EDUCATIONAL REFORM

ESSAYS AND ADDRESSES

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The Report of the Committee of Ten has now been in the hands of the teachers of the country for about six months, so that there has been time to formulate and publish some criticisms and objections. I propose to comment in this address on one criticism or objection which, in various forms and by several different persons, has been brought before the educational public. Whenever I speak of the Report I intend to include the reports of the conferences as well as the proper report of the Committee of Ten; for the chief value of the total report lies in the conference reports.

The objection to the Report which I shall discuss is contained in the question, "What do college men know about schools?" Those who urge this objection say, in substance: "More than half the members of the conferences were at the moment in the service of colleges and universities, and the

1 Before the American Institute of Instruction at Bethlehem, New Hampshire, July 11, 1894.
same was true of the Committee of Ten. The wise management of schools for children from six to eighteen years of age is a different business from the wise management of colleges and universities. Not only is the age of the pupils different, but their mode of life and the discipline they need are also different. The mental capacity of young children is low, compared with that of college students, their wills are weaker, and their moral qualities undeveloped. How can men who teach and govern young people of from eighteen to twenty-four years of age know anything about schools for children? Let them attend to the higher education, and not attempt to teach experts in elementary and secondary education how to conduct their very different business. That a man has succeeded in conducting a college or a university makes it altogether probable that his advice will be worthless as to the best mode of conducting a school, or a system of schools. We school superintendents and principals have to handle masses of average material; your college and university teacher has only a small number of exceptional individuals to deal with."

To meet this objection, I wish to affirm and illustrate the proposition that the chief principles and objects of modern educational reform are quite the same from beginning to end of that long course of education which extends from the fifth or sixth to the twenty-fifth or twenty-sixth year of life. The phrase "educational construction" would perhaps be better than the phrase "educational reform"; for in our day and country we are really constructing
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all the methods of universal democratic education. We seldom realize how very recent and novel an undertaking this educational construction is. As a force in the world, universal education does not go behind this century in any land. It does not go back more than twenty years in such a civilized country as France. It dates from 1871 in England. Plato maintained that the producing or industrial classes needed no education; and it is hardly more than a hundred years since this Platonic doctrine began to be seriously questioned by social philosophers. It is not true yet that education is universal, even in our own land; and in all lands educational practice lags far behind educational theory. In this process of educational construction, so new, so strange, so hopeful, I believe that the chief principles and objects are the same from the kindergarten through the university; and therefore I maintain that school-teachers ought to understand and sympathize with university reform and progress, and that college and university teachers ought to comprehend and aid school reform and progress. Let us review together those chief principles and objects, although in so doing I shall necessarily repeat some things I have often said before.

1. The first of these objects is the promotion of individual instruction, that is, the addressing of instruction to the individual pupil rather than to groups or classes. At present the kindergarten and the university best illustrate the progress of this reform; but the beneficent tendency is clearly
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exhibited all along the line. In elementary and secondary schools the effort is constantly made to diminish the number of pupils assigned to one teacher; and in some fortunate secondary schools the proportion of pupils to teachers has already been intentionally made as favorable as it has incidentally become in the most prosperous universities which have been adding rapidly to their advanced courses of instruction. In urban school systems the number of pupils assigned to a teacher is recognized as the fundamental fact which determines, better than any other single fact, the quality and rank of each system among those with which it may be properly compared. Into the curricula of schools and colleges alike certain new matters have of late years been introduced, for teaching which the older methods of instruction — namely, the lecture and the recitation — proved to be inadequate, or even totally inapplicable. These new matters are chiefly object-lessons in color and form, drawing and modeling, natural sciences like botany, zoölogy, chemistry, physics, mineralogy, and geology, and various kinds of manual training. In school and college alike the really effective teaching in all these subjects is that which is addressed to each individual pupil. All laboratory and machine-shop teaching has this character, no matter what the subject. The old-fashioned method of teaching science by means of illustrated books and demonstrative lectures has been superseded, from the kindergarten through the university, by the laboratory method, in which each pupil,
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no matter whether he be three years old or twenty-three, works with his own hands, and is taught to use his own senses. General explanations and directions may be given a class, but in the laboratory each individual's work must be separately supervised and criticized. There is nothing more individual than a laboratory note-book. In all laboratory and machine-shop work the rates of progress of different pupils vary widely. Quicker eyes, defter hands, greater zeal, and better judgment will tell, and the teacher has every opportunity to discover the natural gifts or defects of the different pupils, and to develop the peculiar capacity of each mind. All the artistic subjects, as well as all the scientific, require individual instruction. In drawing, painting, and modeling the instruction is, of necessity, individualized. It is one of the best results of the introduction of manual training that each pupil must receive individual criticism and guidance. The instructor is compelled to deal with each pupil by himself, and to carry each forward at his own rate of speed. In short, manual training breaks up class-room routine, and introduces diversity of achievement in place of uniform attainment. I say that this principle applies all the way from the kindergarten to the professional school. It applies conspicuously in medical instruction; and within twenty-five years it has been there applied so successfully that it is no exaggeration to say that within this period the whole method of teaching medicine has been revolutionized throughout the
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United States. It is now universally recognized that it is impossible to teach medicine and surgery to large numbers of persons simultaneously by general descriptions, or by the use of diagrams, pictures, or lantern slides which many can see at once. Not that illustrated lectures and general demonstrations are wholly useless, but they hold only a subordinate place. The really important thing is individual, personal instruction, under circumstances which permit the student to see and touch for himself, and then to make his own record and draw his own inferences. Finally, the highest type of university teaching—the so-called seminary or conference method—is emphatically individual instruction.

It is hard to say at what stage of education, from the primary grade to the final university grade, the individualization of instruction is most important. The truth is that the principle applies with equal force all along the line. For the university president, the school superintendent, and the kindergartner alike it should be the steady aim and the central principle of educational policy; and whoever understands the principle and its applications at any one grade understands them for all grades.

2. Secondly, let me ask your attention to six essential constituents of all worthy education—constituents which, in my opinion, make part of the educational process from first to last, in every year and at every stage; and let me ask you particularly to consider which of these constituents
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belong to schools but not to colleges, or to colleges but not to schools.

The first constituent is the careful training of the organs of sense, through which we get incessant and infinitely diversified communications with the external world, including in that phrase the whole inanimate and animate creation with all human monuments and records. Through the gate of accurate observation come all kinds of knowledge and experience. The little child must learn to see with precision the forms of letters, to hear exactly the sounds of words and phrases, and by touch to discriminate between wet and dry, hot and cold, smooth and rough. The organs of sense are not for scientific uses chiefly: all ordinary knowledge for practical purposes comes through them, and language, too, with all which language implies and renders possible. Then comes practice in grouping and comparing different sensations or contacts, and in drawing inferences from such comparisons—practice which is indispensable in every field of knowledge. Next comes training in making a record of the observation, the comparison, or the grouping. This record may obviously be made either in the memory or in written form; but practice in making accurate records there must be in all effective education. Fourthly comes training of the memory, or, in other words, practice in holding in the mind the records of observations, groupings, and comparisons. Fifthly comes training in the power of expression—in clear, concise exposition, and in argument, or the
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logical setting forth of a process of reasoning. This training in the logical development of a reasoning process is almost the consummation of education; but there is one other essential constituent, namely, the steady inculcation of those supreme ideals through which the human race is uplifted and ennobled—the ideals of beauty, honor, duty, and love.

These six I believe to be essential constituents of education in the highest sense: we must learn to see straight and clear; to compare and infer; to make an accurate record; to remember; to express our thought with precision; and to hold fast lofty ideals. The processes I have described as separate often take place in the mind so rapidly that they, or some of them, seem to us simultaneous. Thus, intelligent conversation involves observation, comparison, record, memory, and expression, all in a flash. But if these be constituents of education, is not education a continuous process of one nature from beginning to end? Are not these six constituents to be simultaneously and continuously developed, from earliest childhood to maturity? The child of five years should begin to think clearly and justly, and he should begin to know what love and duty mean; and the mature man of twenty-five should still be training his powers of observing, comparing, recording, and expressing. The aims and the fundamental methods at all stages of education should, therefore, be essentially the same, because the essential constituents of education are the same at all
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stages. The grammar-school pupil is trying to do the same kinds of things which the high-school pupil is trying to do, though, of course, with less developed powers. The high-school pupil has the same intellectual needs which the university student feels. The development of a mind may be compared with the development of a plant; it proceeds simultaneously and continuously through all its parts, without break or convulsion. If at any stage there seem to be a sudden leafing or blooming, the suddenness is only apparent. Leaf and bloom had long been prepared—both were infolded in last year's bud. From first to last, it is the teacher's most important function to make the pupil think accurately and express his thought with precision and force; and in this respect the function of the primary-school teacher is not different in essence from that of the teacher of law, medicine, theology, or engineering.

3. A considerable change in the methods of education has been determined, during the past twenty-five years, by the general recognition of the principle that effective power in action is the true end of education, rather than the storing up of information, or the cultivation of faculties which are mainly receptive, discriminating, or critical. We are no longer content, in either school or college, with imparting a variety of useful and ornamental information, or with cultivating esthetic taste or critical faculty in literature or art. We are not content with simply increasing our pupils' capacity for intellectual or sentimental enjoyment. All
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these good things we seek, to be sure; but they are no longer our main ends. The main object of education, nowadays, is to give the pupil the power of doing himself an endless variety of things which, uneducated, he could not do. An education which does not produce in the pupil the power of applying theory, or putting acquisitions into practice, and of personally using for productive ends his disciplined faculties, is an education which has missed its main end. One humble illustration of the influence of this principle is the wide adoption of reading foreign languages at sight as a suitable test of fitness for admission to colleges. Another similar illustration is the use of question papers in geometry, containing a large proportion of problems which do not appear in explicit form in the ordinary manuals, but which can be answered or solved by making a simple application of the geometrical principles developed in those manuals. These are tests of acquired power. We think it reasonable to test a student of chemistry by giving him an unknown substance to analyze. Can he find out what it is, and prove his discovery correct? In other words, can he apply his information and knowledge of methods to a problem which is to him wholly unknown? Has he acquired not only information, but power? The whole field of natural science is available for that kind of training in power-getting, which it is the main object of modern education to supply. It is not what the student of medicine has heard about, or seen others do, but what he can do himself with his own eyes
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and hands and with his own powers of comparing and judging, which will give him preëminence as a physician or surgeon. To give personal power in action under responsibility is the prime object of all medical education. This same principle, however, applies just as well in the primary school as in the professional school. Education should be power-getting all the time, from the beginning to the end of its course. Its fundamental purpose is to produce a mental and moral fiber which can carry weight, bear strain, and endure the hardest kinds of labor.

4. The next educational principle which I believe to apply to two thirds of the entire educational course between five and twenty-five years of age is the principle of the selection or election of studies. In the first three or four years of a child’s education, say from five or six years of age to nine years, there are not so many possible subjects of equal value and necessity but that the child may pursue them all to some adequate extent; but by the ninth or tenth year of age more subjects will claim the child’s attention than he will have time for, and thereupon arises the necessity for a selection of studies. As the child advances from the elementary school to the secondary school, and from the secondary school to the college, the number and variety of subjects from which to choose will rapidly increase, until in the department of arts and sciences of the university he will find that he cannot attempt to follow the twentieth part of the instruction offered him. Tables I and II in the

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Report of the Committee of Ten demonstrate abundantly the absolute necessity for selection or election of studies in secondary schools, and even in the later years of the elementary course. Who shall make the selection? is really the only practical question. The moment we adopt the maxim that no subject shall be attacked at all, unless it is to be pursued far enough to get from it the training it is fit to supply, we make the election or selection of studies a necessity. This principle has now been adopted by all colleges and universities worthy of the name, and by the greater part of the leading high schools, academies, endowed schools, and private schools; but in these secondary institutions the principle is commonly applied rather to groups of subjects than to single subjects. The result is an imperfect application of the elective principle, but it is much better than any single uniform prescribed course. Finally, this principle has within a few years penetrated the grades, or the grammar schools, and has earned its way to a frank recognition at that stage of education.

It is no objection to the principle, and it establishes no significant distinction between college experience and school experience, that there must obviously be limitations of diversity of studies during school life. School programmes should always contain fair representations of the four main divisions of knowledge — language, history, natural science, and mathematics; but this does not mean that every child up to fourteen must study the same things in the same proportions and to the
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same extent. On the contrary, representation of the different kinds of knowledge and mental action having been secured, the utmost possible provision should be made for the different tastes, capacities, and rates of progress of different children. Moreover, a main object in securing this representation of language, history, science, and mathematics in the earlier years of education is to give the teacher opportunity to discover each pupil’s capacities and powers. There is, however, no ground of distinction between school-teaching and university teaching in respect to these special limitations; for if we turn to the very last stage of education, professional training, we find there a serious limitation on the principle of election—a limitation imposed by the necessity of giving all young lawyers, physicians, ministers, teachers, engineers, biologists, or chemists the considerable quantity of strictly professional information and practice which every future member of these several professions absolutely needs. Again, for the same reason, scientific or technological schools must for the present use a group system rather than a free election of studies. They must adjust their present instruction to current professional needs. The freest field for the principle of selection or election of studies lies between the ages of thirteen and twenty-three—including five or six years of school life and all of college life. School men and college men alike should rejoice in this free field.

5. The next rule of educational reform, which applies at every stage of the long course of educa-

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tion that civilized society provides, relates to what is called discipline. Down to times quite within my memory, the method of discipline, both in school and college, was extremely simple; for it relied chiefly, first, on a highly stimulated emulation, and, secondly, on the fear of penalty. It had not been clearly perceived that an immediate, incessant, and intense emulation does not tend to develop independent strength of will and character good in either solitude or society; and that fear of penalty should be the last resort in education. It is now an accepted doctrine that the discipline of childhood should not be so different from that of adolescence as to cause at any point of the way a full stop and a fresh start. A method of discipline which must be inevitably abandoned as the child grows up was not the most expedient method at the earlier age, for the reason that in education the development and training of motives should be consecutive and progressive, not broken and disjointed. Herein lies one of the objections to whipping or other violence to the body, and to all methods which rely on the fear of pain or of artificial penalties or deprivations. There comes an age when these methods are no longer applicable. At eighteen there are no methods of discipline analogous to whipping, or to the deprivation of butter, sweetmeats, supper, or recreation, or to the imposition of verses to learn, or of pages of Latin or English to copy. If this sort of motive has been relied on up to eighteen, there will then be need of a whole new set of motives. For these reasons, among
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others, the judicious teacher, like the judicious parent, will not rely in childhood, if he can help it, on a set of motives which he knows must inevitably cease to operate long before the period of education is ended. By preference, permanent motives should be relied on from beginning to end of education, and this for the simple reason that the formation of habits is a great part of education, and in that formation of habits is inextricably involved the play of those recurrent emotions, sentiments, and passions which lead to habitual volitions. Among the permanent motives which act all through life are prudence, caution, emulation, love of approbation,—and particularly the approbation of persons respected or beloved,—shame, pride, self-respect, pleasure in discovery, activity, or achievement, delight in beauty, strength, grace, and grandeur, and the love of power, and of possessions as giving power. Any of these motives may be over-developed; but in moderation they are all good, and they are available from infancy to old age.

From the primary school through the university, the same motives should always be in play for the determination of the will and the regulation of conduct. Naturally they will grow stronger and stronger as the whole nature of the child expands and his habits become more and more firmly fixed; and for this reason these same enduring motives should be continuously relied on. Obviously, then, there is no difference between men who manage colleges and men who manage schools in relation
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to this important principle of educational reform. The methods of both should be identical; and the college man or the school man who does not guide and govern through the reason of his pupils, through their natural interest in observation, experiment, comparison, and argument, and through the permanent motives which lead to right conduct, is not in sympathy with one of the most humane and hopeful educational reforms of the present generation. All teachers who deserve the name now recognize that self-control is the ultimate moral object of training in youth—a self-control independent of temporary artificial restraints, exclusions, or pressures, as also of the physical presence of a dominating person. To cultivate in the young this self-control should be the steady object of parents and teachers all the way from babyhood to full maturity.

6. The next principle of educational construction to which I invite your attention is again one which applies throughout the length and breadth of education. It is the specialization of teaching. One might easily imagine that this principle had already been sufficiently applied in universities, and only needed to be applied hereafter in schools; but the fact is that the specialization of instruction is still going on in universities, and needs a much greater extension in American colleges and professional schools than it has yet received. Dr. Oliver Wendell Holmes was professor of anatomy and physiology in Harvard University down to 1871; and he really taught, in addition to these
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two immense subjects, portions of histology and pathology. He described himself as occupying, not a chair, but a settee. The professorship in Harvard University which was successively occupied by George Ticknor, Henry Wadsworth Longfellow, and James Russell Lowell is the Smith professorship of the French and Spanish languages and literatures. In many American colleges we find to-day the same professor teaching logic, metaphysics, ethics, and political economy. Indeed, this was the case in Harvard College down to 1871, except that moral philosophy and Christian ethics were detached from the Alford professorship from and after 1860. The specialization of instruction is by no means completed in American colleges. It is better advanced now in American secondary schools than it was in the American colleges eighty years ago; and it is just beginning to be developed in the American grammar schools, or grades, where it is generally spoken of as departmental organization. From the extension of this principle in American schools much is to be hoped within the next ten years, particularly for the teacher. To teach one subject to pupils at different stages, adapting the instruction to their different ages and capacities, watching their development, and leading them on, with due regard to individual differences, through four or five years of continuous progress, gives an inexhaustible interest to the teacher’s function. To master one subject so as to be able to give both elementary and advanced instruction in it is for the teacher himself a deep source of
intellectual enthusiasm and growth. Real scholarship becomes possible for him, and also a progressive intellectual expansion through life; for only progressive scholars can maintain for many years the mastery of even a single subject. Does it seem to you an unreasonable expectation that teachers in the grades, or grammar schools, should possess this mastery of single subjects? Careful observation seems to me to give assurance that exceptional teachers, both men and women, already possess this mastery, and that what remains to be done is to make the exceptions the rule. Toward effecting this great improvement, two important measures are the elevation of normal schools, and the creation, or strengthening, of educational departments in colleges and universities. At any rate, there can be no doubt that this specialization of instruction is a common need from beginning to end of any national system of instruction, and that it is capable of adding indefinitely to the dignity, pleasure, and serviceableness of the teacher's life. Obviously this common need and aspiration should unite rather than divide the various grades of education, and should induce coöperation rather than cause disension.

7. There is a fundamental policy in regard to educational organization which should unite in its support all teachers, whether in schools or universities — the policy, namely, that administrative officers in educational organizations should be experts, and not amateurs or emigrants from other professions, and that teachers should have large
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advisory functions in the administration of both schools and universities. The American colleges and universities are better organized in this respect than the American schools. More and more; the heads of the institutions of higher education are men of experience in education itself or in other administrative services. The presidencies of colleges are no longer filled, as a rule, by withdrawing from the ministry men well advanced in life and without experience in teaching. The deans of the rather distinct schools which compose universities are usually men of experience in their several departments; and much power is exercised by the faculties of colleges and universities, these faculties being always bodies composed of the more permanent teachers. Moreover, in large colleges and universities all the teachers of a given subject are often organized into a body called a division or department, with a chairman chosen from among them as a judicious man and a distinguished teacher. These or similar dispositions need to be adopted throughout the large urban school systems. Superintendents should be educational experts of proved capacity; their assistants, whether called supervisors, inspectors, or assistant superintendents, should be organized as a council or faculty; and all the teachers of a single system should be associated together in such a way that by their representatives they can bring their opinions to bear on the superintendent and his council, or, in the last resort, on the committee or board which has the supreme control of the sys-
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tem. The teachers of the same subject should also be organized for purposes of mutual consultation and support; and at their head should be placed the best teacher of the subject in the whole system, that his influence may be felt throughout the system in the teaching of that subject. Moreover, the colleges and the schools need to be assimilated in respect to the tenure of office of teachers. After suitable probationary periods, the tenure of office for every teacher should be during good behavior and efficiency.

In general, the differences of organization between colleges, on the one hand, and school systems, on the other, are steadily growing slighter. The endowed schools and academies already have an organization which closely resembles that of the colleges; and all the recent changes in the mode of conducting urban school systems tend in the good direction I have described. There is in some quarters a disposition to dwell upon the size of public-school systems as compared with the size of colleges and universities; but size is no measure of complexity. A university is indefinitely more complex than the largest city school system, and the technical methods of university management are more various and intricate than the technical methods of any school system. Independently of all questions of size or mass, however, administrative reform is taking the same directions in both colleges and schools: first, toward expert control under constitutional limitations; secondly, toward
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stable tenures of office; and, thirdly, toward larger official influence for teachers.

Recalling now the main heads which have been treated,—namely, the individualization of instruction, the six essential constituents of education, power in action as the true end of education, the selection or election of studies, the appeal to permanent instead of temporary motives for controlling conduct, the specialization of teaching, and the right principles of educational organization,—do we not see that the principles and methods of educational reform and construction have a common interest for all teachers, whether connected with colleges, secondary schools, or elementary schools, and shall we not agree that there is something unphilosophical in the attempt to prejudice teachers, of whatever grade, against the recommendations of the Committee of Ten, and of the conferences that Committee organized, on the grounds that a small majority of the persons concerned in making them were connected with colleges, and that the opinions of college or university officers about school matters are of little value?

The plain fact is that there is community of interests and aims among teachers throughout all the grades into which the course of education is at present artificially divided. The identity of the principles which govern reforms and improvements at every stage is strikingly illustrated by the simultaneousness and similarity of the advances now being everywhere made. Elementary
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schools, secondary schools, and colleges all feel similar impulses, and are all making similar modifications of their former methods. I can testify from personal observation that some of the administrative improvements lately made in universities resemble strikingly improvements made at the other extremity—namely, in the kindergartens. It is very noticeable that even some of the mechanical or business changes made in school administration—changes which were not supposed to have any bearing on the philosophy of education, or on new methods of teaching—have facilitated true educational reform. Thus, the method of transporting children, at public expense, to central grammar schools in a rural town, or to high schools in large towns and cities, has distinctly facilitated the introduction of departmental and elective instruction. Again, the purchase and free issue of books for pupils by towns and cities has facilitated the use of good literature instead of readers—an important contribution toward improving the teaching of the native language and literature by increasing interest in them and love for them. In like manner, the institution of departmental libraries—that is, of small working collections of books on the same general subject, deposited in a place by themselves, and always accessible to students of that subject—has made possible great improvements in the instruction of Harvard College and many other colleges.

The Committee of Ten declare, in their Report, that "it is impossible to make a satisfactory secon-
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dary-school programme limited to a period of four years, and founded on the present elementary-school subjects and methods." In view of the rapid changes now going on in elementary-school subjects and methods, this declaration amounts to saying that the Committee's work on the four secondary-school programmes which they recommend has only a temporary interest. Tables I, II, and III of their Report have some permanent value; but Table IV, which contains the four programmes called Classical, Latin-Scientific, Modern Languages, and English, and which cost the Committee a great deal of labor, will surely be rendered useless by improvements in the elementary and secondary schools which may easily be accomplished within ten years. Some firm, lasting principles are embodied in Table IV, but the programmes themselves are only temporary trestlework.

If I were asked to mention the best part of the contribution which the Committee of Ten have made to the progress of American education, I should say that their general method of work was the best part,—the method of investigation and discussion by subject of instruction,—teachers and experts from all sorts of colleges and universities, and from all sorts of schools, public, private, and endowed, taking part in both investigation and discussion. The Committee's method of work emphasizes the community of interest at all grades, and the fact that experience at every grade is valuable for suggestion and counsel at all other grades. To my thinking, the present artificial and arbitrary
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distinctions between elementary schools and secondary schools, or between grammar schools and high schools, have no philosophical foundation, and are likely to be profoundly modified, if they do not altogether pass away. In the same sense, I believe that the formal distinction between college work and university work is likely to disappear, although the distinction between liberal education and technical or professional education is sure to endure. I have never yet seen in any college or university a method of instruction which was too good for an elementary or a secondary school. The alert, inspiring, winning, commanding teacher is just the same rare and admirable person in school and in college. There is, to be sure, one important element of university work which schools and colleges cannot participate in, namely, the element of original investigation; but although this element is of high importance, and qualifies, or flavors, a considerable part of university work, there remains in all large universities, and particularly in those which make much of professional training, an immense body of purely disciplinary work, all of which is, or should be, conducted on principles and by methods which apply throughout the whole course of education. When it is a question how best to teach a given subject, the chances are that college or scientific-school teachers of that subject can help school-teachers, and that school-teachers can help college teachers. Moreover, it is important that each should know what the other does. I have observed, too, that even
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when neither party is ready to venture on affirmative counsel, each is pretty well prepared to tell the other what not to do. Such negative counsel is often very useful.

On the whole, the greatest promise of usefulness which I see in the Report of the Committee of Ten lies in its obvious tendency to promote coöperation among school and college teachers, and all other persons intelligently interested in education, for the advancement of well-marked and comprehensive educational reforms.