

# JOHN DEWEY ON EDUCATION

*Selected Writings*

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*Edited and with an Introduction by*

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NEW YORK

## THE RELATION OF THEORY TO PRACTICE IN EDUCATION \*<sup>1</sup>

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It is difficult, if not impossible, to define the proper relationship of theory and practice without a preliminary discussion, respectively, (1) of the nature and aim of theory; (2) of practice.

A. I shall assume without argument that adequate professional instruction of teachers is not exclusively theoretical, but involves a certain amount of practical work. The primary question as to the latter is the aim with which it shall be conducted. Two controlling purposes may be entertained so different from each other as radically to alter the amount, conditions, and method of practice work. On one hand, we may carry on the practical work with the object of giving teachers in training working command of the necessary tools of their profession; control of the technique of class instruction and management; skill and proficiency in the work of teaching. With this aim in view, practice work is, as far as it

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\* This selection appeared originally in National Society for the Scientific Study of Education, *Third Yearbook*, Part I, 1904.

<sup>1</sup> This paper is to be taken as representing the views of the writer, rather than those of any particular institution in an official way; for the writer thought it better to discuss certain principles that seem to him fundamental, rather than to define a system of procedure.

goes, of the nature of apprenticeship. On the other hand, we may propose to use practice work as an instrument in making real and vital theoretical instruction; the knowledge of subject-matter and of principles of education. This is the laboratory point of view.

The contrast between the two points of view is obvious; and the two aims together give the limiting terms within which all practice work falls. From one point of view, the aim is to form and equip the actual teacher; the aim is immediately as well as ultimately practical. From the other point of view, the *immediate* aim, the way of getting at the ultimate aim, is to supply the intellectual method and material of good workmanship, instead of making on the spot, as it were, an efficient workman. Practice work thus considered is administered primarily with reference to the intellectual reactions it incites, giving the student a better hold upon the educational significance of the subject-matter he is acquiring, and of the science, philosophy, and history of education. Of course, the *results* are not exclusive. It would be very strange if practice work in doing what the laboratory does for a student of physics or chemistry in way of securing a more vital understanding of its principles, should not at the same time insure some skill in the instruction and management of a class. It would also be peculiar if the process of acquiring such skill should not also incidentally serve to enlighten and enrich instruction in subject-matter and the theory of education. None the less, there is a fundamental difference in the conception and conduct of the practice work according as one idea or the other is dominant and the other subordinate. If the primary object of practice is acquiring skill in performing the duties of a teacher, then the amount of time given to practice work, the place at which it is introduced, the method of conducting it, of supervising, criticising, and correlating it, will differ widely from the method where the laboratory ideal prevails; and *vice versa*.

In discussing this matter, I shall try to present what I have termed the laboratory, as distinct from the apprentice idea. While I speak primarily from the standpoint of the college, I should not be frank if I did not say that I believe what I am

going to say holds, *mutatis mutandis*, for the normal school as well.

I. I first adduce the example of other professional schools. I doubt whether we, as educators, keep in mind with sufficient constancy the fact that the problem of training teachers is one species of a more generic affair—that of training for professions. Our problem is akin to that of training architects, engineers, doctors, lawyers, etc. Moreover, since (shameful and incredible as it seems) the vocation of teaching is practically the last to recognize the need of specific professional preparation, there is all the more reason for teachers to try to find what they may learn from the more extensive and matured experience of other callings. If now we turn to what has happened in the history of training for other professions, we find the following marked tendencies:

1. The demand for an increased amount of scholastic attainments as a prerequisite for entering upon professional work.

2. Development of certain lines of work in the applied sciences and arts, as centers of professional work; compare, for example, the place occupied by chemistry and physiology in medical training at present, with that occupied by chairs of "practice" and of "*materia medica*" a generation ago.

3. Arrangement of the practical and quasi-professional work upon the assumption that (limits of time, etc., being taken into account) the professional school does its best for its students when it gives them typical and intensive, rather than extensive and detailed, practice. It aims, in a word, at *control of the intellectual methods* required for personal and independent mastery of practical skill, rather than at turning out at once masters of the craft. This arrangement necessarily involves considerable postponement of skill in the routine and technique of the profession, until the student, after graduation, enters upon the pursuit of his calling.

These results are all the more important to us because other professional schools mostly started from the same position which training schools for teachers have occupied. Their history shows a period in which the idea was that students

ought from the start to be made as proficient as possible in practical skill. In seeking for the motive forces which have caused professional schools to travel so steadily away from this position and toward the idea that practical work should be conducted for the sake of vitalizing and illuminating *intellectual* methods two reasons may be singled out:

a) First, the limited time at the disposal of the schools, and the consequent need of economy in its employ. It is not necessary to assume that apprenticeship is of itself a bad thing. On the contrary, it may be admitted to be a good thing; but the time which a student spends in the training school is short at the best. Since short, it is an urgent matter that it be put to its most effective use; and, relatively speaking, the wise employ of this short time is in laying scientific foundations. These cannot be adequately secured when one is doing the actual work of the profession, while professional life does afford time for acquiring and perfecting skill of the more technical sort.

b) In the second place, there is inability to furnish in the school adequate conditions for the best acquiring and using of skill. As compared with actual practice, the best that the school of law or medicine can do is to provide a somewhat remote and simulated copy of the real thing. For such schools to attempt to give the skill which comes to those adequately prepared, insensibly and unavoidably in actual work, is the same sort of thing as for grammar schools to spend months upon months in trying to convey (usually quite unsuccessfully) that skill in commercial arithmetic which comes, under penalty of practical failure, in a few weeks in the bank or counting-house.

It may be said that the analogy does not hold good for teachers' training schools, because such institutions have model or practice departments, supplying conditions which are identical with those which the teacher has to meet in the actual pursuit of his calling. But this is true at most only in such normal schools as are organized after the Oswego pattern—schools, that is to say, where the pupil-teacher is given for a considerable period of time the entire charge of instruction and discipline in the class-room, and does not come un-

der a room critic-teacher. In all other cases, some of the most fundamentally significant features of the real school are reduced or eliminated. Most "practice schools" are a compromise. In theory they approximate ordinary conditions. As matter of fact, the "best interests of the children" are so safeguarded and supervised that the situation approaches learning to swim without going *too* near the water.

There are many ways that do not strike one at first glance, for removing the conditions of "practice work" from those of actual teaching. Deprivation of responsibility for the discipline of the room; the continued presence of an expert ready to suggest, to take matters into his own hands; close supervision; reduction of size of group taught; etc., etc., are some of these ways. The topic of "lesson plans" will be later referred to in connection with another topic. Here they may be alluded to as constituting one of the modes in which the conditions of the practice-teacher are made unreal. The student who prepares a number of more or less set lessons; who then has those lesson plans criticised; who then has his actual teaching criticised from the standpoint of success in carrying out the prearranged plans, is in a totally different attitude from the teacher who has to build up and modify his teaching plans as he goes along from experience gained in contact with pupils.

It would be difficult to find two things more remote from each other than the development of subject-matter under such control as is supplied from actual teaching, taking effect through the teacher's own initiative and reflective criticism, and its development with an eye fixed upon the judgment, presumed and actual, of a superior supervisory officer. Those phases of the problem of practice teaching which relate more distinctly to responsibility for the discipline of the room, or of the class, have received considerable attention in the past; but the more delicate and far-reaching matter of intellectual responsibility is too frequently ignored. Here enters the problem of securing conditions which will make practice work a genuine apprenticeship.

II. To place the emphasis upon the securing of proficiency in teaching and discipline *puts the attention of the student*

teacher in the wrong place, and tends to fix it in the wrong direction—not wrong absolutely, but relatively as regards perspective of needs and opportunities. The would-be teacher has some time or other to face and solve two problems, each extensive and serious enough by itself to demand absorbing and undivided attention. These two problems are:

1. Mastery of subject-matter from the standpoint of its educational value and use; or, what is the same thing, the mastery of educational principles in their application to that subject-matter which is at once the material of instruction and the basis of discipline and control;

2. The mastery of the technique of class management.

This does not mean that the two problems are in any way isolated or independent. On the contrary, they are strictly correlative. *But the mind of a student cannot give equal attention to both at the same time.*

The difficulties which face a beginning teacher, who is set down for the first time before a class of from thirty to sixty children, in the responsibilities not only of instruction, but of maintaining the required order in the room as a whole, are most trying. It is almost impossible for an old teacher who has acquired the requisite skill of doing two or three distinct things simultaneously—skill to see the room as a whole while hearing one individual in one class recite, of keeping the program of the day and, yes, of the week and of the month in the fringe of consciousness while the work of the hour is in its center—it is almost impossible for such a teacher to realize all the difficulties that confront the average beginner.

There is a technique of teaching, just as there is a technique of piano-playing. The technique, if it is to be educationally effective, is dependent upon principles. But it is possible for a student to acquire outward form of method without capacity to put it to genuinely educative use. As every teacher knows, children have an inner and an outer attention. The inner attention is the giving of the mind without reserve or qualification to the subject in hand. It is the first-hand and personal play of mental powers. As such, it is a fundamental condition of mental growth. To be able to keep track of this mental play, to rec-

ognize the signs of its presence or absence, to know how it is initiated and maintained, how to test it by results attained, and to test *apparent* results by it, is the supreme mark and criterion of a teacher. It means insight into soul-action, ability to discriminate the genuine from the sham, and capacity to further one and discourage the other.

External attention, on the other hand, is that given to the book or teacher as an independent object. It is manifested in certain conventional postures and physical attitudes rather than in the movement of thought. Children acquire great dexterity in exhibiting in conventional and expected ways the *form* of attention to school work, while reserving the inner play of their own thoughts, images, and emotions for subjects that are more important to them, but quite irrelevant.

Now, the teacher who is plunged prematurely into the pressing and practical problem of keeping order in the school-room has almost of necessity to make supreme the matter of external attention. The teacher has not yet had the training which affords psychological insight—which enables him to judge promptly (and therefore almost automatically) the kind and mode of subject-matter which the pupil needs at a given moment to keep his attention moving forward effectively and healthfully. He does know, however, that he must maintain order; that he must keep the attention of the pupils fixed upon his own questions, suggestions, instructions, and remarks, and upon their “lessons.” The inherent tendency of the situation therefore is for him to acquire his technique in relation to the outward rather than the inner mode of attention.

III. Along with this fixation of attention upon the secondary at the expense of the primary problem, *there goes the formation of habits of work which have an empirical, rather than a scientific, sanction.* The student adjusts his actual methods of teaching, not to the principles which he is acquiring, but to what he sees succeed and fail in an empirical way from moment to moment: to what he sees other teachers doing who are more experienced and successful in keeping order than he is; and to the injunctions and directions given him by others. In this way the controlling habits of the teacher finally gets fixed with comparatively little reference

to principles in the psychology, logic, and history of education. In theory, these latter are dominant; in practice, the moving forces are the devices and methods which are picked up through blind experimentation; through examples which are not rationalized; through precepts which are more or less arbitrary and mechanical; through advice based upon the experience of others. Here we have the explanation, in considerable part at least, of the dualism, the unconscious duplicity, which is one of the chief evils of the teaching profession. There is an enthusiastic devotion to certain principles of lofty theory in the abstract—principles of self-activity, self-control, intellectual and moral—and there is a school practice taking little heed of the official pedagogic creed. Theory and practice do not grow together out of and into the teacher's personal experience.

Ultimately there are two bases upon which the habits of a teacher as a teacher may be built up. They may be formed under the inspiration and constant criticism of intelligence, applying the best that is available. This is possible only where the would-be teacher has become fairly saturated with his subject-matter, and with his psychological and ethical philosophy of education. Only when such things have become incorporated in mental habit, have become part of the working tendencies of observation, insight, and reflection, will these principles work automatically, unconsciously, and hence promptly and effectively. And this means that practical work should be pursued primarily with reference to its reaction upon the professional pupil in making him a thoughtful and alert student of education, rather than to help him get immediate proficiency.

For immediate skill may be got at the cost of power to go on growing. The teacher who leaves the professional school with power in managing a class of children may appear to superior advantage the first day, the first week, the first month, or even the first year, as compared with some other teacher who has a much more vital command of the psychology, logic, and ethics of development. But later "progress" may with such consist only in perfecting and refining skill already possessed. Such persons seem to know how to

teach, but they are not students of teaching. Even though they go on studying books of pedagogy, reading teachers' journals, attending teachers' institutes, etc., yet the root of the matter is not in them, unless they continue to be students of subject-matter, and students of mind-activity. Unless a teacher is such a student, he may continue to improve in the mechanics of school management, but he can not grow as a teacher, an inspirer and director of soul-life. How often do candid instructors in training schools for teachers acknowledge disappointment in the later career of even their more promising candidates! They seem to strike twelve at the start. There is an unexpected and seemingly unaccountable failure to maintain steady growth. Is this in some part due to the undue premature stress laid in early practice work upon securing immediate capability in teaching?

I might go on to mention other evils which seem to me to be more or less the effect of this same cause. Among them are the lack of intellectual independence among teachers, their tendency to intellectual subserviency. The "model lesson" of the teachers' institute and of the educational journal is a monument, on the one hand, of the eagerness of those in authority to secure immediate practical results at any cost; and, upon the other, of the willingness of our teaching corps to accept without inquiry or criticism any method or device which seems to promise good results. Teachers, actual and intending, flock to those persons who give them clear-cut and definite instructions as to just how to teach this or that.

The tendency of educational development to proceed by reaction from one thing to another, to adopt for one year, or for a term of seven years, this or that new study or method of teaching, and then as abruptly to swing over to some new educational gospel, is a result which would be impossible if teachers were adequately moved by their own independent intelligence. The willingness of teachers, especially of those occupying administrative positions, to become submerged in the routine detail of their callings, to expend the bulk of their energy upon forms and rules and regulations, and reports and percentages, is another evidence of the absence of intellectual vitality. If teachers were possessed by the spirit of

an abiding student of education, this spirit would find some way of breaking through the mesh and coil of circumstance and would find expression for itself.

B. Let us turn from the practical side to the theoretical. What must be the aim and spirit of theory in order that practice work may really serve the purpose of an educational laboratory? We are met here with the belief that instruction in theory is merely theoretical, abstruse, remote, and therefore relatively useless to the teacher as a teacher, unless the student is at once set upon the work of teaching; that only "practice" can give a motive to a professional learning, and supply material for educational courses. It is not infrequently claimed (or at least unconsciously assumed) that students will not have a professional stimulus for their work in subject-matter and in educational psychology and history, will not have any outlook upon their relation to education, unless these things are immediately and simultaneously reinforced by setting the student upon the work of teaching. But is this the case? Or are there practical elements and bearings already contained in theoretical instruction of the proper sort?

I. Since it is impossible to cover in this paper all phases of the philosophy and science of education, I shall speak from the standpoint of psychology, believing that this may be taken as typical of the whole range of instruction in educational theory as such.

In the first place, beginning students have without any reference to immediate teaching a very large capital of an exceedingly practical sort in their own experience. The argument that theoretical instruction is merely abstract and in the air unless students are set at once to test and illustrate it by practice-teaching of their own, *overlooks the continuity of the class-room mental activity with that of other normal experience*. It ignores the tremendous importance for educational purposes of this continuity. Those who employ this argument seem to isolate the psychology of learning that goes on in the schoolroom from the psychology of learning found elsewhere.

This isolation is both unnecessary and harmful. It is un-

necessary, tending to futility, because it throws away or makes light of the greatest asset in the student's possession—the greatest, moreover, that ever will be in his possession—his own direct and personal experience. There is every presumption (since the student is not an imbecile) that he has been learning all the days of his life, and that he is still learning from day to day. He must accordingly have in his own experience plenty of practical material by which to illustrate and vitalize theoretical principles and laws of mental growth in the process of learning. Moreover, since none of us is brought up under ideal conditions, each beginning student has plenty of practical experience by which to illustrate cases of arrested development—instances of failure and maladaptation and retrogression, or even degeneration. The material at hand is pathological as well as healthy. It serves to embody and illustrate both achievement and failure, in the problem of learning.

But it is more than a serious mistake (violating the principle of proceeding from the known to the unknown) to fail to take account of this body of practical experience. Such ignoring tends also to perpetuate some of the greatest evils of current school methods. Just because the student's attention is not brought to the point of recognizing that *his own* past and present growth is proceeding in accordance with the very laws that control growth in the school, and that there is no psychology of the schoolroom different from that of the nursery, the playground, the street, and the parlor, he comes unconsciously to assume that education in the class-room is a sort of unique thing, having its own laws.<sup>2</sup> Unconsciously, but none the less surely, the student comes to believe in certain "methods" of learning, and hence of teaching which are somehow especially appropriate to the school—which somehow have their particular residence and application there. Hence he comes to believe in the potency for schoolroom purposes of materials, methods, and devices which it never occurs to him to trust to in his experience outside of school.

<sup>2</sup> There is where the plea for "adult" psychology has force. The person who does not know himself is not likely to know others. The adult psychology ought, however, to be just as genetic as that of childhood.

I know a teacher of teachers who is accustomed to say that when she fails to make clear to a class of teachers some point relative to children, she asks these teachers to stop thinking of their own pupils and to think of some nephew, niece, cousin, some child of whom they have acquaintance in the informalities of home life. I do not suppose any great argument is needed to prove that breach of continuity between learning within and without the school is the great cause in education of wasted power and misdirected effort. I wish rather to take advantage of this assumption (which I think will be generally accepted) to emphasize the danger of bringing the would-be teacher into an abrupt and dislocated contact with the psychology of the schoolroom—abrupt and dislocated because not prepared for by prior practice in selecting and organizing the relevant principles and data contained within the experience best known to him, his own.<sup>3</sup>

From this basis, a transition to educational psychology may be made in observation of the teaching of others—visiting classes. I should wish to note here, however, the same principle that I have mentioned as regards practice work, specifically so termed. The first observation of instruction given by model- or critic-teachers should not be too definitely practical in aim. The student should not be observing to find out how the good teacher does it, in order to accumulate a store of methods by which he also may teach successfully. He should rather observe with reference to seeing the interaction of mind, to see how teacher and pupils react upon each other—how mind answers to mind. Observation should at first be conducted from the psychological rather than from the “practical” standpoint. If the latter is emphasized before the student has an independent command of the former, the principle of imitation is almost sure to play an exaggerated part in the observer’s future teaching, and hence

<sup>3</sup> It may avoid misapprehension if I repeat the word *experience*. It is not a *metaphysical* introspection that I have in mind, but the process of turning back upon one’s own experiences, and turning them over to see how they were developed, what helped and hindered, the stimuli and the inhibitions both within and without the organism.

at the expense of personal insight and initiative. What the student needs most at this stage of growth is ability to see what is going on in the minds of a group of persons who are in intellectual contact with one another. He needs to learn to observe psychologically—a very different thing from simply observing how a teacher gets “good results” in presenting any particular subject.

It should go without saying that the student who has acquired power in psychological observation and interpretation may finally go on to observe more technical aspects of instruction, namely, the various methods and instrumentalities used by a good teacher in giving instruction in any subject. If properly prepared for, this need not tend to produce copiers, followers of tradition and example. Such students will be able to translate the practical devices which are such an important part of the equipment of a good teacher over into their psychological equivalents; to know not merely as a matter of brute fact that they do work, but to know how and why they work. Thus he will be an independent judge and critic of their proper use and adaptation.

In the foregoing I have assumed that educational psychology is marked off from general psychology simply by the emphasis which it puts upon two factors. The first is the stress laid upon a certain end, namely, growth or development—with its counterparts, arrest and adaptation. The second is the importance attached to the social factor—to the mutual interaction of different minds with each other. It is, I think, strictly true that no educational procedure nor pedagogical maxim can be derived directly from pure psychological data. The psychological data taken without qualification (which is what I mean by their being pure) cover everything and anything that may take place in a mind. Mental arrest and decay occur according to psychological laws, just as surely as do development and progress.

We do not make practical maxims out of physics by telling persons to move according to laws of gravitation. If people move at all, they *must* move in accordance with the conditions stated by this law. Similarly, if mental operations take place at all, they *must* take place in accordance with the prin-

ciples stated in correct psychological generalizations. It is superfluous and meaningless to attempt to turn these psychological principles directly into rules of teaching. But the person who knows the laws of mechanics knows the conditions of which he must take account when he wishes to reach a certain end. He knows that *if* he aims to build a bridge, he must build it in a certain way and of certain materials, or else he will not have a bridge, but a heap of rubbish. So in psychology. Given an end, say promotion of healthy growth, psychological observations and reflection put us in control of the conditions concerned in that growth. We know that if we are to get that *end*, we must do it in a certain way. It is the subordination of the psychological material to the problem of effecting growth and avoiding arrest and waste which constitutes a distinguishing mark of educational psychology.

I have spoken of the importance of the social factor as the other mark. I do not mean, of course, that general theoretical psychology ignores the existence and significance of the reaction of mind to mind—though it would be within bounds to say that till recently the social side was an unwritten chapter of psychology. I mean that considerations of the ways in which one mind responds to the stimuli which another mind is consciously or unconsciously furnishing possess a relative importance for the educator which they have not for the psychologist as such. From the teacher's standpoint, it is not too much to say that every habit which a pupil exhibits is to be regarded as a reaction to stimuli which some persons or group of persons have presented to the child. It is not too much to say that the most important thing for the teacher to consider, as regards his present relations to his pupils, is the attitudes and habits which his own modes of being, saying, and doing are fostering or discouraging in them.

Now, if these two assumptions regarding educational psychology be granted. I think it will follow as a matter of course, that only by beginning with the values and laws contained in the student's own experience of his own mental growth, and by proceeding gradually to facts connected with other persons of whom he can know little; and by proceeding still more gradually to the attempt actually to influence the

mental operations of others, can educational theory be made most effective. Only in this way can the most essential trait of the mental habit of the teacher be secured—that habit which looks upon the internal, not upon the external; which sees that the important function of the teacher is direction of the mental movement of the student, and that the mental movement must be known before it can be directed.

II. I turn now to the side of subject-matter, or scholarship, with the hope of showing that here too the material, when properly presented, is not so *merely* theoretical, remote from the practical problems of teaching, as is sometimes supposed. I recall that once a graduate student in a university made inquiries among all the leading teachers in the institution with which he was connected as to whether they had received any professional training, whether they had taken courses in pedagogy. The inquirer threw the results, which were mostly negative, into the camp of the local pedagogical club. Some may say that this proves nothing, because college teaching is proverbially poor, considered simply as teaching. Yet no one can deny that there is *some* good teaching, and some teaching of the very first order, done in colleges, and done by persons who have never had any instruction in either the theory or the practice of teaching.

This fact cannot be ignored any more than can the fact that there were good teachers before there was any such thing as pedagogy. Now, I am not arguing for not having pedagogical training—that is the last thing I want. But I claim the facts mentioned prove that scholarship *per se* may itself be a most effective tool for training and turning out good teachers. If it has accomplished so much when working unconsciously and without set intention, have we not good reason to believe that, when acquired in a training school for teachers—with the end of making teachers held definitely in view and with conscious reference to its relation to mental activity—it may prove a much more valuable pedagogical asset than we commonly consider it?

Scholastic knowledge is sometimes regarded as if it were something quite irrelevant to method. When this attitude is even unconsciously assumed, method becomes an external at-



tachment to knowledge of subject-matter. It has to be elaborated and acquired in relative independence from subject-matter, and *then* applied.

Now the body of knowledge which constitutes the subject-matter of the student-teacher must, by the nature of the case, be organized subject-matter. It is not a miscellaneous heap of separate scraps. Even if (as in the case of history and literature), it be not technically termed "science," it is none the less material which has been subjected to method—has been selected and arranged with reference to controlling intellectual principles. There is, therefore, method in subject-matter itself—method indeed of the highest order which the human mind has yet evolved, scientific method.

It cannot be too strongly emphasized that this scientific method is the method of mind itself.<sup>4</sup> The classifications, interpretations, explanations, and generalizations which make subject-matter a branch of study do not lie externally in facts apart from mind. They reflect the attitudes and workings of mind in its endeavor to bring raw material of experience to a point where it at once satisfies and stimulates the needs of active thought. Such being the case, there is something wrong in the "academic" side of professional training, if by means of it the student does not constantly get object-lessons of the finest type in the kind of mental activity which characterizes mental growth and, hence, the educative process.

It is necessary to recognize the importance for the teacher's equipment of his own habituation to superior types of method of mental operation. The more a teacher in the future is likely to have to do with elementary teaching, the more, rather than the less, necessary is such exercise. Otherwise, the current traditions of elementary work with their tendency to talk and write down to the supposed intellectual level of children, will be likely to continue. Only a teacher thoroughly trained in the higher levels of intellectual method and who thus has constantly in his own mind a sense of what

<sup>4</sup> Professor Ella F. Young's "Scientific Method in Education" (*University of Chicago Decennial Publications*) is a noteworthy development of this conception, to which I am much indebted.

adequate and genuine intellectual activity means, will be likely, in deed, not in mere word, to respect the mental integrity and force of children.

Of course, this conception will be met by the argument that the scientific organization of subject-matter, which constitutes the academic studies of the student-teacher is upon such a radically different basis from that adapted to less mature students that too much pre-occupation with scholarship of an advanced order is likely actually to get in the way of the teacher of children and youth. I do not suppose anybody would contend that teachers really can know more than is good for them, but it may reasonably be argued that continuous study of a specialized sort forms mental habits likely to throw the older student out of sympathy with the type of mental impulses and habits which are found in younger persons.

Right here, however, I think normal schools and teachers' colleges have one of their greatest opportunities—an opportunity not merely as to teachers in training, but also for reforming methods of education in colleges and higher schools having nothing to do with the training of teachers. It is the business of normal schools and collegiate schools of education to present subject-matter in science, in language, in literature and the arts, in such a way that the student both sees and feels that these studies *are* significant embodiments of mental operations. He should be led to realize that they are not products of technical methods, which have been developed for the sake of the specialized branches of knowledge in which they are used, but represent fundamental mental attitudes and operations—that, indeed, particular scientific methods and classifications simply express and illustrate in their most concrete form that of which simple and common modes of thought-activity are capable when they work under satisfactory conditions.

In a word, it is the business of the "academic" instruction of future teachers to carry back subject-matter to its common psychical roots.<sup>5</sup> In so far as this is accomplished, the gap be-

<sup>5</sup> It is hardly necessary to refer to Dr. Harris's continued conten-

tween the higher and the lower treatment of subject-matter, upon which the argument of the supposed objector depends, ceases to have the force which that argument assigns to it. This does not mean, of course, that exactly the same subject-matter, in the same mode of presentation, is suitable to a student in the elementary or high schools that is appropriate to the normal student. But it does mean that a mind which is habituated to viewing subject-matter from the standpoint of the function of that subject-matter in connection with *mental* responses, attitudes, and methods will be sensitive to *signs of intellectual activity* when exhibited in the child of four, or the youth of sixteen, and will be trained to a spontaneous and unconscious appreciation of the subject-matter which is fit to call out and direct mental activity.

We have here, I think, the explanation of the success of some teachers who violate every law known to and laid down by pedagogical science. They are themselves so full of the spirit of inquiry, so sensitive to every sign of its presence and absence, that no matter what they do, nor how they do it, they succeed in awakening and inspiring like alert and intense mental activity in those with whom they come in contact.

This is not a plea for the prevalence of these irregular, inchoate methods. But I feel that I may recur to my former remark: if some teachers, by sheer plenitude of knowledge, keep by instinct in touch with the mental activity of their pupils, and accomplish so much without, and even in spite of, principles which are theoretically sound, then there must be in this same scholarship a tremendous resource when it is more consciously used—that is, employed in clear connection with psychological principles.

When I said above that schools for training teachers have here an opportunity to react favorably upon general education, I meant that no instruction in subject-matter (wherever it is given) is adequate if it leaves the student with just acquisition of certain information about external facts and

tion that normal training should give a higher view or synthesis of even the most elementary subjects.

laws, or even a certain facility in the intellectual manipulation of this material. It is the business of our higher schools in all lines, and not simply of our normal schools, to furnish the student with the realization that, after all, it is the human mind, trained to effective control of its natural attitudes, impulses, and responses, that is the significant thing in all science and history and art so far as these are formulated for purposes of study.

The present divorce between scholarship and method is as harmful upon one side as upon the other—as detrimental to the best interests of higher academic instruction as it is to the training of teachers. But the only way in which this divorce can be broken down is by so presenting all subject-matter, for whatever ultimate, practical, or professional purpose, that it shall be apprehended as an objective embodiment of methods of mind in its search for, and transactions with, the truth of things.

Upon the more practical side, this principle requires that, so far as students appropriate new subject-matter (thereby improving their own scholarship and realizing more consciously the nature of method), they should finally proceed to organize this same subject-matter with reference to its use in teaching others. The curriculum of the elementary and the high school constituting the “practice” or “model” school ought to stand in the closest and most organic relation to the instruction in subject-matter which is given by the teachers of the professional school. If in any given school this is not the case, it is either because in the *training class* subject-matter is presented in an isolated way, instead of as a concrete expression of methods of mind, or else because the *practice school* is dominated by certain conventions and traditions regarding material and the methods of teaching it, and hence is not engaged in work of an adequate educational type.

As a matter of fact, as everybody knows, both of these causes contribute to the present state of things. On the one hand, inherited conditions impel the elementary school to a certain triviality and poverty of subject-matter, calling for mechanical drill, rather than for thought-activity, and the high school to a certain technical mastery of certain conven-

tional culture subjects, taught as independent branches of the same tree of knowledge! On the other hand traditions of the different branches of science (the academic side of subject-matter) tend to subordinate the teaching in the normal school to the attainment of certain facilities, and the acquirement of certain information, both in greater or less isolation from their value as exciting and directing mental power.

The great need is convergence, concentration. Every step taken in the elementary and the high school toward intelligent introduction of more worthy and significant subject-matter, one requiring consequently for its assimilation thinking rather than "drill," must be met by a like advance step in which the mere isolated specialization of collegiate subject-matter is surrendered, and in which there is brought to conscious and interested attention its significance in expression of fundamental modes of mental activity—so fundamental as to be common to both the play of the mind upon the ordinary material of everyday experience and to the systematized material of the sciences.

III. As already suggested, this point requires that training students be exercised in making the connections between the course of study of the practice or model school, and the wider horizons of learning coming within their ken. But it is consecutive and systematic exercise in the consideration of the subject-matter of the elementary and high schools that is needed. The habit of making isolated and independent lesson plans for a few days' or weeks' instruction in a separate grade here or there not only does not answer this purpose, but is likely to be distinctly detrimental. Everything should be discouraged which tends to put the student in the attitude of snatching at the subject-matter which he is acquiring in order to see if by some hook or crook it may be made immediately available for a lesson in this or that grade. What is needed is the habit of viewing the entire curriculum as a continuous growth, reflecting the growth of mind itself. This in turn demands, so far as I can see, consecutive and longitudinal consideration of the curriculum of the elementary and high school rather than a cross-sectional view of it. The student should be led to see that the same subject-matter in ge-

ography, nature-study, or art develops not merely day to day in a given grade, but from year to year throughout the entire movement of the school; and he should realize this before he gets much encouragement in trying to adapt subject-matter in lesson plans for this or that isolated grade.

C. If we attempt to gather together the points which have been brought out, we should have a view of practice work something like the following—though I am afraid even this formulates a scheme with more appearance of rigidity than is desirable:

At first, the practice school would be used mainly for purposes of observation. This observation, moreover, would not be for the sake of seeing how good teachers teach, or for getting "points" which may be employed in one's own teaching, but to get material for psychological observation and reflection, and some conception of the educational movement of the school as a whole.

Secondly, there would then be more intimate introduction to the lives of the children and the work of the school through the use as assistants of such students as had already got psychological insight and a good working acquaintance with educational problems. Students at this stage would not undertake much direct teaching, but would make themselves useful in helping the regular class instructor. There are multitudes of ways in which such help can be given and be of real help—that is, of use to the school, to the children, and not merely of putative value to the training student.<sup>6</sup> Special attention to backward children, to children who have been out of school, assisting in the care of material, in forms of hand-work, suggest some of the avenues of approach.

This kind of practical experience enables, in the third place, the future teacher to make the transition from his more psychological and theoretical insight to the observation of the more technical points of class teaching and management. The informality, gradualness, and familiarity of the earlier con-

<sup>6</sup> This question of some real need in the practice school itself for the work done is very important in its moral influence and in assimilating the conditions of "practice work" to those of real teaching.

tact tend to store the mind with material which is unconsciously assimilated and organized, and thus supplies a background for work involving greater responsibility.

As a counterpart of this work in assisting, such students might well at the same time be employed in the selection and arrangement of subject-matter, as indicated in the previous discussion. Such organization would at the outset have reference to at least a group of grades, emphasizing continuous and consecutive growth. Later it might, without danger of undue narrowness, concern itself with finding supplementary materials and problems bearing upon the work in which the student is giving assistance; might elaborate material which could be used to carry the work still farther, if it were desirable; or, in case of the more advanced students, to build up a scheme of possible alternative subjects for lessons and studies.

Fourthly, as fast as students are prepared through their work of assisting for more responsible work, they could be given actual teaching to do. Upon the basis that the previous preparation has been adequate in subject-matter, in educational theory, and in the kind of observation and practice already discussed, such practice teachers should be given the maximum amount of liberty possible. They should not be too closely supervised, nor too minutely and immediately criticised upon either the matter or the method of their teaching. Students should be given to understand that they not only are *permitted* to act upon their own intellectual initiative, but that they are *expected* to do so, and that their ability to take hold of situations for themselves would be a more important factor in judging them than their following any particular set method or scheme.

Of course, there should be critical discussion with persons more expert of the work done, and of the educational results obtained. But sufficient time should be permitted to allow the practice-teacher to recover from the shocks incident to the newness of the situation, and also to get enough experience to make him capable of seeing the *fundamental* bearings of criticism upon work done. Moreover, the work of the expert or supervisor should be directed to getting the student to judge his own work critically, to find out for himself in

what respects he has succeeded and in what failed, and to find the probable reasons for both failure and success, rather than to criticising him too definitely and specifically upon special features of his work.

It ought to go without saying (unfortunately, it does not in all cases) that criticism should be directed to making the professional student thoughtful about his work in the light of principles, rather than to induce in him a recognition that certain special methods are good, and certain other special methods bad. At all events, no greater travesty of real intellectual criticism can be given than to set a student to teaching a brief number of lessons, have him under inspection in practically all the time of every lesson, and then criticise him almost, if not quite, at the very end of each lesson, upon the particular way in which that particular lesson has been taught, pointing out elements of failure and of success. Such methods of criticism may be adapted to giving a training-teacher command of some of the knacks and tools of the trade, but are not calculated to develop a thoughtful and independent teacher.

Moreover, while such teaching (as already indicated) should be extensive or continuous enough to give the student time to become at home and to get a body of funded experience, it ought to be intensive in purpose rather than spread out miscellaneously. It is much more important for the teacher to assume responsibility for the consecutive development of some one topic, to get a feeling for the movement of that subject, than it is to teach a certain number (necessarily smaller in range) of lessons in a larger number of subjects. What we want, in other words, is not so much technical skill, as a realizing sense in the teacher of what the educational development of a subject means, and, in some typical case, command of a method of control, which will then serve as a standard for self-judgment in other cases.

Fifthly, if the practical conditions permit—if, that is to say, the time of the training course is sufficiently long, if the practice schools are sufficiently large to furnish the required number of children, and to afford actual demand for the work to be done—students who have gone through the stages

already referred to should be ready for work of the distinctly apprenticeship type.

Nothing that I have said heretofore is to be understood as ruling out practice-teaching which is designed to give an individual mastery of the actual technique of teaching and management, provided school conditions permit it in reality and not merely in external form—provided, that is, the student has gone through a training in educational theory and history, in subject-matter, in observation, and in practice work of the laboratory type, before entering upon the latter. The teacher must acquire his technique some time or other; and if conditions are favorable, there are some advantages in having this acquisition take place in cadetting or in something of that kind. By means of this probation, persons who are unfit for teaching may be detected and eliminated more quickly than might otherwise be the case and before their cases have become institutionalized.

Even in this distinctly apprenticeship stage, however, it is still important that the student should be given as much responsibility and initiative as he is capable of taking, and hence that supervision should not be too unremitting and intimate, and criticism not at too short range or too detailed. The advantage of this intermediate probationary period does not reside in the fact that thereby supervisory officers may turn out teachers who will perpetuate their own notions and methods, but in the inspiration and enlightenment that come through prolonged contact with mature and sympathetic persons. If the conditions in the public schools were just what they ought to be, if all superintendents and principals had the knowledge and the wisdom which they should have, and if they had time and opportunity to utilize their knowledge and their wisdom in connection with the development of the younger teachers who come to them, the value of this apprenticeship period would be reduced, I think, very largely to its serving to catch in time and to exclude persons unfit for teaching.

In conclusion, I may say that I do not believe that the principles presented in this paper call for anything utopian.

The present movement in normal schools for improvement of range and quality of subject-matter is steady and irresistible. All the better classes of normal schools are already, in effect, what are termed "junior colleges." That is, they give two years' work which is almost, and in many cases quite, of regular college grade. More and more, their instructors are persons who have had the same kind of scholarly training that is expected of teachers in colleges. Many of these institutions are already of higher grade than this; and the next decade will certainly see a marked tendency on the part of many normal schools to claim the right to give regular collegiate bachelor degrees.

The type of scholarship contemplated in this paper is thus practically assured for the near future. If two other factors co-operate with this, there is no reason why the conception of relation of theory and practice here presented should not be carried out. The second necessary factor is that the elementary and high schools, which serve as schools of observation and practice, should represent an advanced type of education properly corresponding to the instruction in academic subject-matter and in educational theory given to the training classes. The third necessity is that work in psychology and educational theory make concrete and vital the connection between the normal instruction in subject-matter and the work of the elementary and high schools.

If it should prove impracticable to realize the conception herein set forth, it will not be, I think, because of any impossibility resident in the outward conditions, but because those in authority, both within and without the schools, believe that the true function of training schools is just to meet the needs of which people are already conscious. In this case, of course, training schools will be conducted simply with reference to perpetuating current types of educational practice, with simply incidental improvement in details.

The underlying assumption of this paper is, accordingly, that training schools for teachers do not perform their full duty in accepting and conforming to present educational standards, but that educational leadership is an indispensable

part of their office. The thing needful is improvement of education, not simply by turning out teachers who can do better the things that are now necessary to do, but rather by changing the conception of what constitutes education.

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Library of Congress Catalog Card Number: 64-18939

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