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EXTRACTS

FROM

PROCEEDINGS IN THE INSTITUTE

FOR

Normal School Teachers

HELD IN

Oshkosh, Wis., December 17-21, 1900.

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CONDUCTOR

L. D. HARVEY, STATE SUPERINTENDENT.

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Madison, Wis., March, 1901.



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## FUNDAMENTAL PROPOSITIONS.

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The following four propositions are fundamental for the teacher and for the pupil in the determination of what is to be done for and in the recitation:

I. The teacher must have in mind a definite purpose or purposes to be realized in the next recitation.

II. The teacher must have in mind the things which must be known or done in order that the purposes may be realized.

III. The teacher must determine what of the things falling under proposition II. the pupil now knows or can do.

IV. The teacher must determine what of the things enumerated under proposition II. the pupil still has to learn or to do, and the order in which they should be known or done.

Is the statement that the foregoing propositions are fundamental a correct one?

This question will now be answered.

The teacher has always to determine with any given class for any given recitation:

1st. What is to be done by the pupils? What by himself?

2d. How shall what he has to do in testing, teaching, drilling and assigning work for preparation be done?

In short—

1. What is to be done at any given time?

2. How is it to be done?

The teacher's work is testing, teaching, drilling and assigning new work for pupils.

The pupil's work before the recitation is, preparation of work assigned; in the recitation is (a) showing the quality and extent of his preparation through expression in one form or another; (b) supplementing inadequate preparation by further work under the direction and inspiration of the teacher through teaching and drilling; (c) preparation for the next lesson.

A fundamental is an essential.

It is essential that the *what* shall be determined for and in every recitation, with every class of pupils, in every subject.

Today's recitation determines what has been done by the pupils in preparation, what more is to be done for and by them during the recitation, including the determination of what they are to do for tomorrow's recitation.

The *what* precedes the *how*.

The *what* must be determined with reference to its value for the pupil at a given time, under conditions then existing. The proper determination of the *what* in any given case demands correct answers to the following three questions:

1st. What in the given subject is the pupil to learn, and what is he to do in the application of what is learned as a necessary part of his training?

2nd. What is he prepared for?

3rd. What of that which he is prepared for and which he is to learn or to do, does he need next?

That the teacher shall be *able* to answer, and that he *shall* answer these questions correctly, is a fundamental condition of any good teaching. If this statement is correct, then the fundamental character of the four propositions is demonstrated, because the answers to these questions are determined by the application of those propositions.

I take it no one will question the fundamental character of the first proposition, viz.: The teacher must have in mind a definite purpose or purposes to be realized in the next recitation.

The demands made upon the teacher by that proposition can not be met except through the answer to the first question above. That is: "What in the given subject has he to learn and what is he to do in the application of what is learned, as a necessary part of his training?"

Neither can it be answered without a consideration of propositions II. and III., as applied to his preceding work.

The second question above, viz.: "What is the pupil prepared for?" can be determined in no other way than through the requirements of the second and third of the four propositions. That is to say, unless the teacher knows what are the elements that go to make up this knowledge which the pupil is to master, and unless he has determined what the pupil now knows, he can never answer that second question, "What is the pupil prepared for?" There is no other way to get at it. No matter whether you have ever heard of these propositions or not, you are doing it if you determine what the pupil is prepared for.

The third question above, viz.: "What of that which he is prepared for and which he is to learn or to do does he need next?" is determined through the application of the fourth proposition.

These four propositions are fundamental because there is no other possible way by which the three questions above enumerated can be correctly answered. Omit what is demanded by any one of the four propositions and at once uncertainty, doubt, and confusion arise. A teacher may never have heard of these propositions and may work wisely in the determination of what is to be done for and in a recitation; but to the extent to which he has worked wisely, he has unconsciously been applying these propositions; to the extent that he has consciously applied these propositions, he is conscious that these determinations have been worked out in a logical manner, and his conclusions at every step tested.

Let us examine a little more fully the reasons upon which the first proposition is based.

If the teacher is to assign a lesson for preparation by the pupils, there must be in his mind a definite purpose or purposes to be realized by the pupils in their preparation and shown in the recitation. Unless there be such a definite purpose in the mind of the teacher, he has no means of knowing whether the work assigned bears a proper relation to the work which has gone before and the work which is to come after; neither does he know whether the work assigned is adapted to the present needs and mental condition of the members of the class; neither does he know whether the work assigned is too much or too little to fully employ the time at the pupil's command for this specific piece of work. If the teacher has no definite purpose in mind in the assign-

ment of his lesson, then the assignment will, of necessity, be vague and indefinite, and the pupil will have nothing before him definitely indicating what he is to learn or to do. The result will be that the next recitation will be largely a failure, primarily because of the teacher's lack of definite purpose.

In determining the aim in each day's lesson, the teacher must keep in mind the question already stated, "What in the given subject is the pupil to learn and what is he to do in the application of what is learned, as a necessary part of his training?" This must be thought out in advance; must be clear to the mind of the teacher. Unless it is clear to the teacher, there can be no definiteness of purpose for any given recitation that will be properly related to the work of the preceding recitations and the work which is to follow.

The purposes from day to day must always be formed in the light of the subject matter and what part it is to play in the training of the child. They must also take into consideration the answer to the second question above stated: "What is he prepared for?" Otherwise, the lesson is assigned without any consideration of the pupil's ability to make the preparation demanded.

One of the most common errors on the part of teachers is to thus assign work without any definiteness of aim. So many pages; so many problems, so many experiments, are assigned for the next day's work. Too often this is done without any thought as to whether the work of today has been mastered by the pupils or not, and that even, when the successful preparation of tomorrow's work depends upon the mastery of today's work. In a little time the pupil is hopelessly lost, discouraged, and unable to make any intellectual growth in this given line of work. I appeal to the experience of those present if this is not a matter of common occurrence in almost every grade of school; if it is not even a matter of somewhat frequent occurrence in the Normal schools, and often in still higher schools. Each teacher can test for himself his attitude upon this matter by formulating clearly and concisely the purposes he has in mind for any given recitation. The very fact that it is not an easy thing to do will convince him that it has not already been done, and that too often he is simply considering the amount of material rather than the amount of mental activity required to master it and whether the pupil is prepared to exert the required mental activity.

I wish to call attention to the fact that, not only is definiteness of purpose essential to the proper assignment of a lesson, but that, whenever in any given recitation the teacher finds it necessary to do some teaching, there must again be the same definiteness of purpose as in the preceding case; that, in his testing of pupils, there must be a definite aim toward which every question or requirement should be directed; that in drill work the same necessity exists for definiteness of purpose, determined primarily by the needs of the pupils as shown in the recitation.

A recitation may frequently disclose a condition as to lack of knowledge or lack of power or of skill which may make it necessary then and there to formulate a new purpose not anticipated, which must be accomplished under the teacher's direction during that particular recitation. There should be no variation from the purpose which decided the assignment of the lesson on the day previous, unless it appears that some lack on the part of the pupil, not anticipated by the teacher, renders it necessary to formulate new lines of work and master those before the work originally assigned can be mastered.

Considering the second proposition—"The teacher must have in mind

the things which must be known or done in order that the purpose may be realized," let us note that the purposes which a teacher may have in mind may be concerned with two aspects of learning; one, the acquisition of knowledge; the other, the acquisition of skill through doing. Is it essential that, with a given purpose in mind, and that purpose being the mastery of certain definite facts and their relations, or the determination of relations from given facts, thus exercising the reason and paving the way for the formation of judgments, that the teacher shall know definitely what preliminary knowledge is essential to the pupil for the accomplishment of the task in hand, and what are the essential elements which go to make up the new body of knowledge which the pupil is to master?

Let me ask the same question with reference to a task which demands something to be done, it may be in the way of graphic presentation. Is it essential that the teacher shall know what elements of knowledge and skill must be possessed by any individual in order that he may be prepared to enter upon the work in hand; and, further, is it essential that the teacher shall make an analysis to determine the elements of knowledge and skill required for the performance of a definite task?

It would seem that to ask these questions is to answer them. No one can successfully deny that it is a necessity for the teacher to know what essential, related body of knowledge must be mastered to reach any given end; what essential, related body of knowledge and correlated forms of activity are essential to the intelligent doing of any given piece of work demanding skill. Without this knowledge, the teacher abdicates his position as a leader, as a teacher. An essential element may be left out by the pupil and, because it is left out, he is powerless to perform the task assigned him. The teacher may blame the pupil; may tell him that he has not studied; may undertake to explain; but, except by happy accident, he fails to hit upon the point of weakness and to bring up before the pupil facts for his mastery that essential element which was lacking. In all such cases there is a waste of time and energy on the part of both teacher and pupil, a loss of interest by the pupil and on the teacher's part, a lack of appreciation of what is essential for the proper discharge of his duties.

It is frequently assumed that every teacher meets the requirements indicated in the second proposition. Is this a fair assumption?

The teacher may test that question for himself or herself by undertaking to formulate definitely what must be known or done in order to achieve the mastery of any given piece of work. Submit this formulation to your own critical examination. Submit it to others for their judgment and criticism and I feel confident that the result will be something of a surprise to those who have never undertaken to do it.

Is there still a further reason for this work?

It has been said that a part of the teacher's work in the recitation is to test the pupil's preparation. Shall the tests be confined within the range of what it is essential for the pupil to know, in order that the purpose for which the lesson was assigned may be accomplished? If so, how can they be kept within that range unless the teacher has definitely in mind what is demanded by the second proposition?

Much of the purposeless and illogical questioning in the class room grows out of the fact that the teacher does not have in mind what are the essentials for the pupil in the mastery of the lesson. Without this knowledge on the teacher's part, the questioning is purposeless, often unnecessary, and always confusing. With it, the question is clearer, more definite, and in its proper place. One great reason why so many



teachers are poor questioners is because there is this lack of definiteness in their minds as to what is necessary knowledge for the pupil, and therefore as to what it is proper for the teacher to question him upon.

Taking up the third proposition, is it possible for a teacher to assign a lesson with proper reference to the needs and conditions of the pupil unless he has met the requirements there stated, viz.: to "determine what of the things the pupil must know or do he now knows or can do"?

If it be assumed that everything in the work assigned is unknown, and it should develop that most of it is old to the pupil, then too little work has been assigned. If it be assumed that most of it is known, or that the pupil is already able to do most of what he is asked to do, and it should develop that neither assumption is correct, then too much work is assigned. In either case the result cannot fail to be bad for the pupil.

Lack of application of this proposition is the cause of more failures in recitation than any other one failure on the teacher's part. Every teacher will bear me out in the statement that the pupil frequently fails to do what the teacher wants him to do because he, the pupil, assumes that he can already do it and, therefore, needs no further preparation or practice; fails to know what the teacher expected him to know because he assumes that he already does know, when his knowledge is vague, inaccurate, and incomplete.

It is not only essential for the teacher to know what the pupil is to prepare upon and what preparation he should make, but it is far more essential that the pupil shall know exactly wherein his knowledge is to be strengthened because it is now indefinite and incomplete; wherein his skill is to be developed because it is now inadequate.

To illustrate:—Certain definitions are assigned to be mastered. They may not be entirely new to the pupil. He has gone over the ground before. He assumes that he knows them, and so comes to the recitation with the same vagueness and inaccuracy that he had before. Had the requirements of the third proposition been met by the teacher before the assignment of the lesson, it would have made clear to the pupil just where he was lacking in accuracy and completeness, and would have put before him a definite piece of work to be mastered for the next recitation.

I have again and again heard this: "Be prepared to pronounce correctly every word in the reading lesson." Do you suppose the pupils were prepared? Not at all. There were perhaps half a dozen new words in the lesson, but because those new words were not indicated, the pupil assumed that because he could pronounce most of them, he could pronounce the rest. When asked why he was not prepared, he answered, "I thought I knew it."

One of the essentials for a student is that he shall early learn how to study wisely. There is no way of mastering the art of study except through study. And there is no better way, I believe, of teaching this art, than by presenting to the pupil definitely and clearly just what he is to do and in the order in which it is to be done. The third proposition, if applied, will secure exactly this result.

It is to be understood, of course, that a teacher who is dealing with the same class from day to day on a continuous and related line of work, will know at any given time quite clearly what, of the things which must be known or done, the pupil now knows or can now do. It is equally clear that in preparing for the assignment of a lesson it

is unnecessary to go over ground which he has already traversed in preceding recitations and to test pupils when he already knows that they can meet the tests. It is equally true that, in almost every recitation, in the preparation for the assignment of the next lesson, some additional tests as to the status of the pupil's knowledge of the new matter should be made.

The application of the third proposition determines for the teacher what of the things determined by applying the second proposition the pupil has yet to know or to do, and the fourth proposition simply demands that the order in which these things are to be known or done, if the order is essential, shall be made clear.

I have thus shown what seems to me to be the fundamental nature of these four propositions and the necessity for applying them in the assignment of work for any given recitation.

It will be evident that with any unit of knowledge the first and second propositions may be applied and worked out fully throughout the entire unit.

*The third proposition cannot be applied strictly except in the presence of the class and from day to day.*

*The same is true of the fourth.*

But whenever a given unit has been worked out a little thought will show, that as the work progresses from day to day with this particular unit, each of the propositions becomes applicable again so far as the day's work is concerned. The aim for each day will be a portion of the larger and more complete aims for the whole unit.

The application of the second proposition for each day's work on the unit will consist in a determination of what portion of the formulation of the entire unit is essential for the day's work.

The application of the third proposition will be concerned with testing on what the second proposition showed to be essential.

The application of the fourth proposition is clear.

A little consideration will make clear how far these propositions are applicable in each of the three phases of the teacher's work in the recitation,—teaching, testing and drilling. The moment he begins to test, that moment the necessity for what is called for in the second proposition is evident. Otherwise his testing is purposeless, as has been shown. The moment that testing has shown him that it is necessary to teach during that recitation period, that moment the application of the first, second and fourth propositions becomes a necessity for him. The moment his testing has developed that drill work is necessary, that moment he has applied the first proposition, for, in determining the necessity for it, he must, if it has been determined wisely, do so in the light of a definite purpose. That purpose is made clear by the application of the second proposition; while every stage of the drill work is also an application of the third proposition.

It will be observed that these propositions have to do with the "what" of the recitation. The "how" is not a consideration at the present time. I am firmly of the opinion that if due care and attention be given to the "what," very many questions as to "how" will become unimportant or answer themselves. The very analysis required of the teacher in this determination of the "what" will give him such an insight into the nature of learning and of teaching as to materially strengthen his method of the "how."

I have sometimes heard the fear expressed that if teachers are required to deal in the manner indicated with the subject matter of each recitation and, especially, if they are required to put in definite form

on paper the requirements of the several propositions, it will become a piece of formalism and result in more harm than good. I wish to state here, once for all, that the writing out of the lesson plan is no essential part of the plan itself. It is merely a device, but a most valuable one, to compel teachers to do the work necessary to be done, and to put it into such form as will make it possible for them to criticise their own work and to submit it for the criticism of others in the interests of better preparation.

This definite formulation and putting into permanent form of what is demanded by these propositions, if continued sufficiently long, will develop skill through close attention and clear analysis. The purpose of this work is to develop a habit of mind, so that the teacher will unconsciously do the thing which ought to be done. The freedom which some people fear will be abridged by this process is the freedom of lawlessness, of carelessness, of indifference, of ignorance and of irresponsibility. The freedom that is desired is the freedom that comes through the reign of law, and in this case it is pedagogical freedom through the reign of pedagogic law.

Skill in any art is not acquired by accident. Skill in the art of all arts, that of training the human mind, can only be acquired by careful study, continued experiment and pains-taking examination of methods and results.

In beginning the mastery of any art it is essential to see what is to be done. It is essential that the first efforts toward doing the required thing shall be made with the greatest care. This means laborious, painful work, and often then, meagre results. But continued, persistent, intelligent practice finally develops the skill which gives that which is so much prized,—freedom of action. The skill is the resultant of mental and perhaps physical habits.

It is the purpose of this work to develop a habit of thought and when that has been developed, the necessity for the written formulations no longer exists. It will be well, however, for the teacher even then to occasionally give himself the practice and the test of writing out what is called for in these propositions. The same reason for this exists as in the case of the skillful pianist who delights thousands at the evening recital and spends hours the next day in practicing the scales.

If I am right in assuming, and it is an assumption proved, that all good teaching must take cognizance of what is required in these propositions, then the demand that they shall be applied is not a fad, nor a piece of formalism or of mechanical organization of matter. Whatever merit these propositions have lies in the fact that they compel the doing of the things which must be done, in such a way that the doer is conscious of what he is undertaking, and also in such a way that the person responsible for having it done will know that it is done.

## FUNDAMENTAL QUESTIONS.

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TO WHAT EXTENT, WHERE, AND FOR WHAT PURPOSES SHOULD THE FOREGOING FUNDAMENTALS BE APPLIED IN NORMAL SCHOOL WORK?

If what I have stated thus far is correct this question answers itself. If in the Normal school anything is learned or done for and in the recitation by the students and because of the teacher, then if that which is so learned or done is what ought to be learned or done, and if it is so learned or done when it should be, and in the order it should be, then these fundamentals must be applied at every step in determining *what* shall be so learned or done and the *order* of the learning or doing.

If in the Normal school many things are learned or done which it is unnecessary to learn or do, or if not learned or done at the proper time or in the proper order, then it is because these fundamentals are ignored or not skillfully applied.

If teachers are trained in applying these fundamentals until they have become skillful in so doing, then by their application of them they become able to determine whether they are teaching or requiring students to learn many things which are unnecessary, or out of place when taught or learned, and so able to secure the necessary results in less time, with less work by both teacher and student. They also present better ideals of correct teaching to the student, and in so much as what he is required to learn or do is essential and better organized and related, he is better trained and therefore is better prepared to train others. I know that my own experience as a teacher in the Normal school and as an institute conductor, in consciously applying these fundamentals has resulted in the elimination of much which I had been requiring, in the better organization and arrangement of what was required as a result of their application, with greater clearness of thought and comprehension of subject matter by the students, and a considerable saving of time for them and for myself. It has also resulted in all I have been claiming in the way of better ideals, standards, and training. I know further, that as I have observed the conscientious and skillful application of these fundamentals by others, either in the school or in the institute, similar results have followed from their efforts in this direction. I know further, that as I have observed unskillful work by teachers and institute conductors, resulting in confusion of thought, in lack of definiteness in effort or results, in waste of time and loss of interest, it has resulted much more frequently from a lack of skilled effort in applying these fundamentals in the daily determination of what the students were to learn or to do, than from a lack of skill in the method of the "how."

A teacher may show skill in the way he does a piece of work because his method of the "how" may be good and still the work may be a complete waste of time because it is not worth doing, or is done at a time

when it bears no proper relation to other things done, and so has little lasting value. One of the most just criticisms upon our modern teaching is that so much is taught that is not worth the teaching, and so much time is wasted upon things which the pupil already knows or can do, and so much more time is wasted in trying to have pupils master what they are not prepared at the time to master.

I believe that the application of these fundamentals will remove the cause for these criticisms. I think I appreciate as clearly as any one that there are other things of importance in teaching besides these four propositions. I make no claims for them which imply an ignoring of the other important facts in skillful teaching, but I believe that for the Normal school teacher, as well as for every other teacher who would master the art of teaching, it is essential for success that he shall master first the fundamentals of his art, and if these are fundamentals then we can not too strongly insist that they shall be understood and applied.

While as I have said, this is true of the Normal teacher as of every other teacher, it must be said, further, that it is of more importance to his success than to any other teacher, because he is not only teaching subjects, but he is teaching and training his students to teach others, which is an added demand. He is not simply teaching others to teach the subjects he is teaching them, to others like themselves, but he is teaching them to teach other subjects to others *unlike* themselves in attainments, capacity, and interests. A student who becomes a teacher unconsciously absorbs much of the method of his teacher and either consciously or unconsciously attempts to apply it in his teaching. He too often fails to recognize that his teacher's method was adapted to the needs of students altogether different in maturity and power from his pupils.

The Normal school teacher must of necessity do such work as will give his students a grip on the fundamentals in teaching in such a way that they can apply them to the needs of their pupils instead of becoming thoughtless imitators.

We can not attempt to deal with every phase of the art of teaching during this week, and in determining what phases should be considered I have thought it wise to focus attention closely at the very outset upon the fundamentals. To paraphrase a profound truth uttered centuries ago,—

Seek ye first the fundamentals in the art of teaching, and all other things shall be added.

#### TO WHAT EXTENT DO THESE FUNDAMENTALS FURNISH A UNIFYING BASIS FOR THE PROFESSIONAL WORK IN THE NORMAL SCHOOLS?

If they are fundamental, the recognition of their character, and their application by all teachers in the Normal schools will put the entire work of the schools upon a common basis. No sounder basis for professional work can be found than this, because it is fundamental.

It affords an opportunity for students to see in every recitation, under every teacher one common basis of work, one common standing ground. They see how these propositions are applied by different teachers to different subjects in different classes, until it becomes a matter of course to them. They see that here at least the work in the strictly professional classes is re-inforced by every other teacher, no matter what he is teaching. The strictly professional work is then

seen to have some force outside of the particular class in which it is done. As it is now, much of the work that is so carefully and laboriously done in the strictly professional classes is never heard of or thought of outside these classes. In a professional school where the sole purpose is to train teachers there can be no justification of such a condition. Every teacher should do something more than teach well if he is to teach in a professional school where the purpose is to train teachers. If he do nothing more, he should do *nothing* in the professional school. His place is in another kind of school.

What more shall he do? I take it that this is what should be done by every teacher who is teaching what may be called the non-professional subjects. He should show in his own work a recognition on his part of normal processes in teaching, based upon normal processes in thinking. Not only should he show that in his work, but he should take occasion to make his pupils see that that is what he is doing, so that they shall become conscious of the fact that what was taught in the pedagogy class, or the psychology class, or in the practice teaching, is practiced by the teacher, so far as the fundamentals go, in every department of the Normal school. So that when a student comes from a professional class to a class in any other subject, he shall find something there to deepen the impression made of the work in that professional class, to re-inforce that impression, to help the supervisor of practice and the critic teacher when they undertake to get these pupils to do work on sound pedagogic bases. If that is left out, it seems to me we are leaving out an important phase of the work which should be done in every Normal school by every teacher.

And I want to say further, that I believe the best professional work that it is possible to do in a Normal school is the work done in the academic classes under these conditions, because there theory and practice go hand in hand. Theory is tested by practice at that moment, and practice is judged by theory. Put the theory in the northeast corner, in room 40, for the first ten weeks, and it hardly ever gets out of that room the other thirty weeks, and I appeal to the people who are responsible for the practice teaching if this is not true, if they do not feel that there should be more re-inforcement for the work they are doing in every department of the school.

Now, if what I have been saying this morning in my discussion as to whether these four propositions are fundamental, is true, then it seems to me that these fundamentals ought to be recognized and practiced by every teacher in the Normal school. As I said before, the work, so far as these fundamentals are concerned, should be upon a common basis. Take plans that are prepared for the practice work not upon some fundamental basis (and excellent plans may be prepared) and tell me where the student ever finds, as he goes from room to room and from teacher to teacher, anything in the plans of the teachers under whom he is working today that has any relation or any likeness to the plan which he made out last night to submit to the practice teacher. Answer me this,—whether it is not true that the students, as they go out from the strictly professional classes to other classes fail to find such a re-inforcement of the professional work as is desirable, unless some common fundamental basis for work in all classes has been adopted and is used. The teacher may have been doing good teaching, but does this question come to the mind of the student?—"I wonder what have been the mental processes of my teacher as he planned this recitation. I wonder whether they have any relation to my mental processes in planning for my practice class under

the direction of the supervisor of practice." I believe that when these student teachers come to face this proposition—"What am I to do for this class tomorrow?" if it is made clear in the field of science, of literature, of English, in the languages, in mathematics,—in every department of the Normal school work,—that there are certain fundamentals, just as applicable in one case as in another, the close application of them, involving critical analysis of the work of the teachers, will insure better results in the student's work.

I believe that if this is done so that the student will see that in arithmetic, in grammar, in literature, in geometry, in music, in drawing, in German and in Latin, there is a common basis in the preparation of what is to be taught and what is to be assigned, and if he sees it worked out in this subject by this teacher today, and by another teacher in another subject tomorrow, etc., from day to day and week to week there comes a re-inforcement from every side that helps him in his work of planning for his practice class and in the carrying out of that plan.

Now, if that is true, there is at least one common basis that we may work upon, and there may be others. As I said before, we do not expect to solve all the problems this week.

I have already indicated that one of the purposes of the Normal school is to train pupils to study. I want to go over that again briefly.

If your experience is like mine (covering thirteen years of Normal school work) you have discovered that one of the greatest needs of your pupils is a knowledge of good methods of study. They have to be trained to study to get the best results, and if we acquire an art by the practice of it, and if for economical and effective practice we need to know the necessary steps and their order, then it seems to me that this kind of work with the pupils puts in place of vagueness and indefiniteness (which must exist without it), definiteness, accuracy and clear thinking upon the part of the pupils, and that you can thus get the training which is needed to develop in them a mastery of the art of study.

We have volumes written on the training of the apperceptive. It is an important topic. We all know what it means. But I want to call your attention to this fact, that it is a great deal more important to get a pupil to apperceive than it is to talk to him about what apperception is. I have read a great many books on apperception, but I have never yet read one which gave me the slightest suggestion as to how I could go to work to determine definitely whether the pupils had the necessary apperceptive mass to do the work; and, secondly, if they did not have it, how I was to go to work to see that they did have it.

Proposition II demands that you shall determine for yourself in every case what is the apperceptive material absolutely necessary for the reaching of a given end.

I want to call your attention to a second fact,—that the third proposition, that is: "What of the things which must be known or done does the pupil now know or can he now do?" applied successfully determines definitely and accurately what the apperceptive mass of the pupil now is and what further apperceptive material he has yet to acquire. So then these propositions become, if applied, a basis for unified, definite work in this field of apperception.

Tell me, if you will, any better way, any other way, by which it is possible to determine what is necessary in the preparation of the pupil for the mastery of his lesson.

On practice teaching I have already said something, but I want to say a little more.

If in the planning of the work, which I take it is required in all Normal schools, the student in the practice class shall be trained thus to organize what he has to teach, with his particular class in a particular subject under given conditions, then you have as a basis for the planning something that is absolutely fundamental. There are other ways of planning, but note this—if you have a basis that is fundamental and therefore necessary, and if in addition requiring the work of the practice teachers, the planning for the recitation in every department of the Normal school by every teacher is put upon this basis, then every recitation becomes a definite aid to that pupil who is undertaking to plan and organize his work definitely for his practice teaching. If, in the recitations conducted by the regular teachers in what we call the academic subjects in the Normal school, the teacher puts before his students the plan of work which he has been pursuing and which he purposes to pursue through the coming week; shows them what were his mental processes, what the order of procedure in his mind in the organization of his work for that recitation, is it not clear that there would be a re-inforcement of the work which the supervisor of practice is requiring of the pupils? If that be done in another and another and another class, will there not come out of it for these students before they leave the Normal school that which I have said was the purpose of the work,—a habit of thought that will give them a fundamental basis upon which to build in a logical and related manner?

The teachers outside of the professional classes are apt to have no interest in what the professional teachers are doing. They say, "I do not teach that. That is not my business. My business is something else." I take it that this is a misconception of the Normal school teacher's business. If he were teaching in a college or in a high school or university that might be true. But here he is teaching as a member of a Normal school faculty, whose united purpose is to train teachers. If in addition to teaching his special subject he can so bring in these fundamentals and give his students practice in applying them and an opportunity to criticize the teacher's modes of applying them, these students secure a mastery of these fundamentals which I do not believe can be gotten in any other way. I have seen the results of this kind of work. I have seen students in the first year of the Normal school under this régime arranging more systematic, more logical lesson plans than I have seen students in the middle of the senior year doing, where this plan was not followed. This was because they had been having this work in every department of the school and there came to be such a re-inforcement from every point that the habit of thought came to be developed which resulted in correct practice.

As I said at the outset, what we want first is the development of a habit of thought so that we shall unconsciously do this work. Mark this: While we may be unconsciously doing these things, and many teachers are and every teacher should be, that is not enough in a Normal school. They must be brought into the consciousness of these students somewhere else than in room B in the northeast corner of the building and at some other time than in the first, second or third quarter; until they come to see that what is being done by the teacher is or is not in accordance with what is fundamentally correct; until they come to have skill in the preparation of their own work and in the application of these fundamentals.



## HOW CAN THE ACQUISITION OF THESE FUNDAMENTALS BE SECURED?

If what I have been saying is correct, if it be true that every teacher of an academic subject has a duty to perform from a professional standpoint (and if it is not true we ought to know it, and if it is true we ought to accept it), then the next question is, "What shall we do in order that this duty may be performed?"

The first thing to be done is to have every teacher in the Normal school, from the president to the kindergartner, plan his work in the recitation upon these fundamentals. At the outset, each teacher should take some one subject, not everything at once, and begin formulating what is demanded in propositions I, II, and III. In III, what he may assume from his knowledge of the class, and then in his class the testing to find if his assumptions were correct, and from that testing reach the conclusions called for in proposition IV.

The principal of a high school said to me the other day: "I would like to know whether it is necessary to have my teachers write out under these propositions everything that is asked for from day to day, and whether it is necessary to do it with every subject they are teaching, or whether all that is necessary is to have it in their minds, and if that is all that is necessary, how shall I find out whether it is in their minds?" I thought that was a very pertinent question. Now, keep in mind what I said to you. The writing is no essential part of the plan. It is simply a process of training,—merely a device for training. Let the teacher take just one subject and work out his plans on that until he has acquired some skill in doing it; until he can do it easily. It will not be easy at first. Then let him take another subject where the material is different,—requiring a different body of thought,—different organization. Let him work on that until he has acquired skill in organizing his lesson plan. When that is acquired, it is not necessary to write out plans in detail daily.

Now, you may say to me, as others have said—"I have always done that." Some others have said—"I thought I had done it, but I find out that I have not." Some others said that they had done it, and I found on observing their work in the recitation that they had not.

I have examined hundreds of plans written by the best teachers in the State of Wisconsin outside of the Normal schools,—one hundred and eighty this spring and one hundred and twenty last spring, persons in attendance at the institute conductors' schools, and I have talked with high school principals, city superintendents, teachers in Normal schools and elsewhere. I know what they said this work did for them and their experience confirms my experience, observation, and judgment as to the value of this plan of work. When the Normal school teacher has acquired some skill in planning work for his recitations in accordance with these fundamentals, I would have him plan a week's work in advance in a subject, and then at some time during the week, take such a portion of a recitation period as might be necessary to put before his class his week's plan, and to explain his mode of procedure in making it. He should invite the criticism of the class upon the plan as presented, and should answer inquiries as to points not understood.

Some of the best work I have seen done in the Normal schools was the criticism of the teacher's plan by the pupils in his class. They criticised good-naturedly and in a pleasant way and each was helping the other.

I would put every practice teacher upon this basis in planning his work so far as determining *what* is to be done. Then the work which he is planning today interests him in the plan of the teacher of arithmetic, of geography, of history, or of literature, as he goes from room to room and meets those teachers. He is looking to his academic teachers to get some help in his professional work. And if these teachers are doing this work skillfully, he is not looking in vain. He does not get merely an imitative process of work adapted to mature minds, which he attempts to impose upon the immature second and third grade pupils.

In further answer to the question as to how to make these fundamentals a basis for unifying the professional work, I would say this work must be supervised. The plans prepared by the teachers in the Normal school should be submitted to some one or more persons skillful in determining whether they have been properly made. I know from experience that one who has had practice and has skill in this will be able to render very effective assistance to others.

Unless the work is carefully supervised, especially at the outset, you will get what some fear,—mere formalism; you fail to get a definite statement of aim; a proper formulation of what is essential, what must be known; you fail to get a proper test to determine what has yet to be known or done. But with suggestions and careful and kindly criticism and guidance, skill is developed and the value of the work is realized.

Before beginning practice teaching, students should receive training in making lesson plans. This training should be begun before the regular work in observation is undertaken, so that students in observing work in the model school may have an intelligent view of the plan arranged by the teacher whose work is being observed. The earlier in the course students come to understand this mode of preparing plans for work the better, for then they will be better able to understand the plans of the teachers of academic subjects.

Let me recur to the first question, namely:—

“To what extent do these fundamentals form a unifying basis for the professional work in the Normal school?”

They furnish a unifying basis so far as the determination of what is to be taught in any given subject by any teacher is concerned, and no further. That is all I claim. As I said to you at the outset, the “what” comes before the “how.” This is fundamentally essential, and if we can make the fundamental a unifying basis, it seems to me we have started right. Some time later on we may be able to take up the large question of the “how,” and find some unifying basis there upon which we can work. What would be the result? I have already indicated what I think would be the result. I believe we should get a better professional spirit in the school. There would be such a re-inforcement of the professional work now done as we have never yet seen,—a re-inforcement that would come from every teacher of academic subjects and would bring them in closer touch with the professional side of their work. These are the results that I wish to see. I think that we should see the students developing a power which they do not always now have,—a power to organize on a fundamental basis that which they are to do with their pupils.

I want to say to you that all over Wisconsin, in the high schools and elsewhere, there are scores of teachers doing this kind of work; there are boards looking for teachers and superintendents looking for teachers who can do this kind of work. I can name a dozen cities in this state where the work is upon just this basis. I can name a dozen

counties in this state where the county superintendents are undertaking to have this work done and are getting it done by the teachers in the district schools. I have had sent to me scores of the plans which these district school teachers have made. For two years we have put the entire institute work of the state upon this basis so far as the determination of the "what" is concerned. If we can go on with this work in the Normal schools, the result will be a better unification of the work in our educational system from one end of the state to the

#### WHAT SHOULD BE DEMANDED OF THE PUPIL IN THE RECITATION?

I shall have to apologize here, I think, for not having prepared as definitely and as clearly as I would like to have done, the answers to these questions. It has simply been a physical impossibility to get time to do it. So I may be somewhat rambling in what I have to say, but perhaps it will serve to open the discussion.

There are two or three points that I have jotted down.

First, the concentration of attention upon the subject in hand. That should be demanded of the pupil in the recitation. That is a fundamental condition for getting anything out of the recitation or understanding what is treated in the recitation, for the correction of false or erroneous impressions in the recitation, and for the reaching of definite and correct conclusions in the recitation. Now, this is one of the things which cause very little trouble in the Normal school, but the students who are training to become teachers find it a very serious problem when they begin teaching, and one reason why I have put this topic upon the program is that it seems to me that something definite ought to be done in the training of those students, to the end that they shall have power in concentrating the attention of pupils under them. One may say: "If your pupils are interested, they will concentrate their attention;" but what often grows out of that is that the recitation is made the place to interest students, not in the subject matter necessarily, not to accomplish a definite thing, but just to be interesting. Anything that is interesting will concentrate attention. A story or a dozen stories will interest; an organ and a monkey will interest; any number of things will interest, and you and I have seen recitations where there was no other apparent purpose than to entertain, nothing definite done toward a given end because of this effort to interest and so command attention.

It seems to me that what ought to be in the teacher's mind in this effort to command attention is definiteness of purpose in what he expects to get out of the recitation first, and then a definite plan of work in his own mind toward the realization of that purpose and a reasonably close adherence to that plan. Now, if that purpose is clear in his mind, if he has set something for his pupils to do in which he believes, and has made clear to his pupils what they are to do, then he has the conditions for attention; the effort to arouse interest should always be within the field of the purpose, not outside of it. To lug in inconsequential, immaterial and irrelevant things just to arouse interest is utterly inexcusable. The teacher needs to develop the power shaping that work as to demand something of them.

of interesting his pupils in the work to be done, and that means so And this leads to the second point which I have here. "There should be demanded of the pupils a high order of mental activity throughout the entire recitation." You and I have seen recitations in which the major part of the class were exercising no mental activity. They were

simply in a passive, quiescent state,—not a wave of trouble passed over their peaceful brows. They were thinking nothing about what was going on. They cared nothing about what was going on. Now while that is not ordinarily true of the students in the Normal school, is it not true in the schools which they go out to teach often times? If your youthful experiences were like mine, and I suspect that we had about the same experiences, you will recall that many a time in the recitation you sat there in a passive state, oblivious of what was going on. Your thoughts were wool gathering. There might have been a line of mental activity, but it was not directed to the end sought.

If that is one of the difficulties in the recitation which your students are going to meet, then it becomes an essential, it seems to me, to call their attention to it, not only in the professional class, but in every other class.

Suppose you have a set of pupils who go to school simply because they have to go to school, and whose highest ambition is to get out of the recitation with the least possible trouble. What will you do there? How are you to organize your work so as to command the attention and give the largest opportunity for work by the greatest number? The teacher who makes the demand upon the pupil must say something more than “pay attention.” “I want you to think now.” There comes the question “How shall I secure and hold the attention of the class to the work in hand?” That is one of the questions which it seems to me can be very well discussed incidentally by every teacher in the Normal school, and that the discussion will be helpful I know.

Third—“The student shall give evidence of careful preparation of work, such preparation to be shown through expression.” This is only another way of stating that you are going to ask the pupil to recite. But how can the pupil give evidence of preparation through expression if at every moment he is interrupted by the teacher and his line of thought broken up, and he gets to thinking about something else? It seems to me that if I am going to demand of him that he shall show the quality of his preparation through expression in one form or another; it may be written, by a drawing upon the blackboard, or it may be oral, I must give him an opportunity to meet that demand. I must let him understand in advance that that is expected of him and nothing short of that, and that he will have his chance when he comes to the recitation.

I want to modify that a little. I do not expect that the pupil, when he stands up to recite, will do any one of those things perfectly. But that is what he is to aim at. That is not what we are going to get. But we are going to come nearer to getting it if we demand it and insist upon it and make it possible for him to do it, than we shall if we do not demand it, do not insist upon it, and make it impossible for him to do it.

There are places where the expression should be accurate. You assign a student a clause in the Constitution to be learned and recited. Will any recitation serve which is not accurate? If it is a statement of a mathematical problem, it must be accurate or nothing. If inaccurate it is good for nothing. If it is possible to have an accurate statement made and learned, and if that has been assigned as a part of the preparation, then an accurate and complete statement should be demanded, should it not? And it ought to be insisted upon, not simply for these students themselves in their preparation, while that would be ample reason, but for a larger reason than that,—for the establishment of ideals and standards of what they are to do in making demands upon

their pupils. The statement will not be accurate perhaps when the preparation involves judgment on the part of the pupil; it may not be complete; it may not be definite because of the newness of the subject. It is the business of the recitation to make it definite and to make it complete. But so far as the pupil is concerned, he has a right to make his statement, such as it is, without interruption, without being switched off the track again and again. Let him make his statement and then see whether that statement is correct and complete, see wherein he has failed, and subsequently, if possible (and it ought generally to be possible) get a full, complete and accurate statement from him.

"Whatever definite work the pupil has been asked to prepare, that he should be held responsible for."

If preparation has not been made as requested, the pupil should be required to give his reasons for his failure:

I know some students in a higher institution than a Normal school who sometimes "flunk," as they call it. And I have sometimes asked them, "Did the teacher ask you the question as to why you had not prepared, whether you had any good reason why you had not prepared the lesson?" "Oh, no, he never asks such questions, but I was busy." "I was out last night." "I was reading an interesting book." Let that go on and what is the attitude of the student? Why, it is that he is not expected to be responsible in the recitation for the work assigned; that he may or may not do it as he pleases. That may be entirely proper in that kind of an institution. It may be entirely proper to say to those people: "Do just as you please. The responsibility rests upon you. The results of it will come back upon you."

But I take it that in the Normal school and on down, there is a responsibility a little larger than that upon the teacher. The students are younger and they need to have their ideals a little better in hand. They need to have standards made a little more clear and pretty firmly established. I submit to you that that is one of the great lessons in life to teach. When these people go out from the school, no matter what they do, when they come into the activities of society in any form whatever, they find the necessity of doing what ought to be done; that their position in the business world, or in the professional world, depends upon the reputation they have for doing the thing they ought to do and when it ought to be done. And the same thing is true as to the necessity of making accurate statements, definite statements. I am a great sufferer in my lack of ability to make a definite statement. I have realized it more fully the last two weeks than ever before in my life, and I will tell you how, confidentially,—by the questions that have come back to me from you people as to what was meant and what was required and what was asked for. Why, I never realized as clearly before how bad my training had been, how utterly I had failed in trying to make a thing clear. I want you to bear with me for that.

But take the lesson home to your students, and say to them that here is a man who has to confess with shame that his early training does not make it possible for him to put a statement so that people can understand it, and emphasize to them the fact that the best training they can get in the school is the training which will develop the power of making people understand.

I want to press one thing further, that this power of expressing definitely and clearly what is in the mind means the training also to develop power to understand what another means.

Now as to this matter of holding the pupil accountable for his failure.

He may have a very excellent reason, and if he presents it, do not blame him. Simply accept it without question and try to make conditions possible so that his misfortune will not work an injury to him. Do not let the pupil feel that if it has been impossible for him to prepare his lessons because of conditions which he could not control, that he is to be blamed. It is unfortunate, but do not blame him. But if, on the other hand, his failure has been due to the fact that he did not use the opportunities which he had, make it clear to him that that is a serious failure and that it ought not to be repeated, much less become a habit.

We should demand of the pupil that he should know exactly what he is to prepare for the next recitation. It is the pupil's business to know what is demanded for tomorrow. It is the teacher's business to present it so that he can know what is to be prepared for tomorrow.

These are some of the demands. I do not mean that they are all, but they are some of the important demands which it seems to me should be made upon the pupil.

There is one other, and that was suggested this morning, I think, in a question, that there arises in the recitation a condition which necessitates going a little beyond the purpose, a little outside of it. This gives an excellent opportunity for thinking. The demand should be that the pupil shall do some thinking here, and if these other conditions of attention and opportunity are furnished, that thinking will follow.

#### WHAT SHOULD BE DEMANDED OF THE TEACHER?

First, I should say that the teacher should recognize that the recitation is to be made by the pupil and not by the teacher. If Prof. Rockwood is right in his statement, and he ought to know, there has possibly been some failure to recognize this; and if Professor Parker is right in the reports which he brings me weekly as the results of his observations in the high schools of the state it is one of the most common errors, perhaps one of the most serious errors that he observes. The teacher does the reciting. The teacher puts the answer in the form of a question or indicates by his inflection what the answer is to be. The pupil would get it right fifty per cent. of the time, if he were blind. Half of the time he would hit it without a bit of thinking. There is a large amount of that going on. There seems to be more of it than we are conscious of in our Normal schools. I know how easy it is to get into a habit of this kind. I know how delightful it is for the teacher who is master of his subject, to make it clear to his pupils by doing the reciting. He wants to show them how clear it is to him, and how much he knows of it.

What is the result of that? The student very soon finds that he is not expected to do much. He at first puts an hour or two hours of preparation upon his recitation, and then finds he does not have a chance to talk at all. He cannot present what he has done. He cannot show that he has put thought and time upon it. Very soon he says, "What is the use? The teacher will give us all that in the recitation anyhow." There are times when that is what the teacher ought to do. Unquestionably there are times when that is the proper thing, but I submit that there ought to be times when the pupil should say something; when he should have the floor.

Now, my suggestions to you are: First, when next you go into your schoolrooms just have a look at yourselves. See whether you are doing

most of the reciting or not. See whether you are giving the pupils a chance to do what they ought to do, and whether you are demanding of *them* that they shall do what *they* ought to do.

Second, and perhaps this is a restatement, the teacher should respect the rights of the pupil to show what he has done in preparation for the recitation; it should be put as a demand upon him, and if it be a demand, then he has a right to show what he has done, and the teacher can do no less in fairness than respect that right.

Third, in questioning to test, the teacher should confine himself to work assigned or to work previously done. I want to limit that. I do not want you to thing for a moment that I would not ask a question to test the pupil's knowledge of what lies beyond. But when I am dealing with the subject matter of the recitation, with the questioning to test, the questioning should be upon what the pupil has been asked to prepare. And you will see now how important it is that the second proposition which we discussed this morning shall have been worked out in the teacher's mind, "What things must he know or do to reach this end?" That guides and directs the teacher in his questioning. One of the best exercises I ever had in the art of questioning was many years ago when before the recitation I formulated upon paper the questions I proposed to ask during the recitation, arranging them in logical order when a logical relation existed. I frequently discovered in the recitation that the answer obtained to the first question necessitated leaving all the others unasked until I had again questioned the pupil and brought him to the point where my second question was the proper one; or perhaps it disclosed the fact that a new line of questioning was necessary. That was the most excellent training I ever had in the art of questioning, because, though I did not use a single question after the first, the practice which I had in framing that set of questions in logical order enabled me the better in the presence of a new set of conditions and an unexpected answer, to frame the question which ought to be asked next and which had to be asked next; and again and again as I did that and looked at my questions, I made the discovery that I was asking for something which I had no right to ask for, something which did not lie in the content of that lesson and which was not related to it, and so that question was stricken out. And that kind of training is what it seems to me we need, to get ourselves into a critical attitude toward our own questioning. As I have listened to questions in the high schools of the state. I believe I am entirely within the mark when I say that three fourths of the questions for testing are utterly useless. They are worse than useless. They are confusing. If they have any effect at all, they lead the pupil away from the thing that he ought to be going toward.

And so this questioning to test should be kept sharply within proper lines, the lines which circumscribe the amount of work to be prepared. This, then, demands upon the part of the teacher careful preliminary preparation. Some teachers have mastered the art of questioning, and the question comes just as it ought to come, at the right time. The more one has studied over this matter, the more logically one's mind works; and the better his form of question. But all the time he must keep in mind: What is the range within which the questions shall be put?

The questions should be clear, pointed and in logical order. The question designed to test the pupil should not be leading, irrelevant, or immaterial.

Now we sometimes put in a leading question when we are question-

ing to test, that is, when we think we are. The moment we do that we have changed from testing to teaching or suggesting, and here the leading question may have its place. It may be that we have discovered a weak place and that there is a necessity for teaching a little. But the teacher ought to practice in the discrimination of the two classes of questions; he ought to be able to so analyze his work that he will know for what purpose the question is being asked and whether or not it is the proper question to ask.

A leading question may be proper for certain purposes. An immaterial question has no place in the recitation. An irrelevant question has no place in the recitation.

Questioning to test precedes questioning to teach. Often times we find this order reversed, and the teachers do not know that they are so reversing it. I know a man who has taught in this state for thirty years and I have heard him in his recitations put question after question and the only answer was "Yes" or "No." Had these questions been recast in the form of statements, they would have made a complete recitation. And that man thought he was questioning his students to test their preparation. Was he? Most assuredly not. The students very quickly discovered that, and they used to pride themselves upon the skill with which they could tell by some inflection or some expression of the face whether the answer was to be "Yes" or "No." "We never have to do anything for his recitation. If we cut anything, we cut that." And that is just what happens when that kind of work is done.

#### HOW MAY THESE DEMANDS BE ENFORCED?

I know of no way of enforcing the demands made upon the teacher except by the teacher's seeing clearly what should be demanded and then seeing clearly what he must do to meet the demands. Propositions II and III apply there. It is a matter to be settled by each teacher for himself. We unconsciously get into certain habits in our modes of teaching and conducting our recitations, so that when our attention is called to them we are surprised.

So, I would suggest, that it is the business of every teacher to keep a strict watch and guard upon himself in these respects, to see whether he is doing what ought to be done, what his own intelligence tells him ought to be done. Ascertain what has been observed to be a failure by those qualified to judge, and then address himself to the correction of those shortcomings.

#### HOW MAY THESE DEMANDS MADE UPON THE PUPILS BE ENFORCED?

They may be enforced simply by the teacher's understanding clearly what the demands are, making them definite, and making the pupils understand them, and then persistently insisting that those demands shall be met. That is the only way that I can suggest.

#### MODES OF TESTING—CHARACTERISTICS OF A PROPER TEST.

Testing is simply one of the phases of a recitation and the question is one mode of testing. The putting of a certain thing to be done which requires the pupil to show his capacity or power, is another way. There are a variety of these ways, but the proper test is the one which is made with reference to what is expected to be known and what must be



known and in view of the logical order in which what is to be known shall be stated, if there be a logical order.

Now, what constitutes a proper test? With some grades of pupils the oral test is the proper one, with some grades sometimes the oral and sometimes the written. I am a believer in the doctrine that it would be well if we made more of the oral test in our classes than we do make of it. That demands something more than a written test. That will strike you as a strange proposition, but the fact is that the writing which the pupil does is often a test rather of his ability to find things in the encyclopedia and dictionaries and get them together and put them on paper, than it is a test of his knowledge of the subject matter; and in any event, when the pupil can sit down leisurely and take his time to arrange what he knows, think it over and recast it, he is likely to do better work in the end than though he presents it orally; but if he has so prepared himself that he is able to make an oral presentation as clearly and in as orderly a manner as though he had written it at his leisure, that is certainly a higher order of attainment. I do not mean to discourage the written test. It has a very high value for certain definite purposes, for exactness, conciseness, and orderly arrangement, but we shall never teach people to talk by having them write eternally. They must do some talking. They should understand that in the school the preparation to talk needs to be made with the greatest care, and that means to talk it again and again until they feel they can do it. In the students' preparation for the recitation, how many of you have made the discovery that ninety-nine out of one hundred of your pupils never have tested themselves as to whether they have mastered the lesson so that they can present it. Try it and see. What will they do? They will read the lesson or study it, and they will say "I understand that." The pupil who looks through his geometry proposition says, "That is all clear. I know that." And he gets up tomorrow and finds it a different proposition to state it so that other people will see it.

Now, if we shall get the pupils to feel that the recitation is not prepared until they have prepared themselves by practice and experiment to talk it and to talk it well, we have done a great thing, and we have prepared those pupils to meet this demand for a test in an oral presentation of what they have to say. And remember that in all their activities outside of the school room afterwards, ninety-nine per cent. of the demands made upon them are for prompt, accurate oral expression. So I should demand more of that in the school room.

#### PURPOSES OF DRILL EXERCISES, THE NECESSITY FOR, AND HOW DETERMINED.

I have already indicated this morning that which should guide the purposes of the drill exercise. Perhaps you may say that the sole purpose of a drill exercise is to develop skill. I think that that will cover it. We give exercises to quicken the perceptive powers. We give drill exercises to train the reasoning, for quick, sharp, prompt, decision. We give drill exercises to secure skill in the movements of the hand, in writing, drawing, constructive work of whatever kind. There must always be a definite purpose, and skill and readiness is the end in view.

The question comes for us as teachers: Is this thing of sufficient importance so that the drill necessary to develop skill will be worth the time and energy put upon it. Is not that a fair question? Have you not seen drill exercises that were carried on to an extent that made it doubtful in your minds whether the time and energy put upon the drill was met by the proper return? I think I have. And so the

teacher must keep in mind. Is this skill an essential in the training of the individual? In his training for teaching, is there any necessity for drill which does not exist in his training as a student, not as a teacher? If so, what shall those things be? And if we examine closely and critically we shall find that the result of such an examination would eliminate quite a number of those drill exercises. It is the business of the teacher in the Normal school to make that clear. Will you tell me where the best place is to discuss that question? Is it for the teacher of pedagogy to discuss it, or the teacher of arithmetic in the arithmetic class, to say—"Tell me what I am doing this for." Prepare yourselves in advance for this, and sometimes when you have made this preparation you will conclude that it will not be best to try. Now, suppose you make it clear that this particular drill is given in this place for this particular purpose pedagogically. Will not that make an impression upon these students who are going out to teach that will help them the better to determine what are the conditions under which a drill is necessary in their classes? Will not that be of far more value than a theoretical discussion of the subject in a class in pedagogy which has long since been forgotten? In whatever class the drill becomes a necessity. Do you not see that at every point in the Normal school there should be discussed and exemplified the pedagogic purpose of a drill exercise when that drill exercise is given? If the teachers in the Normal school can get together and agree upon the conditions which control the selection of these drill exercises, then there is united action and reinforcement at every point, and the pupil does not go out imitating the drill exercises he has seen his teacher give until he has settled this question: That was right for me there; but is it right for these pupils here?

Now, what are the essentials of a good drill exercise? When I have settled the question as to what the drill exercise is for and what particular kind of skill is to be developed, and when I have worked out, as I said this morning, every step in that exercise necessary for the development of the required skill (and until I have done that I have no business as a Normal school teacher to conduct a drill exercise), having previously determined what had to be done to develop this skill, and then when I have determined how my drill exercise shall be adjusted to meet these demands, I have settled the essentials of a good drill exercise. That, it seems to me, is the kind of an analysis which the Normal school teacher needs to make in order to determine the character of his drill exercise, having determined that drill is necessary.

Just one suggestion as to the mode of conducting the drill exercise. I am not going into the question of the "how," but simply to state one guiding principle, that is to say: Give the drill exercise to the people who need it and not to the people who do not need it. It is barely possible that you have seen a class being drilled and the best pupils in the class, who did not need the drill at all, were the only ones who answered, and there was no mental activity on the part of those not answering except to hear what the others said and perhaps to repeat it, parrot like. If you have people in the class who do not need the drill, sent them to their seats. Do not bother them.

The drill exercise should be of the kind to demand the highest possible mental activity upon the part of the people who need it. I do not want to modify this statement in any way, because drill, to be effective, must be quick, sharp, short, and decisive.

TEACHING IN THE RECITATION—ITS RELATION TO TESTING AND DRILLING.  
ASSIGNMENT OF THE NEXT LESSON.

I do not think I need to say anything further upon this topic. I only care to reinforce what I said this morning, that the things which are to be demanded of the pupil are conditioned upon the kind of an assignment made; that, if the assignment has been vague and indefinite, it cannot be expected that the demands will be met by the pupil. The demand comes upon the teacher to make preparation for such an assignment as will make the demands upon the pupil proper and make it proper for him to enforce those demands. When in the recitation it appears that a pupil has done his best and still does not understand portions of the lesson or does not see the relation of part to part, there actual teaching has to be done. What that teaching shall be is determined by the purpose of the teacher, by what has to be known or done to accomplish this purpose, and by the testing to disclose what the pupil still needs. When the teaching has been done a further test may disclose the fact that drill is necessary to fix the knowledge or to give skill in using it.

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I have just a few moments left for the consideration of the next topic\* I do not need very much time because the proper discussion of this topic would suppose that we had reached a determination as to the essentials of psychology. I am just a little at sea, I confess in that matter. I am a good deal of a believer in the idea that there are some essentials in psychology for the Normal school teacher and that you can name them and that you can number them and that you ought to do it. I am not a believer in the idea that because one knows an immense amount of psychology that, therefore, he is a better teacher. Some of the worst teachers I have known are the people who teach psychology. It is not simply because one knows psychology that he is a good teacher. Some of the best teachers I have ever seen had read very little of psychology and knew very little about it. Somehow the mind has a way of working inspite of the school teacher. The pupil oftentimes learns in spite of his teacher. How many of us have had that experience as pupils? Before psychology was thought of or worked out, people did learn something. People did know something. People did exercise their will, and I suspect that the children of today are going to do the same thing. And then it occurs to me that the problem comes for the Normal school teacher in about this shape: Is there anything in this field of psychology which has been developed through a careful study of the mind, its nature and processes, that this teacher can seize upon and because of his knowledge of it, be better able to cause the pupil to know, to do, and to be what he should know, do, and be in the schoolroom and in life?

I am of the opinion that there are some things in psychology that are essential and that the teacher may never have heard of psychology and still be using these essentials. But that is no warrant for saying that, therefore, a teacher need know nothing about psychology, because those people are as rare as angels' visits and hens' teeth. It is only occasionally that you see them. There are pupils whose minds work in a logical manner naturally, and who somehow instinctively do the right thing at the right time. But our whole system of Normal school training, in this and in other countries, is built upon the assumption that it is best to aid the less fortunate mortal who has not this power,

this genius. It is to enable him to do what he is undertaking to do more systematically, better, and more economically. Therefore, I believe that every teacher will be benefited, other things being equal, by a knowledge of psychology, and when I say "other things being equal," I mean that he shall use such portions of his psychology as are usable.

You have gone over this field and discussed the second question as fully as the first this morning. I have been very much interested in your discussion. It has disclosed how wide apart we are and how near together we are.

It seems to me that our business in the Normal school is three-fold, to train our students—to know, to do, and to be. If that be true, then psychology ought to aid us to have our pupils know better that which they ought to know; to do better, more surely, more economically, and at the proper time, what ought to be done; and to be more fully and completely what they ought to be.

If there be anything in our psychology that enables us to bring to the consciousness of the pupils and to the guiding and directing of their activities, elements which will result in greater power and ability on the part of those pupils to know or to do what they ought to know or to do, that is an essential in psychology and the teacher ought to know it and to use it to that end.

If there be anything in our psychology which will, when mastered by the teacher, enable him the better to guide, direct and stimulate the will power of the pupils, to so train them that they shall the better control and guide themselves in school and out of it, that is an essential in psychology which every teacher should recognize and apply in his work. In the Normal school it is important for us to apply those principles of psychology concisely, definitely and persistently, to the end that we shall get the result which we are seeking.

I have stated briefly in these three propositions practically what you have been going over this morning, simply to give another phase or aspect of the question. It seems to me there are two or three things to be considered in order to reach these ends. The first thing is the processes of knowing. People have *known* before they knew there was such a thing as psychology.

It is the teacher's business to determine, and it is for the pupil's best interest that he shall determine, what the pupil has to know, and what he does not know, and hence, what is yet to be known, and then through proper guidance, direction, and stimulus of the pupil, to lead him to the point of mastery of what is to be known.

Observation of the work of many teachers leads me to the conclusion that this matter is largely neglected. We read or lecture to our pupils, as though we did not realize that they get nothing from words oral or written, beyond a stimulus which serves to bring up in their minds the ideas for which these words are symbols. If the ideas are not there, the words are meaningless. It is true that a pupil may as a result of reading or listening, have some ideas which were not previously in his mind in the same form, but this is because new relations between old ideas have been established, thus creating new, and perhaps enlarged ideas.

If it be important, then, that the teacher shall know in advance what must be known by the pupil, in order to master a given piece of knowledge; if it be important that he shall determine from day to day what of this the pupil already knows, for the purpose of making clear to him what he has yet to master, then is it not important that we shall

focus our attention upon these essentials in the Normal school; that we shall discuss them in our faculty meetings; that we shall examine critically our own work in this respect; shall report to others and discuss with them what we and they are doing in this direction?

The second proposition is, that one of the important lines of work in the Normal school, is to train pupils to *do* something. One of the first essentials in the training to *do* is training to develop the power of attention, and if the teacher's psychology does not focus strongly upon that, if he does not recognize the psychological principles governing attention and does not apply them, he has failed materially to do the thing which ought to be done.

More than that, attention lies at the foundation of interest, or interest at the foundation of attention—whichever you please. Both are true. That being a fundamental thing in making progress, that being fundamental in getting a well regulated self-activity to a given end, it seems to me that it is worth while for us to discuss in our faculty meetings the question: What can we do to train the power of attention in these pupils so that we may better hold to the work in hand until that work is mastered?

The main thing in education is the formation of habits. I believe that one of the essentials for the teacher in a Normal school is that he shall understand definitely and clearly and thoroughly the psychology of habit forming; that it shall be just as much a part of his work to train his pupils in habit-forming, as it is a part of his business to teach him arithmetic, geography or history. It is the thing which will stick to him through life. It will shape his future career. It will determine his success. The teacher in the Normal school is the one whose business it is to see that habits are formed and formed correctly, and to train the students under his tuition so that they shall go out to train others in the formation of correct habits.

The third proposition relates to the training of the will. If there be any such thing as training the will power, if that is vital in the future welfare of the child, then it seems to me that the teacher in the Normal school should thoroughly understand the psychology of the will, and not only understand it, not only be able to discuss it, (I do not care if he cannot settle all the mooted questions), but he must bring to bear upon his pupil who has no will-power or control over himself some stimulus that gradually will develop and unfold that will-power until that individual becomes self-centered, self-controlled. Then he is doing the highest work that any teacher can do. The Normal school teacher who leaves that to accident, or to inspiration or to whatever may happen to bring it out, is a teacher who has neglected the greatest opportunity offered in his work. I believe a study of psychology will enable him to do this better, provided he shall keep this in mind: "I am studying this to get something from it that will aid me in my practice with my pupils." We sometimes lose sight of that. We get interested in our investigation and in following out a line of thought and do not think of that.

I have not time to discuss how these things can be brought about. I believe in the psychology of attention, the psychology of habit-forming, the psychology of will-training, and in the application of that psychology in the school. I believe these are the absolute essentials of psychology in Normal schools. There are other things that are valuable. When I use the word "essentials," I mean the things we *must* have if we are to do our work well. It does not mean that there are not other things which will aid us in doing our work well.

We need to have an apperceptive mass of psychologic truth to get out of literature, or whatever it may be, the psychology that there is in it. It was not what Professor McGregor got out of McDonald, but what McDonald got out of McGregor. If it is not in the reader it cannot be gotten out. Your psychology will arrange it, organize it and bring it to the front. I would like to have a study of psychology that shall pave the way for the extensive application of just the things we need.

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EXPOSITION OF THE LESSON PLAN, AS APPLIED TO THE  
TREATMENT OF A TOPIC.

COURSE OF STUDY IN GRAMMAR.

UNIT I.

*Aims—*

- a. To have pupils recognize and define a sentence and its parts, subject and predicate.
- b. To have pupils recognize and define nouns, pronouns and verbs.

UNIT II.

*Aims—*

- a. To have pupils learn that the meaning of a noun may be modified by an adjective.
- b. To have pupils learn that adjectives may be either simple or many-worded.

UNIT III.

*Aims—*

- a. To have pupils learn to recognize and define adverbs.
- b. To have pupils learn that adverbs may be simple or many-worded.

UNIT IV.

*Aim—*

To have pupils learn to recognize and define transitive, intransitive and copulative verbs.

UNIT V.

*Aim—*

To have pupils learn to recognize and define prepositions.

UNIT VI.

*Aims—*

- a. To have pupils learn to recognize and define conjunctions.
- b. To have pupils learn to classify sentences according to form.
- c. To have pupils learn to distinguish between phrases and clauses.

UNIT VII.

*Aim—*

To have pupils learn that nouns, pronouns and verbs change their forms to express difference in number.

UNIT VIII.

*Aim—*

To have pupils learn that pronouns and nouns change in form to show their relation to other words.

UNIT IX.

*Aims—*

- a. To have pupils learn that pronouns and verbs are inflected to express difference in person.
- b. To have pupils learn the declension of the personal pronouns.

UNIT X.

*Aims—*

- a. To have pupils learn that verbs are inflected to show difference in time.
- b. To have pupils learn the meaning and formation of the tenses of the indicative mode.
- c. To have pupils discuss the meaning of other verb phrases of different modes and tenses.

UNIT XI.

*Aims—*

- a. To have pupils learn that verbs are inflected to express difference in the manner in which the action may be regarded.
- b. To have pupils learn to classify sentences according to meaning.
- c. To have pupils learn that the form of the verb may show whether the subject performs the action or whether the subject receives the action which the predicate expresses.

UNIT XII.

*Aim—*

To have pupils learn that adjectives and a few adverbs are inflected to show a difference of degree.

UNIT XIII.

*Aim—*

To have pupils summarize what they have learned in regard to the inflection of nouns, pronouns, verbs, adjectives and adverbs.

UNIT XIV.

*Aim—*

To have pupils recognize and define interrogative pronouns and interrogative adjectives.

UNIT XV.

*Aim—*

To have pupils learn to recognize and define demonstrative pronouns and demonstrative adjectives.

UNIT XVI.

*Aim—*

To have pupils learn to recognize and define indefinite pronouns and indefinite adjectives.

UNIT XVII.

*Aim—*

To have pupils recognize and define relative pronouns and relative adjectives.

UNIT XVIII.

*Aim—*

To have pupils learn some of the essential qualities of participles.

UNIT XIX.

*Aims—*

- a. To have pupils learn some of the essential qualities of infinitives.
- b. To have pupils learn to distinguish clearly between infinitives and participles.

UNIT XX.

*Aims—*

- a. To have pupils name the parts of speech that may be used as connectives.
- b. To have pupils classify phrases and clauses.
- c. To have pupils name the different kinds of modifiers of the subject.
- d. To have pupils name the different modifiers of the predicate.
- e. To have pupils name the different kinds of complements of the predicate.

UNIT XXI.

*Aim—*

- To have pupils classify and define sentences.

UNIT XXII.

*Aim—*

- To have pupils summarize what they have learned about nouns.

UNIT XXIII.

*Aim—*

- To have pupils summarize what they have learned about pronouns.

UNIT XXIV.

*Aim—*

- To have pupils summarize what they have learned about adjectives.

UNIT XXV.

*Aim—*

- To have pupils summarize what they have learned about adverbs.

UNIT XXVI.

*Aim—*

- To have pupils summarize what they have learned about prepositions.

UNIT XXVII.

*Aim—*

- To have pupils summarize what they have learned about conjunctions.

UNIT XXVIII.

*Aim—*

- To have pupils summarize what they have learned about verbs.

UNIT XXIX.

*Aim—*

- To lead the student to summarize laws of syntax governing number forms of pronouns, verbs and nouns.

UNIT XXX.

*Aim—*

- To lead the student to summarize laws of syntax governing case-forms of nouns and pronouns.



UNIT XXXI.

*Aim—*

To lead the student to summarize laws of syntax relative to the choice of adjectives and adverbs.

UNIT XXXII.

*Aim—*

To lead the student to summarize laws and suggestions relative to the inflection of adjectives.

UNIT XXXIII.

*Aim—*

To lead the student to summarize laws of syntax relative to tense forms of verbs.

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ILLUSTRATIVE DAY PLANS TO TEACH THE UNIT  
"CONJUNCTIONS."

SUMMARY OF WHAT PUPILS KNOW OR HAVE DONE BY THE TIME THE UNIT  
"CONJUNCTIONS" IS REACHED.

I. Definitions.

1. A sentence is the expression of a thought in words.
2. Every sentence consists of two parts, a subject and a predicate.
3. The subject names that about which something is said.
4. The predicate asserts or declares something of the subject.
5. A noun is a word that names something.
6. A pronoun is a word that stands for a noun.
7. A verb asserts or declares something about a person or a thing.
8. A word which modifies the meaning of a noun or pronoun is called an adjective.
9. A group of words used as a simple adjective is called a many-worded adjective.
10. The adjectives "the," "a" and "an" are called articles.
11. An adverb is a word used to modify the meaning of a verb, an adjective or an adverb.
12. A many-worded adverb is a group of words used as a simple adverb.
13. Verbs are divided into two classes, complete and incomplete.
14. Verbs are complete if with the subject they give a complete meaning.
15. Verbs are incomplete if they need a noun, pronoun or adjective to complete their meaning.
16. Incomplete verbs are either transitive or copulative.
17. A transitive verb is one in which the action is said to "pass over" from the subject to the object.
18. A copulative verb is one that simply joins together a subject and a noun, pronoun or adjective.
19. The complement of a transitive verb is called its object.
20. The complement of a copulative verb may be a predicate noun, predicate pronoun or predicate adjective.
21. A preposition is a word used with a noun or pronoun so as to form a many-worded adverb or adjective.
22. A noun or pronoun used with a preposition is called the object of the preposition.
23. A preposition with its object is called a prepositional phrase.

24. Prepositional phrases may be divided into adverbial and adjective prepositional phrases.

II. They have analyzed every sentence accompanying units 1, 2, 3, 4 and 5.

MONDAY.

I. Aim.

*a.* To have pupils learn to recognize and define conjunctions, and to classify sentences according to form.

*b.* To assign the lesson for Tuesday.

II. What must be known or done.

*a.* They must read the following sentences and observe that each sentence is made up of two sentences:

1. I went to school and Mary stayed at home. 2. Charles was right and James was wrong. 3. John may go or James may go. 4. The boy takes exercise, therefore he is strong. 5. I must seem angry or they will not obey me. 6. Everything went against them, still they fought on. 7. My friend went home today, otherwise you could have met him. 8. The crops failed because the weather was unfavorable. 9. I shall come when I am ready. 10. Little Mary cried because her doll was broken. 11. The night was bright, for the moon was shining. 12. Ere he could speak, his soul had departed. 13. Egypt is fertile because the Nile overflows its banks so regularly.

*b.* They must pick out in each sentence the word that joins the sentences together.

*c.* They must know that these words are conjunctions.

*d.* They must observe that in sentences 1 to 7 the conjunctions join the sentences together very loosely.

*e.* They must know that sentences 1 to 7 are compound, and the conjunctions are coördinating.

*f.* They must know that a sentence containing but one subject and one predicate is a simple sentence.

*g.* They must analyze sentences 8 to 13 and observe that the conjunctions join the sentences in such a way that the one introduced by the conjunction modifies some word in the other sentence.

*h.* They must know that the conjunctions in these sentences are subordinating conjunctions, and the sentences introduced by them are called subordinate clauses.

*i.* They must know that sentences 8 to 13 are complex sentences.

*j.* They must read sentences 1 to 13 and in each case:

(1) Name the sentences of which each sentence is composed.

(2) State whether the sentences are compound or complex.

(3) Name the conjunctions and state whether they are coördinating or subordinating.

(4) State the use of each subordinate clause and analyze each clause.

(5) Analyze each member of each compound sentence.

III. What pupils know or can do.

*a, b, d, g* under II (to be determined in class).

IV. What remains to be known or done.

*a.* All of *c, e, f, h, i.*

*b. j* as preparation for the next day's lesson.

TUESDAY.

I. Aim.

- a. To test pupils on the lesson assigned Monday.
- b. To have pupils learn other uses of subordinate clauses.
- c. To have pupils learn that parts of sentences are often omitted.
- d. To assign the new lesson.

II. What must be known or done.

- a. The subject matter under *j* of Monday's plan.
- b. They must analyze the following sentences and observe that subordinate clauses may be used as adjectives, adverbs and nouns:

14. The house was robbed while the owner was absent. 15. I know when you must go. 16. I saw the place where the picnic was held. 17. The teacher knows why you are tardy. 18. The scar on the bean shows where it was attached to the pod. 19. How he does it is a mystery to me. 20. I did not say that he did it. 21. I discovered where the people are going.

- c. They must know that subordinate clauses are divided into adverbial, adjective and noun clauses, and that noun clauses are often called substantive clauses.

- d. They must under the direction of the teacher supply the omissions in the following sentences, and then separate each sentence into its component sentences, and point out the conjunctions and classify them:

22. I will do the work or die in the attempt. 23. John as well as I will go. 24. He is poor but honest. 25. Not only the teacher, but the whole school is looking at you. 26. The girl neither played nor sang. 27. Both city and country feel the need of rain. 28. He does his duty whether pleasant or not. 29. My hair is gray, but not with years.

- e. They must observe that conjunctions may consist of one or more words.

- f. They must know that contracted sentences are often called simple sentences having—

- (1) A compound subject; or
- (2) A compound predicate; or
- (3) A compound object; or
- (4) A compound complement; or
- (5) A compound adjective or adverb modifier.

- g. They must state the exact meaning of each of the following sentences:

- (1) John and I will go.
- (2) John as well as I will go.
- (3) Either John or Henry will go.
- (4) Neither John nor Henry will go.
- (5) The girl did not play and she did not sing.
- (6) The girl neither played nor sang.
- (7) The city and country feel the need of rain.
- (8) Both city and country feel the need of rain.

III. What pupils know or can do.

- a, b, d and e under II (to be determined in class).

IV. What remains to be known or done.

- a, c and f in class.
- b, g for the next day.

WEDNESDAY.

I. Aim.

- a. To test pupils on the assigned lesson.
- b. To have pupils summarize what they have learned about conjunctions.
- c. To assign the next day's lesson.

II. What must be known or done.

- a. *g* under II of previous day's plan.
- b. Under the direction of the teacher they must make the following summary of definitions:

- (1) Conjunctions join sentences together.
- (2) Conjunctions are divided into coördinating and subordinating.
- (3) A clause is a sentence used as an adjective, adverb or noun.
- (4) Subordinating conjunctions introduce clauses used as adverbs, adjectives or nouns.
- (5) Clauses are classified into adverbial, adjective and noun or substantive clauses.
- (6) In contracted sentences conjunctions often join parts of sentences and even single words.
- (7) Sentences are divided into simple, complex and compound.
- (8) A sentence having but one subject and one predicate is a simple sentence.
- (9) A complex sentence is a sentence that contains a subordinate clause.
- (10) A compound sentence is a sentence made up of two or more simple or complex sentences joined together by coördinating conjunctions.

c. Pupils should read carefully the definitions contained in the text-book under the direction of the teacher, and determine their exact meaning.

d. Pupils should commit the text-book definitions to memory for the next day.

III. What pupils know or can do.

- a. *a* under II (to be determined in class).
- b. *b* and *c* under II (to be determined in class).

IV. What remains to be known or done.

- d* as a preparation for next day.

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THURSDAY.

I. Aim.

- a. To test and drill pupils on text-book definitions.
- b. To assign the next day's work.

II. What must be known or done.

- a. The definitions contained in the text-book.
- b. They must analyze as many of the following sentences as possible in class, according to the following outline:
  - (1) Classify each sentence.
  - (2) Name the conjunctions, state what they connect, and classify them.

(3) State use of each subordinate clause.

(4) Analyze each member of a compound sentence and each subordinate clause.

(5) State the exact meaning of each sentence.

30. He worked during his vacation in order that he might earn money. 31. He will receive recognition, for he does his duty well. 32. He is a painter, also a sculptor. 33. The general saw that the battle was lost and avoided further bloodshed by surrendering. 34. After the Americans had won the battle of Monmouth they gained new courage. 35. It is against the law, else I should do it. 36. Washington's men won the battle of Trenton before the Hessians were fairly awake. 37. Unless all signs fail, we shall have rain before night. 38. He died where he fought. 39. Besides being an orator, he is a fine conversationalist. 40. They loved him, likewise respected him. 41. The house where Washington rested can still be seen. 42. The country whence the messenger came was full of strife and discord. 43. The boy disobeyed and was punished. 44. His watch was either lost or stolen. 45. As long as the world exists, Shakespeare's writings will be read with interest. 46. A man deserves respect as long as he is honest and industrious. 47. Though he worked hard, he remained poor. 48. These apples are for you and me. 49. She danced and skipped and ran. 50. He and Joe and Henry will go. 51. Robert Lee was not only a brave soldier, but also a fine scholar. 52. Though often disappointed, he still persevered. 53. Since you will not try you cannot win. 54. Mary and I are sisters. 55. Mary read well, for she enjoyed it. 56. He will neither read nor write. 57. She was at once a great actress and a beautiful singer. 58. The autumn leaves are falling, but the days are warm and pleasant. 59. Since you desire it, I shall look into the matter. 60. Either Frank must go with me or I shall stay at home. 61. You must take care lest you fall. 62. They visited Chicago, New York and Boston. 63. She told you and me. 64. He told the truth, but they did not believe him. 65. He was a poor man, yet he gave alms to the beggar. 66. No man was tolerated unless he was honest. 67. When they learned of its rich mines, the English went into the Transvaal. 68. A republic can be formed provided the people are intelligent. 69. The battle was fought before the general arrived.

c. For the next day they should continue the analysis of sentences according to the outline—say, to number 56.

d. They must review definitions.

III. What pupils know or can do.

a and b under II (to be determined in class).

IV. What remains to be known or done.

c and d for the next day.

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FRIDAY.

I. Aim.

a. To test pupils on the analysis of sentences assigned.

b. To test pupils on definitions assigned.

c. To assign the new lesson.

II. What must be known or done.

a. They must know the definitions.

b. They must be ready to do what was assigned in regard to sentences 41 to 56.

- c.* They must analyze for Monday sentences 57 to 69.
- d.* They must run through all the sentences and pick out the conjunctions, and state the class to which each belongs, and state the use of each subordinate clause.

III. What pupils know or can do.  
*a* and *b* (to be determined in class).

IV. What remains to be known or done.  
*c* and *d* for the next day.

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MONDAY.

- I. Aim.
- a.* To test pupils on work assigned Friday.
  - b.* To assign the new lesson.

- II. What must be known or done.
- a.* They must analyze sentences 57 to 69, as per assignment.
  - b.* They must run through all the sentences from 1 to 69 and select the conjunctions and state class to which each belongs, and state use of subordinate clauses, as per assignment.
  - c.* They must for Tuesday select from their readers five simple sentences, five complex sentences and five compound sentences, and be ready to analyze each.

III. What pupils know or can do.  
*a* and *b* (to be determined in class).

IV. What remains to be known or done.  
*c* for the next day.

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TUESDAY.

- I. Aim.
- a.* To test pupils on work assigned Monday.
  - b.* To assign the new lesson.

- II. What must be known or done.
- a.* They must be ready to do what was called for under *c* of II of previous day's plan.
  - b.* They must answer the following questions orally in class Tuesday, and in writing Wednesday:
    - (1) Classify sentences, define each class, and illustrate.
    - (2) Classify and define conjunctions.
    - (3) Define subordinate clause, adverbial clause, adjective clause, and substantive clause, and illustrate each in a sentence.

*c.* They must analyze the following sentences, and be ready to state the exact meaning of each:

- (1) "Across its antique portico  
Tall poplar trees their shadows throw;  
And from its station in the hall  
An ancient timepiece says to all,—  
Forever—never!  
Never—forever!"

- (2) Half-way up the stairs it stands,  
And points and beckons with its hands  
From its case of massive oak.
- (3) By day its voice is low and light;  
But in the silent dead of night,  
It echoes along the vacant hall,  
Along the ceiling, along the floor.
- (4) The princess of his tales was a person of wonderful beauty,  
for she came from the old illustrated edition of Grimm.
- (5) Then one joking wave caught up the ship at the bow, and another at the stern, while the rest of the water slunk away from under her.
- (6) If our young men miscarry in their first enterprise, they lose all heart.
- (7) Man has not one chance, but a hundred chances.
- (8) No man can come near me but through my act.
- (9) I like the silent church before the service begins.
- (10) Man is his own star; and the soul of an honest and perfect man commands all light, all influence, all fate.

III. What pupils know or can do.

*a* and *b* under II (to be determined in class).

17. What remains to be known or done.

*c* as a preparation for the next day.

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WEDNESDAY.

Aim.

- a.* Written test as per assignment.
- b.* Oral analysis of sentences, and exact interpretation of thought.

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SOME ADVANTAGES OF THE LESSON PLAN.

1. It compels close attention to the aim in each day's lesson.
2. It compels close analysis of the aim which results in a close analysis of the subject matter.
3. It discloses possible shortcomings in regard to the subject matter on the part of the teacher.
4. It compels teachers to recognize the most important principle of teaching. From the known to the related unknown.
5. Attention to proposition III discloses whether the pupil really has the necessary old knowledge or apperceptive material to properly study the new.
6. It necessitates organizing the subject matter for teaching. The arrangement may be logical or pedagogical or a combination of the two.
7. It compels the teacher to determine before the recitation just what he intends to do, what the pupils are to do, and what the assignment is to be.
8. The teacher may not be able, the chances are he will not be able, to carry out each day's work as he planned it. But his preparation will put him in a position to meet any emergency that may arise.
9. It illustrates in a specific way how the inductive-deductive method may apply in teaching grammar. It illustrates also that the inductive-deductive method cannot be used exclusively.

10. It illustrates how the text-book is to be used in grammar.
11. It illustrates how pupils can be led to make a summary of several days' work.
12. It illustrates what is meant by exercising the pupils' self-activity in learning.
13. It illustrates how teaching can be made thorough and practical, inasmuch as it shows how knowledge may be transformed into power and skill.
14. It illustrates what is meant by making learning easy and attractive.
15. It illustrates how each day the pupils accomplish something definite, and how at the end of a unit or subject they may carry away the essentials in a permanent form.
16. It illustrates how close analysis of subject matter and attention to propositions III and IV suggest method of procedure.

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APPLICATION OF THE "FOUR FUNDAMENTAL PROPOSITIONS"  
IN THE TEACHING OF GRAMMAR.

*Introduction.*

The following units were selected to be reviewed by classes in the Professional Review class in Grammar in the Milwaukee Normal school. These units were developed one at a time and were organized in lesson or class-plans based upon the four fundamental propositions. The teacher at times formulated a class-plan corresponding to a whole unit. Again the teacher organized individual daily class-plans corresponding to each new step in advance in the teaching of a whole or large unit. The students in turn each organized lesson-plans corresponding to each succeeding step in the teaching of and developing of a large or unit-whole. The pupils observed the teacher's class-plans closely—discussed the class-plans under following heads:

1. Preparation for the next day's work.
  - a. Of subject matter to be taught.
  - b. Of the pupil's mind in order that he may do assigned work effectively and rapidly.
2. Presentation of the day's lesson in the class-room.
3. Review and application of the data learned, or generalizations arrived at, to new particulars.

The students in the review class finally formulated what seemed to them to be the results of the application of the four fundamental propositions to the teaching of Grammar.

UNIT I.

*Aims—*

- a. To have pupils recognize and define a sentence and its parts.
- b. To have pupils recognize and define nouns, pronouns and verbs.

UNIT II.

*Aims—*

- a. To have pupils learn that the meaning of a noun may be modified by an adjective.
- b. To have pupils learn that adjectives may be simple or many-worded.



UNIT III.

*Aims—*

- a. To have pupils learn to recognize and define adverbs.
- b. To have pupils learn that adverbs may be simple or many-worded.

UNIT IV.

*Aim—*

To have pupils learn to recognize and define transitive, intransitive and copulative verbs.

UNIT V.

*Aim—*

To have pupils learn to recognize and define prepositions.

UNIT VI.

*Aims—*

- a. To have pupils learn to recognize and define conjunctions.
- b. To have pupils learn to classify sentences according to form.
- c. To have pupils learn to distinguish between clauses with respect to their office.
- d. To have pupils learn to distinguish between clauses and phrases.

UNIT VII.

*Aim—*

To have pupils learn that nouns, pronouns and verbs change their form to express a difference in number.

UNIT VIII.

*Aim—*

To have pupils learn that pronouns and nouns change in form to show their relation to other words.

UNIT IX.

*Aims—*

- a. To have pupils learn that pronouns and verbs are inflected to express difference in person.
- b. To have pupils learn the declension of the personal pronoun.

UNIT X.

*Aims—*

- a. To have pupils learn that verbs are inflected to show difference in time.
- b. To have pupils learn the meaning and formation of tenses of the indicative mode.
- c. To have pupils discuss the meaning of other verb-phrases of different modes and tenses.

UNIT XI.

*Aims—*

- a. To have pupils learn that verbs are inflected to express a difference in the manner in which the action may be regarded.
- b. To have pupils learn that the form of a verb may show whether the subject performs the action or whether the subject receives the action which the predicate expresses.

UNIT XII.

*Aim—*

To have pupils learn that adjectives and a few adverbs are inflected to show a difference in degree.

UNIT XIII.

*Aim—*

To have pupils summarize what they have learned in regard to the inflection of nouns, pronouns, verbs, adjectives and adverbs.

UNIT XIV.

*Aim—*

To have pupils recognize and define interrogative pronouns and interrogative adjectives.

UNIT XV.

*Aim—*

To have pupils learn to recognize and define demonstrative pronouns and demonstrative adjectives.

UNIT XVI.

*Aim—*

To have pupils learn to recognize and define indefinite pronouns and indefinite adjectives.

UNIT XVII.

*Aim—*

To have pupils learn to recognize and define relative pronouns and relative adjectives.

UNIT XVIII.

*Aim—*

To have pupils learn some of the essential qualities of participles.

UNIT XIX.

*Aims—*

- a. To have pupils learn some of the qualities of infinitives.
- b. To have pupils learn to distinguish clearly between infinitives and participles.

UNIT XX.

*Aims—*

- a. To have pupils name the parts of speech that may be used as connectives.
- b. To have pupils classify clauses and phrases.
- c. To have pupils name the different kinds of modifiers of the subject.
- d. To have pupils name the different modifiers of the predicate.
- e. To have pupils name the different kinds of complements of the predicate.

UNIT XXI.

*Aim—*

To have pupils summarize what they have learned about nouns.

UNIT XXII.

*Aim—*

To have pupils summarize what they have learned about pronouns.

UNIT XXIII.

*Aim—*

To have pupils summarize what they have learned about adjectives.

UNIT XXIV.

*Aim—*

To have pupils summarize what they have learned about adverbs.

UNIT XXV.

*Aim—*

To have pupils summarize what they have learned about prepositions.

UNIT XXVI.

*Aim—*

To have pupils summarize what they have learned about conjunctions.

UNIT XXVII.

*Aim—*

To have pupils summarize what they have learned about verbs.

UNIT XXVIII.

*Aim—*

To have pupils classify and define sentences.

UNIT XXIX.

*Aim—*

To have pupils learn to summarize and apply the laws of correct syntax relative to comparison of adjectives and adverbs.

UNIT XXX.

*Aim—*

To have pupils learn to summarize and apply the laws of correct syntax relative to case forms of nouns and pronouns.

UNIT XXXI.

*Aim—*

To have pupils learn to summarize and apply the laws of correct syntax relative to tense forms of verbs.

UNIT XXXII.

*Aim—*

To have pupils learn to summarize and apply the laws of correct syntax relative to comparison of adjectives and adverbs.

UNIT XXXIII.

*Aim—*

To have pupils learn to summarize and apply laws of correct syntax relative to comparison of adjectives and adverbs.

II. The application of the "four fundamental propositions" in preparation of class work from day to day, necessitates the organization of lesson-class-plans, the parts of which are arranged under the four headings, viz.:

1.—Aim or aims.

2.—What must be known or done by the student to realize these aims.

3.—Of proposition 2 what does the student already know, or what can he do?

4.—What under proposition (2) the pupil still has to learn or do.

The lesson plans necessitate the selection and organization of the subject matter of grammar. The selection and organization of the subject matter of grammar (for purposes of teaching the same) depend upon three other things—(1) the content of grammar; (2) the

purposes or values of the study; (3) similarities or differences between data.

The selection and organization of similar data involves often a unit or topic-whole. This whole may be so large that it is not adapted to individual or daily work, i. e., it is necessary then that the teacher should organize the large unit or topic-whole into smaller units, and again organize these smaller units into class-plans each corresponding in turn to one or more days' work, according as each class-plan developed will need one or more days to realize number 1 of the four fundamental propositions.

II. The following is an outline of a unit-whole based upon the four fundamental propositions:

1.—Aim—To lead the pupil to recognize and define copulative, transitive and intransitive verbs.

2.—What must be known or done to realize above aim.

(a) The pupil must observe in a series of sentences supplied by the teacher that some verbs require other words to complete the assertion about the subject.

(b) He must be told that such verbs are called incomplete verbs.

(c) He must select incomplete verbs in this series of sentences.

(d) He must observe again in this series of sentences that some verbs do not require other words to complete the assertion about the subject.

(e) He must be told that such verbs are called complete verbs.

(f) He must select complete verbs in this series of sentences.

(g) He must be led to observe that some incomplete verbs are completed by words which seem to qualify the subject, as, e. g., "She seems indifferent."

(h) He must be told that such verbs are called copulative verbs.

(i) He must select copulative verbs in this series of sentences, which verbs are completed by words qualifying the subject.

(j) He must be led to observe that some verbs are completed by words which seem to name as well as qualify the subject.

(k) He must be told that such verbs are also called copulative verbs. He must select such copulative verbs as are completed by words naming the subject.

(l) He must be led to observe again that some verbs are completed by words which seem to stand for the name of the subject, as "It is I," I standing, for instance, for the name-word Mary or Grace.

(m) He must be told that such verbs are also called copulative verbs.

(n) He must select copulative verbs which are completed by words which stand for the name of the subject.

(o) He must be led to define "copulative verb."

(p) He must recall that a word which qualifies the subject is called an adjective. He must then be told that a word qualifying the subject and completing the verb is called a predicate adjective.

(q) He must select predicate adjectives of copulative verbs in this series of sentences.

(r) He must recall that a name word is a noun. He must be told that words completing verbs which seem to name the subject as well as qualify the subject are called predicate nouns.

(s) He must select predicate nouns in this series of sentences.

(t) He must recall that a word standing for a noun is a pronoun. He must be told that such words completing verbs which stand for name-words are called predicate pronouns.

(u) He must be led to select predicate pronouns in this series of sentences.

(v) He must be led to define a predicate adjective, predicate noun, predicate pronoun.

(w) He must turn to his grammar to fix and perfect the definition of a copulative verb, predicate noun, predicate pronoun, predicate adjective.

(x) He must analyze a series of sentences taken from the grammar in which he selects copulative verbs with their completing words.

(y) He must be led to observe that some verbs are completed by words which do not qualify, name, or stand for the name of the subject.

(z) He must observe that the completing word of such verbs receive the act asserted by the verb.

(a') He must be told that such verbs are transitive verbs.

(b') He must select transitive verbs and their completing words in a series of sentences.

(c') He must be told that the completing word of a transitive verb is called the object of the verb.

(e') He must be led to define transitive verb and direct object of transitive verb.

(f') He must turn to his grammar to fix and perfect the definition of transitive verb and direct object of a transitive verb.

(g') He must be told that another name for a complete verb is an intransitive verb.

(h') He must be led to select intransitive verbs in a series of sentences presented by the teacher.

(d') He must formulate a definition for an intransitive verb.

(j') He must turn to his grammar to fix and perfect this definition.

(k') He must be led to analyze a series of sentences, discriminating between transitive and intransitive and copulative verbs, and their completing words, if they have such words.

(l') He must be led to make a summary of verbs with reference to whether they are complete or incomplete and with reference to their completing words.

What facts of grammar must have been taught the pupil before he is taught to recognize and define copulative, transitive, and intransitive verbs.

He must know the following:

- 1.—That a sentence is an expression of thought in words.
- 2.—That every sentence has two parts, a subject and a predicate.
- 3.—The definition of the subject of a sentence—simple, and many-worded.
- 4.—The definition of the predicate of a sentence—simple, and many-worded.
- 5.—The definition of a noun.
- 6.—The definition of a pronoun.
- 7.—The definition of an adjective.
- 8.—The definition of a verb.
- 9.—The pupil must be able to distinguish between an adjective and an adverb.

III. The lesson plan developing this unit-whole involves so much that is new to the student that it necessitates the organization by the teacher of lesson plans corresponding to only one of two advanced steps of the whole unit. With this in view the following aims or series of aims are given for the development of this large unit-whole for the organization of smaller units corresponding to daily lesson class-plans.

Aims—1. To teach the pupil to recognize a complete and incomplete verb.

2nd Set of Aims.—(a) To review with the pupil the work of the preceding day with reference to complete and incomplete verbs. (b) To teach the pupil to recognize and define one division of the incomplete verb, the copulative verb. (c) To prepare the pupil for the next day's lesson.

3rd Set of Aims.—(a) Review of the preceding day's lesson with reference to copulative verbs. (b) To teach the pupil to recognize and define a transitive verb. (c) To prepare the pupil for the next day's lesson.

4th Set of Aims.—(a) To test or review the preceding day's work with reference to transitive verbs. (b) To teach the pupil to recognize and define the intransitive verb. (c) To prepare the pupil for the next day's lesson.

5th Set of Aims.—(a) To lead the pupil to fix and formulate the definitions of the following: copulative verb, transitive verb, intransitive verb, predicate noun, predicate pronoun, predicate adjective, direct object of a transitive verb. (b) To prepare the pupil for the next day's lesson.

6th Set of Aims.—To review the preceding day's work. (b) To lead the pupil to apply his knowledge of copulative and transitive verbs by leading him to discriminate between the copulative and intransitive verb in a series of sentences selected from the text-book. (c) To prepare the pupil for the next day's lesson.

7th Set of Aims.—(a) To review the preceding day's work. (b) To lead the pupil to apply his knowledge of transitive and intransitive verbs by leading him to discriminate between transitive and intransitive verbs in a series of sentences selected from the text-book. (c) To prepare the pupil for the next day's recitation.

8th Set of Aims.—(a) To review the preceding day's work. (b) To lead the pupil to discriminate between copulative, transitive, and intransitive verbs in a series of sentences selected from the text. (c) To prepare the pupil for the next day's lesson.

NOTE.—Some teachers would here teach the laws relative to the case forms of pronouns used as completing predicates and of pronouns used as direct objects of transitive verbs. If so, the following series of aims develop.

9th Set of Aims.—To lead the pupil to observe and formulate the following laws: (a) That a direct object of a transitive verb is in the objective case. (b) That a pronoun used as a completing word of a copulative verb is in the same case as the subject of that verb. (c) To prepare the pupil for the next day's lesson.

10th Set of Aims.—(a) To review the preceding day's work; that is, to lead the pupil to apply the preceding laws in a series of sentences prepared by the teacher. (b) To prepare the pupil for the next day's lesson.

11th Set of Aims.—(a) To review the preceding day's work; that is, to lead the pupil to discover that these two laws are obeyed in thought, —embodied in literary form. (b) To prepare the pupil for the next day's lesson.

12th Set of Aims.—(a) To lead the pupil to detect and hence to avoid errors with reference to case forms of completing words used

with copulative and transitive verbs. (b) To prepare the pupil for the next day's lesson.

13th Set of Aims.—To lead the pupil to apply above laws to his own oral and written work.

If the preceding aims are developed with reference to case forms of completing words, other data must be known by the pupil before attempting to teach him laws governing case forms of completing words, namely, the following: (1) The pupil must know the definition of the term *case*. He must know what is meant by the terms *nominative* and *objective case*. He must be able to inflect the following personal pronouns in the singular and plural, *I, he, she*, the relative pronoun *who* and its compound forms, like *whosoever*.

IV. Illustrations of class or lesson-plans based upon the four fundamental propositions, which lesson-plans are for the purpose of realizing the first three sets of aims outlined above when teaching the unit or topic whole; copulative, transitive and intransitive verbs.

*Class-Plan 1.*

Aim 1.—To teach the pupil to recognize and define complete and incomplete verbs.

2. What must be known or done by the pupil to realize these aims.

- (a) That a sentence is an expression of thought in words.
- (b) That every sentence has at least two parts, subject and predicate.
- (c) That the subject is that about which something is asserted.
- (d) That the predicate is that which asserts something about the subject.
- (e) That the subject may be many-worded.
- (f) That the predicate may be many-worded.
- (g) That a verb is usually the predicate, or is that which asserts something about the subject.
- (h) The pupil must be able to analyze a series of sentences presented by the teacher and observe that some verbs do not need a word to complete the assertion about the subject.
  - (i) He must observe this again and again.
  - (j) He must be told that such verbs are called complete verbs.
  - (k) He must select the complete verbs in this series of sentences.
  - (l) He must be led to define a complete verb.
  - (m) He must observe in this series of sentences that some verbs do require other words to complete the assertion about the subject.
    - (n) He must observe this again and again.
    - (o) He must be told that such verbs are called incomplete verbs.
    - (p) He must select incomplete verbs in this series of sentences.
    - (q) He must be led to define an incomplete verb.
    - (r) He must be led to discriminate between all the complete and incomplete verbs in this series of sentences, by the teacher.
    - (s) He must turn to his grammar to fix and perfect the definitions of a complete and an incomplete verb.
    - (t) He must be told to analyze a series of sentences selected by the teacher taken from the grammar, to select and name the complete and incomplete verbs. This last is in preparation for the next day's lesson.
- (3) Of all under proposition (2) what does the pupil already know or what can he do?

He knows all of a, b, c, d, e, f, g.

(4) What remains to be known or done?

All under proposition (2) not found under proposition (3), namely, from h to s.

*Class-Plans 2.*

Aim.—(a) To review the preceding day's lesson, to test the student's preparation of a part of the advance lesson.

(b) To teach the pupil to recognize and define copulative verbs and their completing words.

(c) To prepare the pupil for the next day's lesson.

2.—What must be known or done to realize these aims?

(a) He must define again a complete and incomplete verb.

(b) He must analyze rapidly the series of sentences indicated the day before by the teacher, selecting the complete and incomplete verbs, that is, noting the subject and predicate, and stating whether the verb is the complete predicate or whether the verb requires another word or words to complete the assertion about the subject.

(c) He must observe in a given series of sentences that incomplete verbs are completed by words which seem to qualify the subject, as in the sentence: "Sue looks *pale*."

(d) He must observe this again and again.

(e) He must be told that such verbs so completed are called copulative verbs.

(f) He must be led to select copulative verbs so completed in a series of sentences.

(g) He must be led to observe that some verbs are completed by words which seem to name as well as qualify the subject as, "He is a *king*."

(h) He must be led to observe this again and again.

(i) He must be told that such verbs so completed are also called copulative verbs.

(j) He must be led to select copulative verbs so completed in this series of sentences.

(k) He must be led to observe that some verbs are completed by words which seem to stand for the name of the subject as, "I am *she*."

(l) He must be led to observe this again and again.

(m) He must be told that such verbs so completed are also called copulative verbs.

(n) He must be led to select copulative verbs so completed in this series of sentences.

(o) He must be led to define a copulative verb.

(p) He must turn to his grammar to fix and perfect his definition of a copulative verb.

(q) He must recall that a word completing a copulative verb which seems to qualify the subject is an adjective. He must be told to call such completing words of a copulative verb predicate adjectives.

(r) He must select predicate adjectives in this series of sentences.

(s) He must be led to define a predicate adjective.

(t) He must recall that words which complete the verb, which name the subject as well as qualify it are nouns, and he must be told that such completing words of copulative verbs are called predicate nouns.

(u) He must be led to select predicate nouns in a series of sentences.

(v) He must be led to define the predicate noun.

(w) He must recall that words used in place of nouns are pronouns, and must be told that pronouns needed to complete copulative verbs are called predicate pronouns.

(x) He must select predicate pronouns in this series of sentences.

(y) He must be led to define a predicate pronoun.



(z) He must turn to his grammar to fix and perfect his definitions of a predicate noun, predicate pronoun, predicate adjective.

(a') In preparation of the next day's work he must be given a series of sentences in which he is to select the complete and incomplete verbs, the incomplete verbs which are copulative, their completing words.

3.—Of all the points under proposition 2 what does the pupil now know or what can he do? a, b, perhaps s, g, k, q, t, w.

4.—What remains to be known or done?

All under proposition 2 not indicated under proposition 3.

*Class-Plan 3.*

Aim.—(a) To review and test the pupil's knowledge of a copulative verb and its completing words.

(b) To teach the pupil to recognize and define a transitive verb.

(c) To prepare the pupil for the next day's recitation.

2.—What must be known or done by the pupil to realize these aims.

(a) The pupil must define again a copulative verb, a predicate adjective, a predicate noun and a predicate pronoun.

(b) The pupil must analyze rapidly the sense of sentences assigned the day before, select the complete and incomplete verbs, select the copulative verbs and name their completing words.

(c) The pupil must select the incomplete verb in a series of sentences supplied by the teacher and observe that some verbs are not completed by words which name, qualify or stand for the name of the subject.

(d) He must observe that they are completed by words standing for objects which receive the act asserted by the verb.

(e) He must observe this again and again.

(f) He must be told that such verbs are called transitive verbs.

(g) He must select all the transitive verbs in this series of sentences.

(h) He must be led to define a transitive verb.

(i) He must be told that the completing word of a transitive verb is called the direct object of a transitive verb.

(j) He must select all of the objects of the transitive verbs in this series of sentences.

(k) He must be led to define the direct object of a transitive verb.

(l) He must turn to his grammar to fix and perfect his classification of a transitive verb, of a direct object of a transitive verb.

(n) In preparation for the next day's work he must be told to analyze a series of sentences given in the grammar and to select the transitive incomplete verbs and their completing words in this series of sentences.

3.—Of all included under proposition 2 what does the pupil now know or what can he do? a, b, perhaps c, d.

4.—What remains to be known or done?

All not included under proposition 3.

NOTE.—If a lesson or class-plan is not completed in one day, the same lesson is continued until finished before the teacher attempts to realize a new series or set of aims in the development of this large unit-whole—"Copulative, Transitive and Intransitive verbs."

a. Further lesson plans should be made by the teacher until all of the aims noted under III. are realized—these aims were formulated for the purpose of teaching new data, testing students' preparation of assigned work, drilling upon data taught, application of data learned, or the application of generalization arrived at to new particulars.

V. Above selections and grouping of material and organization of the same in lesson plans involves what plans or lines of work on the part of the teacher?

1.—The teacher must know the subject of grammar as a whole and see its natural and logical division into units. See units I to XXXIX given in introduction.

2.—The teacher must see the relation between these units if any exists.

3.—The teacher must determine the naming of the "unit-heads."

4.—The teacher must determine their relative importance.

5.—The teacher must determine their order.

6.—The teacher must organize lesson-plans corresponding to a unit or a division of a unit, if the unit is so large as to require a series of lesson plans.

7.—The teacher must determine what topics a, b, c, etc., under proposition "2" of the lesson-plan the pupil now knows or can do.

8.—The teacher must determine how he may rapidly and effectively bring to the consciousness of the pupils the data already known, which may be brought into such living and vital relation with the new as to aid the class to comprehend the new or unknown.

9.—The teacher must determine his mode of procedure before he attempts to teach the class the topics under proposition "4" of the lesson plan.

10.—The teacher must prepare a series of sentences, which sentences are so selected and grouped that the pupil may observe again and again some grammatical fact; for example, that some verbs require other words to complete the assertion about the subject and may finally arrive at generalizations; for example, verbs which require other words to complete the assertion about the subject are called incomplete verbs.

11.—The teacher must be ready to refer the pupil to certain pages of the text-book for reference and study. The pupil will need to compare the definitions and rules which he has formulated with like generalizations in the text-book, will need to study series of sentences presented in the text for the purpose of applying the generalizations arrived at to new particulars, will need the guidance of the text-book in the formation of summaries of units; such as all the offices of nouns in sentences, classes of pronouns, etc.

12.—The teacher must think out logical summaries of units in order that he may teach his class to form similar summaries.

VI. The handling of the class-plan based upon the four fundamental propositions in the classroom, or with the class.

This will be considered under three heads:

1. Preparation.
2. Presentation.
3. Application and drill.

#### 1. Preparation.

(a) The teacher organizes the subject-matter to be taught, and the order in which it is to be taught.

(b) The teacher announces the aim or purpose of the lesson.

(c) The teacher determines the questions which are to reach back and gathered up data presented in former lessons which will serve as a transition for the new lesson.

(d) The teacher announces the matter of the new lesson to the class.

(e) If the child is to study the next day's lesson, which study is to

precede actual recitation in the classroom the teacher makes such remarks explanatory of the topics under "proposition 4," if such need explanation, and gives such definite directions as are necessary for the child's accurate understanding of his mode of procedure in preparing the next day's lesson.

### 2. *Presentation.*

The recitation is conducted for the purpose of the pupil's gaining a truer view and a deeper insight of the subject matter which he has studied, or with the purpose of presenting the new inductively, in which case the subject matter has not been previously assigned to the pupil for study.

(a) In this latter case, presentation to the class of a series of sentences to be used in teaching the new.

(b) Presentation or teaching of the new:

The teacher by means of a series of questions and directions leads the class to observe again and again concrete illustrations of some grammatical fact or phenomenon. The pupil compares these illustrations or concrete examples of the same phenomenon, states the similarity existing between these individual illustrations or concrete examples and arrive at a definite conclusion or generalization, which generalization may be a definition, or a rule of correct syntax. For example: He observes that some verbs are followed by words which complete the assertion made about the subject; he observes this again and again in a like series of sentences; he states in his own words this observation which he has repeatedly made; he is told to call such a completing word a completing predicate and is then led to define the term "completing predicate."

### 3. *Practice, Drill, Application.*

Comparing pupil's generalization with text-book generalization, further application of generalization to many new particulars—repetition of the generalization, that is the definition or rule; when a whole "unit" has been taught, the making of a summary of the whole; repetition of the facts of this summary in an orderly series; original illustrations by the class of the different data of the summary; application of rules learned to pupils' oral and written work; constant search in literature for further illustrations.

VII. Class work based upon the four fundamental propositions is truly pedagogical.

1. The first important function and duty of the teacher is to prepare the students' mind for the assimilation of new knowledge, and to present the subject matter of instruction in the order and manner which best conduces to this assimilation. The class-plan based upon the four fundamental propositions does this. Why?

(a) It presents the subject matter in logical order.

(b) Points out definitely what is to be done.

(c) Indicates the order in which this is to be done.

(d) Brings to the consciousness of the pupil preceding known data and experiences similar to or relating to today's subject-matter of instruction.

(e) These known data reach out and bring into vital relation with themselves the new elements of knowledge to be learned.

(f) The statement of the aim puts the pupil into the proper frame of mind for work in so far as it may excite expectation, arouse the pupil's activity in working at a task.

2. The class-plan based upon the four fundamental propositions makes the subject matter of instruction clear.

(a) It presents matter not in the mass, but in small logically connected sections to each of which in succession the pupil gives his individual attention, thus ensuring clearness of each step.

(b) After attention has been given to each successive step of the lesson-whole, these steps are brought into a close relation with each other;—the pupil thus gains clear individual notions and avoids the apprehension of a confused mass of disconnected details. This close connection of the individual steps of the lesson-plan is brought about by means of requiring the pupil to make a clean well-cut summary of the whole lesson.

3. The class-plan based upon the four fundamental propositions is capable of presenting the subject matter of instruction in a connected series.

(a) The class-plan rightly organized calls for summaries of unit-wholes as a final means of review. Each lesson-plan of a "unit" corresponds to one or more onward steps of a series of related steps.

A naturally related series helps form intimate and lasting associations.

(c) The class-plan does not preclude devices to fix the series in mind.

(d) The class-plan calls for persistent application of generalizations to new particulars. If knowledge is to have a rich content, the generalization must be again and again re-enforced by application to new particulars. This application of a generalization to a new particular co-ordinates, groups knowledge.

4. The lesson-plan based upon the four fundamental propositions requires the taking of thought about the best sub-division of the matter to be taught. The pupil in time sees the "unit-whole," an order in grouping.

5. The lesson-plan based upon the four fundamental propositions admits of the use of the monologue or dialogue in the class, of analysis or of synthesis with regard to the subject matter, of the method of induction and of deduction with regard to the learner.

6. The lesson-plan based upon the four fundamental propositions requires the teacher to see that what knowledge the pupil has on hand is put to use, in so far as the pupil is led to relate the known to the unknown and is constantly required to apply generalizations made (rules, definitions, classifications) to new particulars.

7. The lesson-plan based upon the four fundamental propositions calls for careful determination of each day's advance lesson and of careful preparation.

(a) The right order and manner of the subject matter to be taught.

(b) Of the student's mind for rapid and effective assimilation of new data.

8. The lesson-plan based upon the four fundamental propositions requires the teacher to think of the best means at hand to aid the pupil to assimilate new knowledge, since the teacher must constantly conceive of means to realize aim or "proposition 1."

The average Grammar usually introduces an individual generalization which is illustrated by a single sentence and then applied to a few disjointed and often meaningless sentences. The teacher's attempt to see how he may best realize the aim or aims set forth in "proposition 1" leads him to see that the pupil must arrive inductively at a generalization and apply this generalization again and again to new particulars.

VIII. The handling of a class-plan with a class who are composed of students in the *Professional Review Class in Grammar*.

1. The teacher presents a large unit, the outline of which is based upon the class-plan. The unit is large for two reasons: (a) The pupil has a breadth of knowledge concerning Grammar before entering the professional review class. (b) The large unit saves time in so far as topics are reviewed.

2. The teacher at least once during the half quarter takes a large unit which has been developed with the class, divides this unit into a series of logically related smaller units, organizes a series of class-plans corresponding to each of the smaller units. These individual class-plans, corresponding to the units of the large class-plan, make up an orderly series developing the whole unit. The class-plan embraces the four heads.

1. Aim or aims of the day's work.
2. What must be known or done to realize these aims.
3. What is already known or can be done by the pupil.
4. What remains to be done or known.

3. Each student in the professional class is expected to develop, as a piece of original and special work done by himself, a similar series of related class-plans which are parts of a series developing a large unit, or larger class-plan whole. He carefully prepares each of the units of the series in an orderly outline—this outline is based upon the four fundamental propositions noted above. This individual work of each student is criticised by the teacher and compared with class-plan work presented to the class by the teacher. The student then reviews and corrects his work and puts it in the best shape possible. After some two or three weeks have been devoted to the consideration of class-plans outlined by the teacher, the class are expected to formulate the results of the teaching of grammar based upon the four fundamental propositions, which results they infer or derive from their own experience in the classroom. These results are read aloud in class by individual students, compared, and different students are required to state how each one of these results seems to him to have been accomplished. At times the teacher definitely discusses with the class the aims in view in the development of a class-plan, the order and arrangement of the subject matter of instruction, and the means used for drill and application.

The teacher reviews with the class the subject matter of grammar. This subject matter was organized and grouped by the teacher in some thirty units. As many of these units are reviewed with the class as time permits. These units represent large wholes which then need subdivision into smaller units, making up a related series of this larger whole. The teacher uses these lesson-plans for two reasons: (a) to review with the pupil the essentials of English Grammar; (b) to illustrate to the pupil the organization of the subject matter of Grammar based upon the four fundamental propositions. Thus the academic work and professional work are combined. There is a necessity for the combination of the academic work and professional for two reasons: (1) The average student in the professional class evinces a lack of understanding of Grammar. (2) It seems a foolish waste of time to first present the subject matter of instruction by one method to the class, and then later to organize this subject matter of instruction based upon the four fundamental propositions in a different manner and order than that originally presented by the teacher. The review or the academic work is presented to the class inductively, that is, the teacher prepares a series of sentences to be used in connection with each unit

of instruction. The pupil observes the phenomena or facts through the medium of these correct illustrations; he observes like illustrations; he is led to consciously compare them and to determine their points of similarity. Through this observation, comparison and abstraction of a similarity, he arrives finally at a generalization. This generalization may be a definition, it may be a rule of syntax. This generalization made by the student is then compared with the text-book generalization, is fixed and formulated. The student then applies the generalization to many new concrete illustrations of the same phenomena. These concrete illustrations are taken from the text-book in Grammar. The student is expected to make a summary of each day's new lesson presented, and a final summary of the series of successive units which go to make up a larger unit or whole. The student is thus illustrating also the deductive method in the study of Grammar in so far as he is required to apply the generalization at which he has arrived to many a new particular.

The student is required in time to discuss with a teacher the class-plan based upon the four fundamental propositions under the following heads: 1—Preparation for class-work, (a) the preparation or organization of the subject matter of instruction; (b) the preparation of the child's mind for the rapid and effective assimilation of this new data. 2—The presentation of the same in the classroom, (a) the method of presentation through induction; (b) the character, number and kind of the sentences or concrete illustrations to be prepared by the teacher; (c) the logical order of the presentation of the new. (3)—Drill and application. Necessity of drill to fulfill the aim as stated under the four fundamental propositions. Means to vary mode of drilling, such as the summary of each day's work, the summary of larger units, and application of the principle derived to new particulars.

VIII. The following results of the application of the four fundamental propositions to the teaching of grammar were formulated and stated by the students of a Professional Review Class in Grammar. The conclusions at which they arrived were not instigated by the teacher except in so far as she in her review work with her class presented to them the units of subject matter in Grammar organized in lesson-plan based upon these propositions.

*Results formulated by the class.*

1. The teacher is required to determine the aims in view in each succeeding lesson.
2. The "class-plan" determines the method of what?
3. The teacher is led to make a careful analysis of subject matter selected to be taught in order to determine whether the selection is adapted for the realization of the aims stated under "proposition 1."
4. The class-plan calls for a careful organization as well as selection of subject matter to be taught.
5. The matter of organizing the "what" aids the child's memory of data. Why?
  - (a) Because one step is taught thoroughly at a time.
  - (b) Because facts are taught in a related series.
  - (c) Because of the careful presentation of the new in a logical order and manner.
6. The class-plan paves the way for the child's effective and rapid assimilation of new data. Why?
  - (a) The new data are presented in an orderly and logical manner.

- (b) The child's mind is prepared for this effective and rapid assimilation of new data, since the teacher brings to the consciousness of the pupil the "known" which has a close and vital relation to the "unknown."
7. The class-plan causes a teacher to discover whether the child really has the necessary known data to properly understand the new or related unknown. The third fundamental proposition calls for the recognition of this by the teacher.
8. The class-plan necessitates the organization, that is, the selection and arrangement or classification of subject matter for teaching.
9. The class-plan prevents waste of time. How?
- (a) Teacher determines beforehand what the child is to do, the order in which this is to be done, and makes a definite and exact assignment of each day's succeeding work.
  - (b) The statement of the aim will cause the child to work with the thought of finally arriving at the data necessary for the realization of this aim.
  - (c) The class-plan necessitates the teacher's bringing to the consciousness of the child that apperceptive mass which has a vital and close relation to the new.
10. The class-plan requires so careful a preparation on the part of the teacher that it makes the teacher free; in other words the teacher is better prepared to meet the emergencies which may arise in the classroom.
11. The class-plan makes the teaching of Grammar practical, in so far as the child is to apply every generalization reached or arrived at to new and varying particulars.
12. The class-plan prevents the child's memorizing facts by page. How? Teacher does not assign the advance lesson by page, but by topic in a related series of steps developing this topic.
13. The summaries of unit-wholes made admit of excellent training in language power. How? (a) The child learns to separate essential data from non-essential. (b) The child is required to make a condensed oral summary of the whole. (c) The child is required to talk definitely to a point.
14. Through the medium of a class-plan the child learns the relation existing between the parts of the whole. Again the child learns the whole through a related series.
15. The class-plan forces the teacher to utilize the child's previous knowledge and experience, thus stimulating interest and attention.
16. The child's mind is aided in rapid and effective assimilation of new data: (a) because of the statement of the aim, (b) because of the orderly presentation of subject matter in a related series, (c) because the new or "unknown" is made clear through the medium of its close and vital relation to the "known."
17. The child has a well defined plan, a method of study, for each day's work, in other words he knows what to do, and the order in which to do it.
18. The class-plan has an ethical value for the child (a) in so far as he is aided and guided in the performance of a definite task for the fulfillment of a definite aim or purpose, (b) in so far as the child cannot plead that he did not understand the assigned lesson or duty.
19. The class-plan illustrates the inductive and deductive process of learning.
20. The teacher puts to use the capital the child has on hand.
21. The class-plan arouses the self-activity of the pupil. Why?

- (a) Statement of aim may stimulate interest and attention.
  - (b) Statement of aim may indicate to some pupil the steps to be taken to arrive at this aim.
  - (c) The careful assignment of the next day's lesson invites activity of the pupil.
22. The class-plan may be a means of valuable mental discipline. Why?
- (a) The "method of the what" often points out the "method of the how."
  - (b) The child is led to compare, observe, abstract and generalize.
23. The class-plan illustrates the proper use of the text-book in the following respects: (a) The child is to compare his definitions, rules, or generalizations arrived at with those given in the text-book; (b) the child is to acquire from the text-book new and further illustrative sentences, which sentences are to be used for the application of the child's generalizations to new particulars; (c) the average text-book of Grammar presents fine summaries of whole units. These units may be used as a means of review; (d) the average text-book in Grammar presents the conclusions of trained thinkers, and is often a fine reference book concerning technical and disputed points.
24. The class-plan illustrates how the child each day may be led to accomplish something definite, a step in advance, and how at the end or close of the study of the unit, he is able to carry away essentials in definite and permanent form. Why? The child is required always to make a summary of each day's advance work, as well as a summary of the unit-whole.
25. The class-plan compels the child's close attention to the aim of each day's lesson, since the subject matter of instruction is based entirely upon the aim or aims to be accomplished.
26. Class-plan discloses possible shortcomings with respect to the subject matter as presented in the average text-book. How? The teacher in formulating what is to be known or done to realize aims or propositions must inevitably analyze the subject matter as presented in the average text, must criticize the presentation of the same, and must determine whether the subject needs further elucidation and illustration than that presented by the text. Again many a text-book calls for the rote-memorizing of underived generals and the application of imperfectly understood generals to new particulars.
27. The class-plan compels a teacher to recognize and use an important principle of teaching; namely, "proceeding from the known to the related unknown."



## USE OF THE FUNDAMENTAL PROPOSITIONS 1, 2, 3, AND 4 IN THE TEACHING OF HISTORY.

I. The application of the four fundamental propositions in the preparation from day to day of class work necessitates a lesson-plan—the parts of this lesson-plan arranged under four headings, viz.: 1—Aim or aims to be realized in the next recitation. 2—What must be known or done to realize these aims. 3—What of the things enumerated under proposition 2 the pupil now knows or can do. 4—What of the things enumerated under proposition 2 the pupil still has to learn or do.

II. These lesson-plans necessitate the selection and organization of subject-matter.

There are difficulties attending the grouping of subject-matter of history. Why?

- (a) Because of the multitude of events or data.
- (b) Because of the chronological grouping of data as presented in many text-books rather than the "institutional method" of grouping, i. e., the author groups the data presented in the order of time in which they occurred. He follows the method which builds up associations in "chronological units" while the "institutional method" marks the progress of any one idea or institution.

In the first formal study of history through the medium of the text-book the teacher should, with his class, follow the text-book arrangement of the chronological method of organizing historic data, since the organization of an historical topic by the "institutional method" of grouping implies a knowledge of later phases of the subject, which phases occur perhaps a century or more later than earlier phases of the same subject, this later data being properly understood only in connection with a study of many other events which happened contemporaneously with them.

The class-plan, then, based upon the four fundamental propositions must follow the chronological method of classifying events, if the class is studying the historical data for the first time through the medium of a text-book.

After this is done and the proper time for a careful review arrives, this review should be conducted following the "idea" or "institutional method" of grouping.

This would necessitate the formation of a second series of class-plans in which the data formerly organized by means of "chronological units" are again outlined following the "institutional or idea method." The latter work is absolutely necessary for no one really knows history who has not been led to associate historic facts and reassociate them until he sees the development of an "institutional unit."

Teachers in history in Normal schools should train students to organize properly history topics for teaching purposes. The students in the Professional Review classes in history, then, should study the adaptation of the four fundamental propositions to the teaching of history, when historic data are presented following the chronological or text-book method of grouping, and again, when historic data are presented following the "institutional method" of grouping.

The students in the Professional Review classes in our Normal schools have studied history for several years and are supposed to

have gained a chronological view of the leading historic data of their nation's history. Hence the teacher of the Professional Review class should organize in these class-plans (based upon the four fundamental propositions) subject-matter which is so grouped that it illustrates the "institutional method." Again the teacher should organize class-plans in which the subject-matter presented to be taught should illustrate the chronological method of grouping.

The former of these two series of class-plans is necessary in the Professional Review class for the following reasons:

1. It serves as a means of reviewing "academic" history.
2. It illustrates to the student the organization of data which go to make up a whole "institution" or idea.
3. It gives the student a certain faculty and power—in that final organization of data—at which the trained student of history arrives. No one can really teach history who cannot make this final and best organization of historic data, who cannot trace the relation of cause and effect, the gradual development of an idea or institution through years of time, what "has become" as well as "what was."
4. It presents to the pupil an illustration of the adaptation of the four fundamental propositions to the outlining of subject-matter of instruction, which subject-matter is presented through a series of class-plans, each plan outlining an onward step or steps in the development of an "institution." The other or latter of these series of class-plans is necessary as the future teacher should follow the arrangement of data as presented in the text-book and should present historic events grouped in chronological units. As the former of these series is the more difficult, the teacher in the Professional Review class in history should illustrate this the more frequently. The following is a skeleton outline of important historical data grouped according to the "institutional method." This outline embraces the subject-matter presented in Channing's Students' History of the United States from about the year 1790 to the outbreak of the Civil War.

A. Struggle between Nationality and Democracy—Doctrine of National Sovereignty vs. State Sovereignty.

I. Over Domestic Questions. a. Assumption Bill. b. Funding Bill. c. Excise Tax on Whiskey. d. United States Bank.

II. Over Foreign Questions or Relations.

1. With France. a. Question of Aiding France. b. Citizen Genet. c. Alien and Sedition Laws. d. Virginia and Kentucky Resolutions.

2. With England. a. Impressment of Our Seamen. b. British Orders in Council. c. Our Embargo Act. d. Our Non-Intercourse Act. e. Opposition to Declaration of War with England. f. Hartford Convention.

B. Approach of Nationality and Democracy.

1. Louisiana Purchase. 2. What Political Parties Seemed for the Time to Advocate Each Other's Views as Sectional Interests Seemed to be Threatened. 3. Era of Good Feeling. 4. Desire for National Expansion, i. e., Opening of the West, Internal Improvements. 5. Pride in National Life Between 1835-1840.

D. Nationality and Tariff.

1. How Free and Slave Labor Made Industries Sectional in Character and Extent. 2. Forces Which Developed Manufactures in Free States. 3. Opposition of Slavery Section to Protection of These Industries. 4. Nullification of South Carolina. 5. Compromise Upon the Issue.

C. Nationality and Slavery.

1. Slavery Conflict in 1820. a. Origin of the Conflict. b. The Missouri Struggle and Compromise of 1820. c. Threats of Secession.

E. Growth of Sectionalization, or of Sectional Interests, Feeling and Legislation with Respect to Extension of Slavery.

1. Movement for Texas by Southerners. 2. Real Motive of Mexican War. 3. Acquisition of Mexican Cession. 4. Gold in California. 5. How 3 and 4 aided in Sectionalization. 6. Compromise of 1850 as a Result of 3 and 4. 7. Kansas-Nebraska Bill and Civil War in Kansas.

F. Continued Growth of Sectionalization with Respect to the Slavery Issue.

1. Abolition Movement. 2. Uncle Tom's Cabin. 3. Dred Scott Decision. 4. Lincoln-Douglas Debates. 5. Charleston Convention. 6. Session. 7. The Slave Holding Section's Appeal to Arms. 8. Feeling of Nationality in the North. 9. Beginning of the Civil War. 10. Contrast of North and South in 1860 with Respect to Differences in Their Social and Industrial Life.

III. Illustration of a lesson-plan based upon the four fundamental propositions. This lesson-plan develops the unit marked above as c, or "Nationality and Slavery."

1. Aims.

(a) To lead the pupil to see that the question of slavery is a sectional question and is a question or problem which arises again and again.

(c) How the Missouri struggle affected sectional ill-feeling and renewed the question of the sovereignty of the central government.

2. What must be known or done in order to realize these aims.

a. The student must review the history of former disputed questions which arose concerning slavery, from the time of framing the Constitution until 1820.

(b) The student must group and state former illustrations relative to questioning the constitutionality of acts of central government.

(c) The student must know the relative number of free and slave states just previous to 1820, and be able to color the slave and free area upon an outline map.

(d) The student must know why each section, slave or free, was anxious to retain an equal or greater balance of power through the number of their representatives and senators.

(e) The student must know of Missouri's desire to be admitted to the union, and of the various bills and resolutions proposed relative to her admission and to the question of slavery within her boundaries and within the Louisiana Purchase from which Missouri is carved.

(f) The student must know that the question arose of Congress' constitutional right to forbid slavery in territories.

(g) The student must know of the attempt to admit Maine and of the relation of its admission to that of Missouri.

(h) The student must know the final provisions embodied in the Missouri Compromise.

(i) The student must know the terms of the "obnoxious clause" in Missouri's constitution, of the dispute concerning this clause and how the dispute was settled.

(j) The student must know the effect of above bill and its discussion upon sectional ill-feeling and how it illustrated sectional feeling and interests.

(k) The student must study his text-book, and if possible, do collateral reading.

(l) The student must give a summary of each of the above topics a, b, c, etc.

(m) The student must be able to give a brief, clean-cut summary of the whole unit.

3. What is known.

(a) Perhaps something of c, d, e, f, g, h, i, j.

All under 2 not found to be known under 3, i. e., probably c, d, e, f, g, h, i, j, k, l, m.

Note—The extent of what is known is determined by what the teacher has already taught and what was taught under preceding lesson-plans before the Missouri Compromise is reached. The extent of what is known is also determined by the questions asked by the teacher upon the topics c, d, e, etc. The amount of this knowledge already known depends upon former experiences of individual pupils, the reading they have done, work in history in other grades, conversations heard in the home, etc.

IV. This preceding lesson-plan is a small unit in the series indicated under topic "Struggle Between Nationality and Democracy," "The Doctrine of National Sovereignty vs. State Sovereignty." It is small since it indicates but one onward step in the struggle concerning the powers of the central government and in the strife between sectional interests. Other historical units are so large and represent so many steps in the development of an institution or idea that the teacher must use judgment with respect to the subdivision of this larger unit into a series of smaller ones to be presented in logical order corresponding to a series of lesson-plans, for example, a series of lesson-plans, and not one lesson-plan should be made, if the unit "Nationality and Tariff" be presented to a class. These lesson-plans should realize one or more, at a time, of the series of aims stated below.

Aim (1) To lead the class to contrast the slave and free sections with respect to their industries in about the year 1790.

Aim (2) To lead the class to review and summarize the forces which made the industries of the slave and free sections sectional in character.

Aim (3) To teach the influence of the invention of the cotton-gin upon cotton growing in the South and upon the rise of cotton manufacturing in the North.

Aim (4) To teach the influence upon our commerce of attacks on our neutral trade by France and England.

Aim (5) To teach the influence of our retaliatory measures (our Embargo and Non-intercourse Acts) upon the rise of manufactures in New England, upon our ship-owning and commercial interests.

Aim (6) To teach the further influence of the war of 1812 upon our industrial interests.

Aim (7) To trace the growing desire to protect our new manufacturing interests.

Aim (8) To trace the growth of sectional feeling for and against a protective tariff due to the preceding development of sectional industries.

Aim (10) To teach and compare the views and debates of Hayne, Webster and Calhoun concerning national sovereignty and state sovereignty, these debates being precipitated by the Foote Resolution and the tariff issue.

Aim (11) To teach the nullification of the tariff act of 1832 by South Carolina, coercion of South Carolina by President Jackson.

Aim (12) To teach how the tariff issue was compromised and settled for the time being.

Aim (13) To review and summarize all relative to the unit "Nationality and Tariff."

Aim (14) To review and summarize preceding compromises made between opposing parties and sections upon vital issues.

Aim (15) To review and summarize all preceding attempts to question and criticize acts of the central government.

This paper is so long that the writer will not attempt to give illustrations of class-plans based upon the four fundamental propositions in which the subject-matter to be taught is grouped following the chronological order or the arrangement of matter as presented by the text-book, but will refer teachers for fine illustrations of lesson-plans so organized to the suggestive lesson-plans in history outlined by C. E. Patzer for use in the Teachers' Institutes in Wisconsin in 1899.

V. Above selection and grouping of material and organization of the same in lesson-plans involves what phases or lines of work on the part of the teacher?

1. The teacher must know the subject of American history as a whole and see the natural and logical division into eras or epochs.

2. The teacher must see the relation between these epochs in order that the student may not gain the impression that the history of any country develops "in sections."

3. The teacher must determine the natural units of each epoch.

4. The teacher must see the relation between these units if any exists.

5. The teacher must then determine the naming of the "unit-heads."

6. The teacher must determine their relative importance.

7. The teacher must determine their order.

8. The teacher must organize the lesson-plans corresponding to a unit or a division of a unit, if the unit is so large as to require a series of lesson-plans showing progressive steps in the development of an institution.

9. The teacher must refer the student to the paragraphs in the text-book referring to the different topics under proposition 4 of the lesson-plan.

10. The teacher must determine what topics under 4 of the lesson-plan need further elucidation than that afforded by the text and must prepare the notes and questions and select historical and illustrative reading for the pupil.

11. The teacher must arrange these "questions for thought" and reference readings in an order corresponding to sub-topics under proposition 4 of the lesson-plan.

12. The teacher must be ready to assign to individual pupils references to read, indicate the purpose of each reference, and to what in the reference the student should pay attention.

13. The teacher must determine what of the sub-topics indicated under proposition 2 of the lesson-plan the pupil now knows or can do.

14. The teacher must think out how he may rapidly and effectively bring to the consciousness of the pupil the known data already possessed by the student, which may be brought into such living and vital relation with the new as to aid the pupil to comprehend the new or unknown.

15. The teacher must think out a clean-cut summary of each sub-topic under proposition 4, and also a clean-cut summary of 4 as a whole unit.

VI. The handling of the class-plan (based upon the four fundamental propositions in the class-room).

1. The teacher's preparation of her class for the next day's work.

(a) Announcement of the aim or purpose of the next day's lesson.

(b) Presentation to the class of that part of the plan corresponding to proposition 4.

(c) Questions by the teacher which reach back and gather up the data presented in former lessons which will serve as a transition to and preparation for the new lesson.

(d) Further questioning determining what is known by the pupil under 2.

(e) Remarks and notes by the teacher explanatory of topics indicated under 4 if such need explanation.

(f) The teacher indicates the exact paragraph in the text-book, presents a series of questions for critical thought, assigns reference reading, indicates the purpose of this reading and what to look for in these references, all of this designed for the purpose of further elucidation of the subject than that given by the text, if further data is needed.

(2) The next day's recitation conducted with the purpose of the pupil's gaining a truer view and a deeper insight.

(a) Placing together before the eyes of the class the teacher's written headings under 4 as a guide to the impression upon the mind of all that is to be held.

(b) Recitation by the pupil of first sub-topic under 4.

(c) Dialogue between teacher and pupils correcting erroneous statements, clearing up vague ideas, adding data omitted by pupil.

(d) Answering of critical questions prepared by teacher or pupils relating to first sub-topic under 4.

(e) Dialogue to group the various portions of subject-matter now belonging to this in light of latter work.

(f) A fuller and better recitation upon this first sub-topic in light of latter work indicated.

(g) Proceed with each succeeding topic under 4 as with 8.

(h) Concentration questions now by the teacher or suggestion by pupils indicating the important data in logical order of 4 as a whole.

NOTE.—Only so many sub-topics, a, b, c, etc., should be handled each day as time allotted to class recitation will allow.

### 3. Practice, Drill and Application.

Connected recitation of all the individual topics under 4. Repetition of condensed headings in connection. Recitations of smaller sections in full and connected form again, if this seems necessary, all this to show an understanding of the whole. Application of, and comparison, if possible, of principle of conduct, of motives, of traits of character, of the question of political problem involved, etc., to similar affairs of local and national life today. Illustration of this last.

VII. Class work based on the "four fundamental propositions" is truly pedagogical.

(1) The first important function and duty of the teacher is to prepare the student's mind for the assimilation of new knowledge and to present the subject-matter of instruction in the order and manner which best conduces to this assimilation. The class-plan based upon the four fundamental propositions does this. Why?

(a) It presents the subject-matter of instruction in logical order.

(b) Points out definitely what is to be done.

(c) Indicates the order in which this is to be done.

(d) Brings to the consciousness of the pupil preceding known data and experiences similar to or relating to today's subject-matter of instruction.

(e) These known data reach out and bring into vital relation with themselves the new elements of knowledge to be learned.

(f) The statement of the aim puts the pupil into the proper frame of mind for work in so far as it may excite expectation, stimulates interest and inquiry, arouses self-activity in working at a task. The analysis of known data should be developed in the same order as presented in preceding lessons, then the mind is in the condition in which it has reached its greatest capacity of taking on new knowledge; i. e., avoid mixing up this preliminary recalling of former data with new data for assimilation.

(2) Class-plan based upon the four fundamental propositions makes the subject-matter of instruction clear.

(a) It presents matter not in the mass, but in small logically connected sections, to each of which, in succession, the pupil gives his undivided attention, thus ensuring clearness of each step.

(b) Then after attention has been given to each successive step of the lesson-whole, these steps or units are brought into close relation with each other. The student thus gains clear individual notions and avoids the apprehension of a confused mass of disconnected details. This close connection of individual steps of the lesson-plan is brought about by means of requiring the student to make a clear, well-cut summary of the whole. The number of the individual units or steps of the whole lesson-plan must be determined, of course, by the age and mental strength of the pupil.

(3) The class-plan based upon the four fundamental propositions is capable of presenting the subject-matter of instruction in a connected series.

(a) The average text-book of history presents a mass of unrelated data. The class-plan, rightly organized, presents finally as a means of review a related series as has been indicated. A naturally related series helps form intimate and lasting associations. Each lesson-plan of a related series corresponds to an onward step, to an extension of the subject-matter. The class-plan does not preclude devices to fix the series in mind.

(b) The class-plan breaks up the accidental historical associations based upon the time or space relation, which relation prevents thought and true insight. There is need of a wide and persistent application of general truths. If knowledge is to have a rich content, the general truth must be again and again reinforced by application to new particulars. The application of a general truth to particulars co-ordinates, groups knowledge. The lesson-plan in history permits of so grouping that the lessons they teach appear in the consciousness of the learner.

(4) The lesson-plan based upon the four fundamental propositions requires the taking of thought about the best subdivision of the matter to be taught. The pupil in time sees the "method-whole" an order in grouping, an evolution of an institution; what "has become" as well as what happened.

(5) The lesson-plan based upon the four fundamental propositions admits of the use of the dialogue, the monologue in the class, of analysis or of synthesis with regard to the subject-matter learned.

(6) The lesson-plan requires the teacher to see that what knowledge the child has on hand is put to use.

VIII. The writer asked students of a certain Professional Review Class in history to formulate and state the results as they had conceived them, of the adaptation of the four fundamental propositions to the teaching of history. The class had studied a series of class-plans developing an "institutional unit" presented by the teacher, had formulated for class revision and criticism a series of class-plans developing a "chronological unit" of history, had discussed the class-

plan under the following heads: (a) Preparation, (b) presentation, (c) drill and application.

The results they formulated are the following:

1. The class-plan is a basis for real topical work.
2. The class-plan prevents the pupil's memorizing of facts "by page."
3. The student must select the central, essential points of each lesson.
5. Students learn to separate the essential data from the non-essential.
4. The summaries made by the students admit of excellent training in language power.
6. Students learn the relations existing between the parts of a "whole" learn wholes in a series, thus acquiring an historic vista and breadth of view.
7. The teacher consciously selects the known as a basis to which to relate the unknown, if the known exists.
8. The student's time is saved. Why? He knows what to do, the order in which to do it.

(a) Result 8 is true again, since the student's mind is aided for the rapid and effective assimilation of new data. The teacher consciously brings to the mind of the pupil preceding known data and experiences similar to or relating to today's subject-matter of instruction.

9. The text-book is not neglected, but its proper and thorough use is indicated, i. e., the chronological order of the text-book is followed and yet there is also a constant attempt to group and co-ordinate related events, not only in lesson-plans which group related data of an "institution," but also with each day's advance lesson the teacher looks back, gathers up and requires the student to review other similar data: (See a and b, under proposition 2 of class-plan on Missouri Compromise and see aims 1, 13, 14, 15, in the series of aims relating to unit "Nationality and Tariff.")

10. The student is led to make summaries of several days' or weeks' work.

11. The student carries away essentials in definite form.

12. The class-plan necessitates the accomplishment, each day, of something definite, a step in advance.

13. The class-plan compels close attention to the aims or purposes and the determination of what to do to realize these aims.

14. That part of the class-plan corresponding to proposition 2 discloses to teacher the possible short-comings of the text-book in regard to the subject-matter: for example, the text-book, at times, does not present a sufficient number of details for the child to picture the historic scene or event; for instance, the first home and first clearings of land in the new west. Again the text-book does not present a sufficient number of details for the average child to understand the purpose and organization of some institution; for instance, the United States bank.

15. The class-plan necessitates the organization of subject-matter.

16. The class-plan calls for such careful preparation on the part of the teacher that he is made free, i. e., ready to meet such emergencies as arise.

17. The class plan has an ethical value in so far as the child cannot plead that he did not understand the assignment of the next day's lesson. He is required to perform a definite duty in a definite manner.



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