or thinking cannot be employed. An entirely new situation, or some change in an old one, may break up our usual way of doing things, and compel us to seek for a plan of action that will meet the new conditions. A

flood, a fire, a financial panic, the loss of some tool or utensil, a blockade of the street-car system, the stopping of a watch, the increased cost of foodstuffs, — any one of these may prove a serious problem and compel thought in order to master the new situation. Such apparent dilemmas arise frequently in connection with nature study, geography, arithmetic, and other school studies, as well as in connection with the formal routine of schoolroom procedure. For example, a child's idea of a desert is frequently found to be that it is a place where nothing can grow. When confronted with the statement of the fact that certain places, hitherto deserts, are now very productive, he is face to face with a difficulty which should furnish him with a valuable problem. The pupil who comes upon a verbal noun for the first time may find that it puzzles him to classify it properly as a part of speech. Similarly in arithmetic, there are problems varying sufficiently from those already mastered to cause the degree of thought needed to analyze and master them.

b. *The need of relating new knowledge to old*

Sometimes the problem originates in the attempt to relate some new fact to the knowledge already possessed, as in the case of the pupil and