

A RATIONAL CORRELATION OF SCHOOL STUDIES.

AT the meeting of the Department of Superintendence of the National Educational Association, held in Boston in February, 1893, a committee was appointed for the purpose of preparing a report on elementary education, to supplement the Report of the Committee of Ten on secondary education, which had been appointed the previous year. The new committee, which was known as the Committee of Fifteen, was composed of Dr. W. T. Harris, the United States Commissioner of Education, and fourteen public-school superintendents, representing nearly all parts of the country. The Report¹ was formally introduced to the public at the Cleveland meeting of superintendents in February of this year. In view of the fact that the Report of the Committee of Ten had been so widely read and discussed, the Report of the Committee of Fifteen was naturally awaited with anxiety.

Three special phases concerning elementary education having been set down for consideration, namely, the training of teachers, the organization of city school systems, and the correlation of studies, the committee was divided by the chairman, Superintendent Maxwell, of Brooklyn, into three sub-committees of five. The document, therefore, was presented, not in the form of a report of a committee of fifteen, but in the form of three reports of committees of five.

The paper on the training of teachers, as well as that on the organization of city schools, except in matters of detail, met with general approval, and were commended for their excellence. In regard to the other report, however,—that on the correlation of studies,—an entirely different story is to be told. Its reading was followed by an ardent discussion. It was regarded by many as a defense of the mechanical routine, from which progressive teachers for many years have been endeavoring to depart; and it was feared that the report would exert a reactionary influence.

It is not my purpose to review the entire Report of the Committee. I desire to refer only to a single feature in the paper on Correlation—viz., the unification of studies, which was condemned.

¹ Published in the "Educational Review," March, 1895.

As the problem of unification of studies does not represent a mere pedagogical quibble, but an educational principle so vital in character as to exert a marked influence both on the character of the instruction and the happiness of the pupil, I deem it my duty, in the name of the child, to enter a protest on the ground that the reference to unification was eminently unfair. And my purposes in writing this article are, first, to prove that the report on the unification of studies is not entitled to official recognition; and second, as well as I can, to present the question of unification—fairly; which, as I have said, was not fairly presented in the paper. My reasons for protesting against official recognition of the Report on Unification are:

First, that, owing to the very nature of its construction, the entire Report is a misnomer, as it is not a report of a committee of fifteen, but simply a report of a committee of five. Three committees of five do not constitute one committee of fifteen, simply because their papers are published in the same volume.

Second, that the comments on the unification of studies do not even represent the opinion of the majority of the committee of five, there being a dissent on the part of three members.¹

Indeed, so strong are their dissenting remarks, as I shall point out farther on, that, if the remarks on unification had represented the views of the majority, they would have formed an admirable plea in favor of the very principle which the Report itself so heartily condemns. As, therefore, the remarks on unification have been condemned by a majority of the committee who are supposed to have written them, it is but natural that what has been circulated as the Report itself, should be regarded in the light of a dissenting opinion, and thus be robbed of much of its weight. By reason of these facts, it is clear that the so-called Report of the Committee of Fifteen can never be placed in the same category with the Report of the Committee of Ten. In the case of the latter, every point involved was discussed by a committee of ten, practically every chapter was signed by all members; and the conclusions were practically unanimous.

Third, unification was condemned on an entirely misleading argument—on a statement of the case so painfully incomplete as to mention only a perverted form of unification in which scarcely any one

¹ There were four dissenters to the report on correlation, which was signed by only one person, the Chairman, Dr. W. T. Harris. The report on the training of teachers was signed by five, and the report on the organization of city school systems by three.

believes. Moreover, this incomplete discussion of unification proved a great disappointment to many of the teachers who had looked forward to the Report for guidance. As the terms "correlation of studies" and "unification of studies" had been usually regarded as synonymous, it was generally expected that the entire Report would be devoted to the consideration of this particular question. It came to pass, however, that the chairman of the sub-committee, Dr. Harris, entertained an entirely different notion, and drafted a report on other matters. If Dr. Harris had remained sufficiently consistent entirely to ignore the subject of unification, even then the question of unfairness might never have arisen. But briefly to present, at the close of his discussion, merely a picture of a most perverted form of unification, and on that picture to condemn the entire principle, was, without question, extremely unfair. It was not only an injury to the cause of the child; but it was a lack of recognition of the admirable work performed by some of our most successful educators, toward placing elementary education on a rational basis.

So much to prove that the report on unification is not entitled to official recognition. I shall now endeavor to present an outline of this principle in a manner that will point out the favorable, as well as the unfavorable features—the advantages, as well as the dangers.

The fundamental element in unification lies in teaching the child in such a way that he will be able to view ideas and processes in their relations to each other. In school-work, as ordinarily conducted, each branch of study is so rigidly isolated from all others that the child is unable to see that there is a true relation between ideas. He is, indeed, treated as if his mind were divided into well-defined compartments, separated by impenetrable walls, in order that there might be no blending of ideas. In the vast majority of our schools, even such closely related branches as penmanship, spelling, punctuation, and the construction of sentences are taught altogether independently. Thus, the routine work in written language, as followed in the ordinary school, might be represented by the following outline: As a spelling exercise, the child is obliged to write a list of words, arbitrarily selected, regardless of their relation or meaning; in penmanship the central point involves practice in forming small and capital letters, and in joining them together into words, regardless of any thought underlying these words; the same words or phrases are repeated over and over again to the end of the period; for practice in capi-

talization and punctuation, a few arbitrarily selected sentences are dictated by the teacher; in the period devoted to grammar, the teacher may call for simple, complex, or compound sentences, with a sprinkling of prepositional and adverbial phrases, and so on; again, at designated periods, the pupils will be told to write compositions on abstract subjects, with which they may be not at all familiar; and, last, might be mentioned written answers to questions in geography, history, or some other subject, given for the purpose of testing how well the pupils have studied their lessons.

This is an illustration of what is understood by rigid isolation in instruction. Now, by reversing this process and slightly modifying it, the picture presented will be one of instruction by unification, in an elementary form; thus, for example, if, in place of answering test questions in geography, the pupil should write a composition on a geographical subject related to the lesson of the day, he would deal with more subjects in this single exercise, than are involved in the six exercises above described.

First, it would serve as a test of the child's knowledge; second, the mere writing of a composition on a lesson in geography would in itself serve to render the ideas more clear to the child, which direct answers to test questions can never do; third, it would involve an exercise in written language in all its phases—viz., spelling, penmanship, punctuation, capitalization, the construction of sentences, grammar, and composition. And this revolution is accomplished simply by regarding language as a mode of expression, and teaching it incidentally with the expression of ideas. Just as the child may learn to use written language while expressing ideas, he may learn to read while acquiring ideas, by making the mechanical process of reading incidental to the thoughts expressed in the reading-matter. That this plan of work has been successfully tried, I shall point out farther on. That some direct drill in each individual phase of language is necessary, scarcely any one would think of denying. The question at issue is simply this: namely, To what extent may these truly correlated subjects be taught in connection, without neglect to individual elements?

What I have thus far described, represents: first, the unification of ideas and the mode of expressing ideas,—the correlation of content and form; and second, the unification of the various elements in language.

The next step concerns the unification of subjects which, though apparently distinct, are nevertheless closely related. Prominent

among these branches are geography and history. It requires no argument to prove that in all questions of conquest, history and geography are inseparable. Again, the influence of climate and soil, of mountains and rivers, on the development of a nation is apparent. That, to a certain extent, geography and history must each follow its own course, cannot be denied. On the other hand, it cannot be denied that, even while following their own courses, they continually meet and serve to throw light on each other. And again the question arises: To what extent may they travel together to mutual advantage and without the neglect of either?

Further, there is, on the one hand, a close relation between history, biography, and literature, and, on the other hand, between geography, plant and animal life. In short, when this argument is followed to its limit, it is seen that all forms of knowledge are more or less closely related. Owing to this latter fact, it is claimed by some educators that it is quite feasible to select a single subject as a pedagogical centre, and to cause all instruction to revolve around that centre.

This, then, is a description of what is understood by the unification or correlation of studies, in contradistinction to isolation in instruction. The purpose of unification, therefore, lies in the treatment of the various subjects in a manner that they may mutually support each other; or, in other words, that the ideas of each branch may serve to throw light on those of the others. In isolation, the subjects are kept distinct and separate, so that the child does not see them in their true relations.

Concerning the opinions of teachers who favor unification, there are very few indeed who have gone so far as to advise the selection of a central study. Nearly all agree that this method is fraught with the danger of forcing relationships, simply for the purpose of unifying; which is fully as unnatural as complete isolation. They believe, that for the sake of making the work intelligible and interesting to the child, natural relations, so far as possible, should be preserved; but they do not forget that, for the sake of thoroughness, each subject must be, to a certain extent, taught independently. They are anxious to learn the golden mean. Hence, the argument in the report upon which unification was condemned did not apply to the majority of our progressive teachers at all. It applied merely to that very small number of educators who believe in centring all instruction around a single study. It was as follows:

"Your committee would mention another sense in which the expression, 'correlation of studies,' is sometimes used. It is held by advocates of an artificial centre of the course of study. They use, for example, DeFoe's Robinson Crusoe for a reading exercise, and connect with it the lessons in geography and arithmetic. . . . A correlation of this kind, instead of being a deeper correlation such as is found in all parts of human learning by the studies of the college and university, is rather a shallow and uninteresting kind of correlation that reminds one of the system of mnemonics, or artificial memory, which neglects the association of facts and events with their causes and the history of their evolution, and looks for unessential quips, puns, or accidental suggestions with a view to strengthening the memory. The effect of this is to weaken the power of systematic thinking which deals with essential relations, and substitute for it a chaotic memory that ties together things through false and seeming relations, not of the things and events, but of the words that denote them. The correlation of geography and arithmetic and history in and through the unity of a work of fiction is at best an artificial correlation, which will stand in the way of the true objective correlation. . . ."

From this argument, the committee drew the following conclusion:

"There should be rigid isolation of the elements of each branch for the purpose of getting a clear conception of what is individual and peculiar in a special province of learning. Otherwise one will not gain from each its special contribution to the whole."

It may be clearly seen, therefore, that the conclusion, "There should be rigid isolation," etc., was drawn from an argument which was woefully incomplete and misleading. As one of our prominent educators aptly stated, "It was the play of Hamlet, with Hamlet left out."

That my view of the case accords with the views of the majority of the Committee is proved by the dissenting opinions that follow; and these dissenting remarks prove further that, if the Report had represented the opinion of the majority, it would have formed a very strong plea in favor of unification. In dissenting from the Report, Superintendent Charles B. Gilbert, of St. Paul, says:

"While in the main I agree with the bald statements under the head 'Correlation by synthesis of studies,' since reference is made to only a very artificial mode of synthesis not at all in vogue in this country, I must dissent emphatically from this portion of the Report as by inference condemning a most important department of correlation, to which I have referred earlier. The doctrine of concentration is not necessarily artificial; rather it refers to the higher unity, of which this Committee has spoken in glowing terms as belonging to the province of higher education. It includes also the division of the school curriculum into content and form, which this Committee inferentially adopts in its treatment of language. I do not believe, any more than do the majority of the Committee, that the entire course of study can be literally and exactly centred about a single subject, nor do I believe in any artificial correlation; but there is a natural relation of all knowledges, which this Committee admits in various places, and which is the basis of a proper synthesis of studies, according to the psychological principle of apperception. . . . This relation of form to content

is vaguely referred to in the Report, but nowhere definitely treated. It seems to me that it is a true form of correlation, and, as such, deserves special and definite treatment. . . . The fact that it adds the important element of interest to the dry details of common school life makes it especially attractive to progressive and earnest teachers, and this Committee should recognize its importance and make such an utterance upon it as will guide the average teacher to a clear comprehension of its meaning and to a wise use of it in the school-room. . . . I regret to be compelled to express dissent upon so many points [Mr. Gilbert dissented on eleven points], but as most of them appear to me vital and as the differences appear to be not merely superficial but fundamental, affecting and affected by one's entire educational creed, I cannot do otherwise."

The dissent of Superintendent L. H. Jones, of Cleveland, follows:

" . . . It does not, as it seems to me, follow that, because correlation based on Robinson Crusoe is a failure, all correlations having the same general purpose will necessarily prove failures. For my own part I do not believe that correlation needs any 'centre,' outside the child and its natural activities. If, however, it seems wiser to give special prominence to any given field of acquisition, it should, in my judgment, be accorded to language and its closely related subjects—reading, spelling, writing, composing, study of literature, etc., etc. Indeed language as a mode of expression is organically related to thinking, in all fields of knowledge, as form is related to content. A 'system' or 'programme' of correlation on this basis would seek for fundamental ideas in all the leading branches and make them themes of thought and occasions of language exercises. The selections would omit all trivialities in all subjects, and would not attempt to correlate for the mere sake of correlation; but would seek to correlate wherever by such correlation kindred themes may be made to illuminate one another. To illustrate, concrete problems in arithmetic would be sought that would clearly develop and illustrate mathematical ideas and their application, but in a secondary way these problems would be sought for in the various departments of concrete knowledge—geography, history, physics, chemistry, astronomy, meteorology, political, industrial, or domestic economy. But none of these themes would be so relied upon for problems as to compel one to choose unreasonable or trivial relations on which to base them. The problems themselves should represent true and important facts and relations of the other subjects as surely and rigidly as they should involve correct mathematical principles; and all such exercises should be rightly related to the child's education in language.

"In like manner, when a child is engaged in nature study of any kind, some valuable problems in mathematics may be found rightly related both to the subject directly in hand and the child's natural progress in arithmetic. Also many of the lessons in nature study are directly related to some of the finest literature ever produced, in which analogies of nature are made the means of expression for the finest and most delicate of the human experiences. When the child has mastered the physical facts on which the literary inspiration is based, is the true time to give him the advantage of the study of such literature. These ideas are not only rightly related to one another, but to the mind itself. It is, so to speak, the nascent moment when the mind can easily and fully master what might else remain an impenetrable mystery; and all because subjects and occasion have come into happy conjunction. . . . This is not the place in which to attempt any elaboration of such a system of correlation. But I feel that its absence from the Report may make many persons feel that the latter is so far incomplete."

Superintendent Maxwell, of Brooklyn, in his dissent says:

" . . . I desire to express my agreement with the opinions stated in Sections 2, 3, 6 and 9 of Mr. Gilbert's dissenting opinion; and, in the main, with what Mr. Jones says on the correlation of studies." Superintendents Gilbert, Jones, and Maxwell constitute a majority of the sub-committee that framed the report. Superintendent J. M. Greenwood, of Kansas City, the other member of this sub-committee, also dissented on a number of points. As they did not, however, relate to the question of unification, I shall not quote from them.

The particular advantage claimed in favor of unifying the studies is, that *interest* in school work, on the part of the child, is greatly increased. This is due to several causes; and, of course, ability on the part of the teacher properly to apply the principle is essential.

First, when the mechanical studies are made incidental to thought, the drudgery of school work is reduced to a minimum, and the school is changed from a sombre institution into a house of life and sunshine. The work being much enriched, the child leads a life abounding in ideas and ideals, and the spiritual atmosphere of the class-room is markedly improved. That this is not merely a theory, may become clear, in my opinion, to any one who will visit schools where the principle of unification in instruction is observed. Among the prominent examples that have come under my own observation may be mentioned schools in Indianapolis, Minneapolis, and St. Paul.

Secondly, when the child views ideas in their proper relations, he frequently finds an immediate use for his knowledge. Other things being equal, interest in a thing is diminished in the same proportion use becomes remote. For this reason, we cannot measure the child's as its interests from the adult's standpoint; because what may be of great interest to the adult may be so far removed from the child that, to the latter, it will be of no interest whatever. For example, if a young man should find that there is nothing in the way of his securing certain employment, except the fact that he is a poor penman, the subject of penmanship may become so interesting to him as to lead him to practise this mechanical process with enthusiasm. Yet a plea to the young child, urging him to become a good penman because good writing will be useful to him when he is a man, will touch no chord in his emotions. But if we lead this same child to acquire ideas, and awaken in him from the start the desire to express his ideas in writing, then he will see an immediate use for penmanship, which thus will become a source of interest, and assume to him

a true life-form. What is true of penmanship is no less true of spelling, punctuation, grammar, and composition.

Again, if we can succeed in creating within the child the desire to write, much more can be accomplished than when he writes simply because he is ordered to do so. Just as writing may be regarded as a mode of expressing ideas, so reading may be regarded as a means of acquiring ideas. Concerning the teaching of other branches, in their natural relations, I shall add nothing to what has been stated in the dissenting remarks by Superintendent Jones, already quoted.

In regard to the Committee's objections to incidental instruction in language, we find the statement that *learning to read and write should be the leading study of the pupil in his first four years of school*. That this is so, I do not think any one—not even the most radical—will deny. Indeed, to believe that the advocates of a natural system of education are willing, in *any degree*, to neglect those subjects, is no less than a delusion. Yet fully to recognize the value of reading and writing does not by any means imply that, in order to obtain satisfactory results, it is necessary rigidly to isolate the elements and thus make the instruction in language purely formal.

While it may appear perfectly logical to argue that we cannot do two things at the same time as well as we can do one of them alone, and, consequently, that in order to secure the best results in all departments of language it is necessary to treat each element as distinct and separate; nevertheless, in this instance, the conclusion does not accord with facts. The reason for the apparent contradiction is simply this: that logic and psychology are not one and the same thing. Those who would deduce psychological theories by logical reasoning forget that the mind of the child is an unknown quantity, and acts in a manner difficult to comprehend. There is, indeed, only one way in which we can tell what results will be produced by a particular method of instruction; it consists in trying the method and testing the results. The end and aim of education may be determined by abstract reasoning; but the most rational means of reaching the desired end can be determined alone by the study of the child.

In regard to results, my personal observations have proved to me that the poorest reading and writing—I refer to written language in its broadest sense—are found in the schools where the instruction in language is made purely formal, by a rigid isolation of the elements; while the best results in reading and writing are obtained in the schools where the fundamental plan lies in giving the child ideas

and teaching language, to a considerable extent, incidentally, as a mode of expression and subordinate to ideas. Therefore, while logic speaks in favor of isolation, facts speak in favor of unification.

To state why children learn to read and write better when these branches are taught largely through a thought-medium, would be a matter of conjecture. Interest in the work may, in part, account for it. I shall not endeavor to explain the fact. Suffice it to say that it is a fact. I must, however, repeat the assertion that, with the diminution of formalism in instruction, the happiness of the child increases. If it should be necessary to purchase this happiness at the expense of results, the problem would still be an open one; for as the banishment of formalism not only relieves the school-work of drudgery, but improves the results as well, I do not understand how there can be any longer two sides to the question.

While I have undertaken thus to criticise the Report on the Correlation of Studies, I do not wish to be understood as implying that, in my opinion, the Report is without merit. On the contrary, the discussion of educational values is, without question, an excellent analysis, which, in part, cannot fail to prove beneficial to our teachers. But, while recognizing the general excellence of the Report, we must not lose sight of the fact that it is not a report of a committee of fifteen. And, while all should be grateful to Dr. Harris for giving us an analysis of educational values, it is but just to the child to bear in mind that the remarks on the unification of studies do not represent the views of the majority of the committee. It is no less fair to say that, in thus ignoring the opinions of the majority and substituting therefor his own views, Dr. Harris overstepped the limit of his authority, and assumed the position of a dictator. This is the more unfortunate for the reason that in other countries the Report will be regarded as representing the trend of American educational thought, which, in the question at issue, is in the opposite direction. For, if the views of the majority had been respected, the Report would have expressed the belief that much could be done toward uplifting our schools by teaching the subjects in their proper relations, that is, by educating the child on a rational system of unification.

J. M. RICE.

AN AMERICAN EDUCATIONAL SYSTEM IN FACT.

It was near the middle of this century before we realized that a Western State, not long before a territory, had become famous in Europe for a university more advanced in method than most of our higher institutions of the older States. The University of Michigan was founded as early as 1817. The charter implied one of the broadest and most radical educational programmes ever conceived. It discarded all those elements that stood in the way of making common and higher schools a unit; it discarded the separation of the sexes at some variable point in the progress of mental training; it discarded the idea that higher education was to create a learned class and educated citizens; it discarded the idea that the church owned or should control higher education while the State controlled the lower. It adopted the idea that higher education, as much as that of the common schools, was an affair of the State. It enacted that the University should be sustained by taxation. It was not till 1870, however, that Michigan connected all the high-schools of the State to the University, admitting their graduates to the University exactly as secondary schools received as pupils graduates of the primaries. So it came about at last that one State had a completely unified secular system of instruction, reaching by natural gradation from the lowest schools to the University. This University was the crown and bond of all the rest.

Although the first charter of this University enacted State support, it was not till 1867 that Michigan assumed in the fullest sense the obligation involved. In that year it was voted that \$15,000 annually should be paid to its support. The amount was small, but the principle was established. It declared that a State system of education ought to be provided for by each State, and that its sustenance should be provided by the State. More than this was implied, namely, that such a system ought not to be compelled to beg for its living, or be dependent on the whims of legislators for annual or less frequent gifts; it was entitled to as regular support as the governor and the legislators and judges. In 1873 one-twentieth of a mill on all taxable property was fixed as a regular university-allow-