THE DEVELOPMENT OF CRITERIA FOR EVALUATING EDUCATION METHODS COURSES IN NORTH TEXAS STATE TEACHERS COLLEGE FROM 1930 TO 1940

THESIS

Presented to the Graduate Council of the North Texas State Teachers College in Partial Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

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August, 1940
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CHAPTER I

INTRODUCTION

The Problem

The purpose of this study is to present a philosophi-
cal exegesis of the five general types of method which have
characterized methods courses from years 1920 to 1940 in the
North Texas State Teachers College.

During the past twenty years significant changes in teach-
ing methods have occurred. These changes have been, for the
most part, gradual in development. Although there is some over-
lapping in the stages of transition, the progression from one
method to another has been fairly well-defined and can be traced
with sufficient chronological accuracy to insure a uniform
portrayal. The fundamental assumption underlying the accept-
ance of the years 1920 to 1940 as the ones during which the
changes of method could be traced was that the World War affected
education along with, and quite as much as, every other social
institution. Hence the two decades following this great up-
heaval constitute an interesting period of study of this scien-
tific progression in methodology.

Philosophy Underlying the Procedure

The first task in formulating a definite procedure was to
determine what theories of teaching were generally accepted and
rather universally followed in this twenty-year period. An examination of the literature, text and reference books reveals that the following teaching theories were stressed for the general periods indicated.

Immediately after the World War, the Herbartian five formal steps, and the closely interwoven problem method, were still in great vogue. However, with the coming of the great movement for standardized tests, and the culmination of the teachings of the modern progressives, these two methods began to give way to the more tangible project method. This latter method seemed to suit the materialistic emphasis of the Coolidge era of prosperity, and remained in great popularity until approximately the entrance of this nation into the Great Depression.

In a time of economic chaos, every method of teaching, along with every philosophy of life is bound to be questioned. The task of tying together the broad aims of the project so that it could function as a unit was attacked with great vigor. The result was the wide-spread acceptance of the unit method as an educationally sound procedure.

Then came the great influence of that most significant of all psychologies of learning, the Gestalt, or configuration principle. The followers of this movement urged that since pupils learn by whole patterns, and they develop these patterns into parts through reasoning and insight, teachers should follow a method based on this system of thought. Hence the principle of integration came quite suddenly into great vogue, and is treated in connection with the unit method.
Then came the demands of the scientifically advancing age in which we live for a type of education essentially creative in its significance. Hence the method of creative learning and teaching came into contemporary prominence.

Approximate dates for the periods in which the methods as set forth above were used are as follows:

1. The Herbartian five formal steps and the problem method, 1920-1923.
2. The project method, 1923-1930.
3. The unit method, 1930-1937.

While it is recognized that there is some overlapping of methods used in these periods, it is significant to match these prevailing theories with the theories as taught in the methods courses offered by the North Texas State Teachers College during this same period. The problem of the study is to determine how closely these two types of method correspond or disagree.

Sources of Data

The source of data for the exposition of the methods was, of course, all the available library material with a definite bearing on the subject. The source of data for the type of methods taught in the Education Department of the College included all the textbooks and syllabi, obtained from the files of the Department director; a group of lantern slides used by the Education Department in its special faculty meetings; wall charts, which have been used for a number of years in the
advanced methods courses; and finally, the statements of opinion of the methods teachers themselves.

Method of Procedure

The procedure has, accordingly, a two-fold aspect. The first portion of each chapter following presents an analytical exposition of the successive theories in vogue for the twenty-year period. The second portion presents a parallel picture of the corresponding method used in the Education Department of North Texas State Teachers College. Since much of this material is in the nature of a separate discussion, it is presented largely in the appendices.
CHAPTER II

THE HERBARTIAN FIVE FORMAL STEPS

During the nineteenth century the precepts of the great German educational philosopher, Herbart, came into increasing prominence. Always the master of method, Herbart stressed four essentials in the learning process: "clear apprehension by the pupil of each individual fact; association or comparison of the facts; systematizing and classification of the facts into concepts; 'method' or the application of the knowledge learned."¹

Although Herbart is usually recognized as the formulator of the famous "five formal steps," it was really the modern methodizers of the nineteenth century who brought the familiar divisions into general prominence. The five steps may be defined as follows:

1. Preparation. Preparing the pupils' minds for the reception of the new lesson. Arousing interest and purpose.
2. Presentation. Setting forth or presenting the facts of the new lesson. This was done entirely by the teacher before textbooks were available for students, but later was supplemented by the text.
3. Association or comparison. Relating new ideas to those already in the mind of the pupil. This should be directed to well-associated and systematized knowledge.

¹Johann Friedrich Herbart, Outline of Educational Doctrine, pp. 55-56.
4. Generalization or abstraction. Deriving the abstract or general notion from the concrete particulars, stating the general principle in specific terms, and relating it to previously acquired knowledge.

5. Application. Making use of this knowledge; applying the general principle to a practical situation.²

The great educational philosopher, Herbart, attested his interest in education by systematic lectures, by extensive writings, and by maintaining for nearly a quarter of a century a practice school at the University of Konigsberg. This great educator, called the father of empirical psychology, laid great stress upon the acquired fund of empirical knowledge as a means of increasing one's mental stores and of more rapidly receiving and assimilating new ideas. He taught that mind grows by what it feeds upon, and that this thought material seemed to possess a kind of vitality which emanated attractive or repulsive power. He believed that ideas become active agents for learning, when once they gain real significance in the mind.

Commenting on Herbart's concept of the active character of experience, McMurry says:

This accumulated fund of ideas, as it goes on collecting and arranging itself in the mind, is not only a favorable condition but an active agency in our future acquisition and progress. Moreover it is the business of the teacher to guide and, to some extent, to control the inflow of new ideas and experiences into the mind of a child; to superintend the process of acquiring and of building up those bodies of thought and feeling which eventually are to influence and guide the child's voluntary action.³

² Charles de Garmo, Herbart and the Herbartians, pp. 133-140.
³ Charles A. McMurry, General Method, p. 218.
The Herbartian followers patiently worked out a thorough-going system of education, based on experimental study and analytical discussion, and proposed the following:

The first proposition is to make the foundation of education immovable by resting it upon growth in moral character, as the purpose which serious teachers must put in first.

The second is permanent, many-sided interest.

The third is the idea of organized unity, or concentration, in the mental stores gathered by children.

The fourth is the bird's-eye view which the culture epochs give of the meaning of education.

The fifth is that apperception is the most practical key to the solution of the problems of education.

The sixth is that the selection of proper materials conditions the formation of a suitable course.

When any method becomes standardized to the point of well-nigh universal acceptance, there arises the tendency to follow the form rather than spirit of the method. This tendency became especially pronounced in this country during the first quarter of the twentieth century, when the German domination in education was strong. With the general upheaval following the World War there was brought into question the wisdom of following blindly the steps as fixed by the Herbartian followers. Miller expressed his criticism thus:

If the word, application, revives pedagogical memories of Herbart, it is pertinent to remark that under formal methods in the old school, both teachers and pupils were thoroughly exhausted and out of breath before they reached the fifth step, application in the last lap of the relay of the five formal steps.

4Ibid., pp. 222-223.

5Harry Lloyd Miller, Creative Learning and Teaching, p. 113.
The direct forerunner of the subsequent methods discussed in this thesis is certainly the Herbartian method. In fact, during the latter part of the nineteenth century the term, unit, was quite frequently used. Of course, it was broadly applied to almost any conception, principle or general idea which involved general learning and teaching aims. What modern methodologists recognize everywhere is that the Herbartian method stressed a mutual pupil-teacher undertaking which was developed and culminated as any cooperative undertaking or project must be.

The chief factor which prevented the Herbartian system from maintaining clear possession of the methods field was the recitation system. Because the unit as it was understood by Herbart and his followers might range in flexibility from a few days to many weeks, it was discarded for the formal daily lesson plan. The idea was to initiate, develop, and culminate activities in a single class period.

With the growing emphasis on the pupil-centered procedure, the famous five formal steps of Herbart steadily declined in influence. Although most educators admitted that steps approximated the process of thought, it was generally agreed that they were of little value in directing thought. However, there were certain values to be realized in the method which had the following essential features:

1. **Experiencing clear-cut examples.** Give the pupils personal experiences with clear-cut, varied, typical examples of the form, process, or rule.
2. **Attentive scrutiny.** Raise questions which stimulate the pupils to scrutinize attentively these examples so as to note the general characteristics of the latter.
3. Varied applications. Give varied exercises that will train the pupils in recognizing the form, process, or rule, and applying it in new situations.  

In order to popularize the Herbartian steps of teaching, the followers of his method applied them to the recitation and called the resulting procedure the method of the recitation. This explains the long delay in arriving at the modern method of the unit. Not until the recitation declined in influence did the original aim of the Herbartians come into its own.

Although Herbart did a great service to the cause of education, his method did not come really into its own until the subsequent methods, discussed in the following chapters were used successively. And with the passing of the first quarter of the twentieth century, there came into sharp relief the need of a method which would fit the child for meeting life needs.

The Herbartian Method in Education Methods Courses

In one of the early texts used in the elementary methods course at North Texas State Teachers College, there is a very pertinent reference made to essence of the five formal steps. The entire book is written in conversational style, hence the following quotation is in keeping with the entire treatise:

"Do you know that some years ago most normal schools followed the Herbartian Five Formal Steps in their teaching methods?"
"Yes."
"And do you know that these are giving way and largely to teaching through problems?"

---

"I have noticed something like that."

"Why is a problem better than the five formal steps?"

"In order to answer suppose we list the separate steps in the complete act of thought and see how learning is fostered by using them.

1. A situation arouses an impulse or tendency to pursue a certain course of action.
2. A difficulty appears: how to continue the given course is now known; there is no appropriate way of responding known or immediately available.
3. An examination of the situation is made to locate and define the difficulty more precisely.
4. Suggested solutions arise; hypotheses are formed, behavior patterns are suggested.
5. Implications (one or more) are drawn from each suggested solution, each hypothesis.
6. Actual trial is made to see whether the deduced implications hold.
7. A solution is accepted in the light of the tests made."

In dwelling on the value of the overview, Miller cautions against a misuse of the five formal steps in the procedure. Where they are used with flexibility, there is left sufficient opportunity for the pupil to develop independence and initiative.

There is danger of destroying the "practicing ground" for creative thinking and vital challenge. Soft pedagogy plays havoc in the business comprised within the steps of "preparation" and "presentation". An inordinate emphasis is placed on them. The mischief is done by teachers talking these two steps before pupils expecting them to learn the "lessons" or "contracts". The steps of "Comparison," "Generalization," and "Application" are hardly touched at all. Any attempt to dress up a day's lesson in five formal steps, or any other sacred number, leads inevitably to undue emphasis on form for its own sake.

In the examples of problems and projects presented in succeeding chapters there will be noted the strong influence of

8Harry L. Miller, Creative Learning and Teaching, pp. 33-34.
the Herbartian method. It is truly the foundational system for practically every phase of methodology which has succeeded it. The other methods will now be discussed in turn.
CHAPTER III

THE PROBLEM METHOD

Every teacher should have a philosophy of teaching, based on a carefully planned and deeply experienced philosophy of life. In his celebrated treatise on the processes of thought, Dewey has this to say regarding the value of the problem as the starting-point of thinking.

We may recapitulate by saying that the origin of thinking is some perplexity, confusion, or doubt. Thinking is not a case of spontaneous combustion; it does not occur just on "general principles". There is something specific which occasions and evokes it. General appeals to a child (or to a grown-up) to think, irrespective of the existence in his experience of some difficulty that troubles him and disturbs his equilibrium, are as futile as advice to lift himself by his bootstraps.¹

A consideration of the nature of problem, as applied to education, calls for a psychological distinction of end-results. Thus it is that intellectual activity is considered as an activity, in its true sense, only when it is accompanied by a sense of result. Owen considers the psychology of the act as an essential feature in his statement:

The third fundamental moment in the problem method is the psychology of action. This psychology is based on the anatomy of the nervous system. This nervous system consists of a series of five elements, sense organ, sensory nerve, brain, motor nerve, muscle.

¹John Dewey, How We Think, p. 13.
A complete act involves all five. Reflex and instinctive acts do not require thinking. Habitual acts may dispense with thinking. New situations, however, cannot be met by reflex, instinctive, or habitual reactions. The new problem requires thought for its solution. The brain suspends the activity of the series of the five elements until the right action is thought out. Once thought out, the series is restored and the act follows. If the right result follows, the problem is solved. But it takes a complete act to get a complete experience. Only the complete experience can test the value of the thought. That is why we learn by doing. The problem, therefore, calls for a new form of action, and thinking is the means of establishing this new form of action.

The notable feature of the problem procedure is the degree of objective attitude which can be aroused from the subjective attitude which must be its preliminary. The teacher who is skillful in presenting a problematic situation before the class finds that it has great motivating power. When pupils are fully aroused by the intriguing perplexities of a problem, they will show the utmost concern in finding materials which may be of aid in the solution of the problem.

Wilson, Kyte, and Lull suggest that a problem is solved by a pupil when he complies with the following conditions:

1. He has a clear conception of the problem.
2. He recalls old experiences which may help in its solution.
3. He acquires, out of new experiences, the additional information essential to determining the best reaction to it.
4. He critically evaluates and manipulates these data to make them serve his needs, and, supplementing them, corrects his tentative conclusions.
5. He arrives at a conclusion.
6. He checks the conclusion against the problem to determine the correctness of the response to be made.3

3Harry B. Wilson, George C. Kyte, and Herbert G. Lull, Modern Methods of Teaching, p. 97.
In considering further the nature of study, and the principles of economy in thought, Dewey has set forth five logically distinct steps: "(1) a felt difficulty; (2) its location and difficulty; (3) suggestion of possible solution; (5) further observation and experiment leading to its acceptance or rejection; that is, the conclusion of belief or disbelief."4

The problem method of teaching was especially popular immediately preceding the era of the project method, when the movement for standardized tests reached its height. One of the difficulties confronted by the teachers was that of insufficient teaching materials. The idea of reorganizing knowledge into a course consisting of intriguing problems was a very difficult matter. Yet the value of such a method, from the psychological standpoint, can hardly be denied, as Douglass has pointed out:

It seems quite certain that no arrangement could be more psychological than the problem arrangement. It is the natural and lifelike method of thinking and of discovering facts. It conforms to normal thinking procedures and appeals to effort and to interest much more effectively than does the formal and logical order of mastering content.5

Since so few textbooks were organized on the problem plan, teachers generally relied on manuals and syllabi which were rather spontaneous and flexible. In fact the informality and spontaneity characteristic of the problem method made it highly desirable in the development of originality.

4Dewey, op. cit., p. 72.

The importance of getting and keeping the problem in mind, has been well stressed by Douglass, who says:

Before any effort is expended in the attack of a problem, it is economy to be certain that the problem is clearly envisaged. It is the nature of young people to rush into the attack of a problem without knowing just exactly what their objectives are. Much time in making assignments--much more than is commonly taken--may be spent with profit in clearly defining and visualizing the problem or problems. Not only is it necessary to insure that the problem be clearly understood by the pupils, but also that it be kept in mind throughout the effort at solution, and that the efforts made at its solution be gauged by it.6

In teaching by this method there was continually the necessity for stimulating individual pupils to more productive thinking. The use of reference materials, abundant hints and suggestions, discussion, and use of analysis and hypotheses all were considered legitimate in the teaching process. As to how much suggestion and help the teacher was supposed to give depended on the pupil's age, ability, familiarity with the subject and his amount of time available for study. The main consideration for the teacher to keep in mind was that the maximum of returns for the minimum of effort was the desirable goal. Douglass has listed the following summary of the teacher's function in the method of problem-solving:

1. Assisting the pupil or class to encounter suitable problems.
2. Assisting the pupil or class to formulate problems clearly, and in such a way as to be of suitable difficulty and of proper educational value.
3. Assisting pupils to keep problems and conditions of problems in mind, and preventing digression.

6Douglass, op. cit., p. 311.
4. Assisting the pupils to find or recall data which will contribute to the solution of the problem, and offering hints, suggestions, and references, but being careful to be of no more assistance than is necessary, and thereby not depriving the pupil of any educational opportunity.

5. Training pupils to evaluate carefully for themselves each suggested conclusion, and to maintain an attitude of suspended final judgment.

6. Training pupils to be systematic in the consideration of hypotheses and their evaluation, to follow some order, and to complete the consideration of one before digressing to another.

7. Assisting pupils to formulate their conclusions for themselves.

8. Training pupils to make final check and verification.

9. Providing for the fixing of solutions in mind by drill, application, memory work, or exercises.

In summarizing the value of the problem method it should be noted that it was designed to develop within the pupil the ability to do critical thinking. More specifically, this meant the ability to assume a tentative attitude about questions whose solution follows suspended judgment. By this method pupils were trained to plan, to assume responsibility for class contributions, to follow a purposeful activity, to accept a challenge, and to follow all the implications involved in what is termed reflective thinking. In all this, the teacher served as the good guide rather than the taskmaster. The result was a method of lasting importance, whose influence has been felt by all the methods which have been its successors.

The Problem Method in Education Methods Courses

The notable feature of classes taught by the problem method is the objective attitude of the students, motivated by the

7Douglass, op. cit., p. 319.
problematic situations created by the teacher. When students are fully aroused by the intriguing perplexities of a problem, they will show the utmost concern in finding materials which aid in the solution of the problem. McMurry, in his masterly treatment of the nature of study, sheds light on the intellectual demands made when a problem is attacked. His analysis of the main factors of study includes the following:

1. The finding of specific purposes
2. The supplementing of thought
3. The organization of facts selected
4. The judgment of the worth of statements
5. Memorizing
6. The using of ideas
7. The tentative attitude
8. Provision for individuality

In Appendix A there is presented under the caption, "When the I. D.'s Scored," a scene typical of a problem situation, typical of the type discussed in the College methods courses when the problematizing of subject matter was in great vogue. It will be observed that the eight factors of study, just presented from McMurry, are followed very closely in the procedure. The teachings of all the great progressives, from Rousseau to Dewey, are brought into sharp relief. It represents a cooperative and mutually helpful scene from life, properly connected with interests, instinctive longings, and felt needs. The teacher is guide, co-worker, and helper, but the vital thinking done by the child is the basis for judging the success of school work.

Otto M. McMurry, How to Study and Teaching How to Study, pp. 15-23.
CHAPTER IV

THE PROJECT METHOD

The most natural and logical outgrowth of the problem method was the method originally known as the "problem-project", to denote that the more subjective phases of the problem had been applied to the objective phases of the project. The need for carrying out to its logical conclusion an activity which remained too often in the abstract stage, prompted teachers to seek a more or less definite objective in the realm of concrete production.

During this period of transition during which problem and project were used as rather interchangeable terms, it became necessary to draw up some cleavage by which the two could be distinguished. Wilson and Wilson distinguished between them as follows:

But even a thoroughly motivated problem is not a project. The problem may be solved in thought only, while the project requires the completion of some objective piece of work based upon a problem or series of problems. The difference is that the problem solution may end in thought, while the project can end only with the successful completion of an objective unit of work.1

Chief among the early problem-project methodologists was Kilpatrick, who set forth in a succinct bulletin his exposition and definition of the project. He conceived the project as a

"wholehearted purposeful activity in a social situation."\(^2\)
The author elaborated further the idea that the purposeful act is a typical unit of the worthy life. Moreover it should lead on to further, more fruitful and more social activity, and, too, it should be attended with satisfaction.\(^3\)

Doubtless the term "project method" was originally one coined to synthesize a number of educational ideas, such as self-activity, the school as life, socialization, concreteness, experience, and the like. All of these had seen service before. But the project method was needed to embody in the activities of the children the most useful principles of educational psychology on the one hand, and the most significant principles of socialized or democratic group activity on the other.

Then, too, the project method was a logical outcome of the spirit of impatience which many teachers could not help but manifest at the artificial setting of many school problems. This is clearly set forth in Dewey's pointed comment:

There can be no doubt that a peculiar artificiality attaches to much of what is learned in schools. It can hardly be said that many students consciously think of the subject matter as unreal; but it assuredly does not possess from them the kind of reality which the subject matter of their vital experiences possesses....Where schools are equipped with laboratories, shops, and gardens,


\(^3\)Ibid., p. 12.
where dramatizations, plays, and games are freely used, opportunities exist for reproducing situations of life, and for acquiring and applying information and ideas in the carrying forward of progressive experiences.  

Hosic has set forth further the necessity for a method which would enlarge on the limitations of the problem method.

Now the project method professes to favor new units of study, new roles on the part of both teacher and pupils, and new standards of judgment as to success or failure. In this lies the hope that problem-solving may become a more lifelike thing with correspondingly greater benefits. Not the least of these will be greater ability to perceive and select those problems whose solution is most worth while. In a regimen wherein students' problems are all selected and presented by teacher or textbook, little or no place is reserved for this. The project method demands that the student have large opportunity to practice finding and stating problems for himself.

At first projects were usually divided into three types, according to whether they were undertaken by the individual, the class, or by the entire school. Kilpatrick classified projects into the four following types, according to whether the purpose was to (1) embody some idea or plan in extended form, (2) enjoy some esthetic experience, (3) solve some intellectual difficulty, or (4) obtain some item or degree of skill or knowledge.

The chief credit for introducing and popularizing the term "project" must be given to the teachers of agriculture,

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6Kilpatrick, op. cit., p. 18.
manual training, and domestic science. Originally the term
denoted such activities as constructing a bookcase, raising a
prize calf, or baking a cake. The designation "home project"
was used in 1908 in connection with the teaching of vocational
agriculture. The worth of such "projects" was measured by
the degree to which they duplicated projects and activities
found in life.

Among the most widely quoted of the early definitions
of the project was that by Stevenson, who called it "a problem-
atic act carried to completion in its natural setting." This
definition contrasts sharply the idea of a complete activity
as opposed to passive absorption of information, reasoning as
opposed to memorizing, a functional problem as opposed to
theoretical principle, and a natural setting as opposed to an
artificial one.

Horn included in his definition of project practically
the same essentials:

  A highly practical, problematic activity taken
  in its natural setting and involving the use of con-
  crete materials, usually in a constructive way.

Horn goes on to distinguish projects from problems and
other types of school activities. The differences are chiefly
centering around the following elements; (1) they are organized

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7J. A. Stevenson, The Project Method of Teaching, p. 43.
8Ernest Horn, "Criteria for Judging the Project Method,"
Educational Review, LXIII (February 1922), p. 93.
more directly about the activities of life outside the school; (2) they are more concrete; and (3) they afford a better test of working knowledge. 9

It is well to consider the essentials of a good project, as listed by Wilson:

1. A basis in problem thinking terminating in definite planning for doing.
2. A real life undertaking on a scale as large as the maturity of the pupil and the facilities at hand will permit.
3. Planning and executing under supervision, thus securing and educative process.
4. Arrangements by which the pupil gets (or takes) the results of his work.

If the term project is limited as here suggested and the effort to make of it a universal panacea abandoned, the pedagogical situation will be not only simplified, but clarified. 10

Woodhull indicates that the project method is nothing more than a method of the scientist adapted to children. Of course, he goes back to Dewey's analysis of a complete act of thought to substantiate his views regarding what is the method of the scientist. He makes a very pertinent observation of this when he says:

A project, or problem, differs from and is superior to a topic in that (1) a project originates in some question and not in such a logical sequence of ideas as may be found in codified matter. In teaching from the so-called 'logical' texts one wrongly attempts to induce the pupils to accept topics as their own projects. (2) The project involves the active and motivated participation of the pupil in carrying it out. It does not, therefore,

9 Ibad.

like the topic, lend itself to didactic, formal treatment in which the teacher does all the thinking and the pupil passively absorbs. (3) Projects furnish a basis for the selection of facts according to the value or significance, topics furnish no such basis for selection. (4) The project seldom ends in a complete, final or absolutely finished conclusion.11

Horn set up three criteria by which to judge the merits of the project method, considered in the light of the great objectives of public education.

1. The project must represent a body of subject-matter of known value in life outside the school.
2. The purpose of the school is not to interest the child, merely, but to develop the interests that he should have.
3. There must be a sharp and systematic attack on social objectives of value.12

Continuing in the same analytical viewpoint regarding the value of the project educationally, it is pertinent to quote from Hosic:

Now it is precisely the completeness of the purposeful experience which makes it so educative. Planning is as necessary as executing and quite as much in need of being learned. So is judging and appreciating. Unthinking obedience to directions gives small play to these. Projects are good for children not so much because they like them--are interested--but because projects enable children to learn more, to learn indeed much they can learn in no other way.13

Two general criteria may be set up by which to judge the value of the project. The first deals with the nature of the experiences which it provides. If it provides an

12Horn, op. cit., p. 97.
enrichment in the lives of those engaged in the activity, and if they are fully prepared to incorporate the experience into a life asset, then the project is worthy.

The second criterion deals with the provision for individual differences. The extent of pupil participation furnishes the check on this standard. Although theoretically no stimulus can elicit an identical response from any two pupils, in the application of the project idea it will elicit some type of response from each participant.

In a scholastic work which seemed to crystallize the current opinion of the period in which the project reached greatest popularity, three authors from different sections of the nation corroborated in setting forth the successive steps in the execution of a project. It is still considered one of the clearest statements on the theme ever compiled:

(1) There must be a real human interest in it for the pupil. It should originate with him or be accepted by him as his own in answer to a felt need.
(2) He must see adequate reasons for putting forth his best efforts. The project should be within the range of his understanding and its values should be appreciated by him.
(3) He should experience natural activities in natural situations. The experiences should be real and occurring in an environment similar to that found in life outside of the school.
(4) A good educative project should be broad in scope so that enrichment and enlargement of experience is possible throughout.
(5) The child must be availing himself of useful knowledge; that is, the project should be based upon sound educational purpose.
(6) Throughout the activity, the effort and the product resulting from it shall be the child's own. In the execution of a project the pupil must be the one required to do the thinking, feeling, and acting.
(7) The project method of learning should result in outcomes or successes either judged or measured largely by objective standards of achievement.\textsuperscript{14}

But what should be the significance of the project to the pupils themselves? This question was asked repeatedly by those who understood the rising and falling nature of children's interest. Hosic comments on this value of the project when he says:

The project method means providing opportunity for children to engage in living, in productive worthwhile enterprises--worthwhile for them--and in guiding and assisting them to participate in these enterprises so as to reap to the full the possible benefits.\textsuperscript{15}

A splendid exposition of the value of the project method in developing the democratic ideal is set forth by the same author.

Now, the project method seeks to be true to the democratic ideal. If democracy is good for grown-ups, it is good, so far as may be, for those growing up. Certainly the way to learn how to participate in democracy is by participating, by doing that and not something else. Freedom and responsibility educate--for freedom and responsibility. That seems clear. The problem is mainly one of ways and means.\textsuperscript{16}

In giving a critical appraisal of the merits of the project, it is well to compare what its advocates thought of it when it was first coming into great favor with what they

\textsuperscript{14}Harry E. Wilson, George C. Kyte, and Herbert J. Lull, Modern Methods in Teaching, pp. 113-114.


\textsuperscript{16}Ibid., (October 1922), p. 67.
thought it had accomplished when it reached its greatest popularity. An appraisal of Hosi, made in 1923, is compared to one made by Lowengrund, in 1928.

In considering the difficult external applications of the project method, we discover some such sequence as this: 1. The improved assignment and more effective direction of study. 2. Motivation of all types of learning, including drill. 3. Project units identified more or less completely with particular subjects, though often employing other subjects as means. 4. More inclusive undertakings, carried on without special regard to any one subject and often designated as extra-curricular.

Then after five years of widespread usage in practically every progressive school in the land, there appeared a very critical analysis of its weaknesses and benefits, by Lowengrund, as follows:

Yet in spite of these weaknesses the project has proved beyond a doubt, I believe, that it has a very great value in modern American education. It is helping to concentrate the attention of educators where it belongs—on the pupil, not on the subject matter. It is helping to bring about better organization of subject matter into wholes instead of chopping it into departments, and of experience as a unit, breaking down the dual "in school— in life" conception. It is providing for the motor-minded a medium of instruction better adapted to his type of mind. It provides for individual differences by having work of many kinds suited to different skills and capacities. It is helping the child to find out early what he can do well, and to take pride in doing it well; and it is helping the teacher to find the child's capacities and needs....It is giving good training in some phases of democratic living. And, far from least, it requires better teachers than does the formal method, and thus stimulates teachers to greater effort, keeps them out of the rut, and makes for wide knowledge and broad-mindedness.


The Project Method if Education Methods Courses

During the time that the project method was attaining its peak of popularity, there was formulated by the director of the Education Department a synopsis of significant pronouncements regarding this method. The synopsis was presented in outline form on lantern slides and these were used to great advantage in stimulating discussion at professional teachers' meetings of various types. It is now presented as a splendid example of a practical survey of this particular method.

THE PROBLEM-PROJECT METHOD

I. Why discuss educational method?

A. School studies tend to become exceedingly formal; their social origins and uses are too often lost sight of.

B. Hence they fail to provide pupils with real and fruitful experiences leading to actual control of social values--they cease to be the best possible means of growth.

C. The effectiveness of any course of study--what it becomes in actual practice--depends upon the methods of the teachers who attempt to carry it out.

D. There is always possibility of improvement in education--especially now when a new and scientific educational psychology is becoming available.

II. What the problem-project method is?

A. Organization of school life in accordance with life in the home and in the community. A "project" may be
defined as a single complete unit of purposeful experience.

B. Not to be exactly identified with any other current conception in education, such as interest, motivation, self-activity, socialized recitation, correlation, recapitulation, naturalism, developmental method, incidental teaching, informal teaching, self-government, logical thought movement, type studies, shop practice, etc., though indebted more or less to all of these.

C. A Principle, not a rule, formula, fad, or panacea.

D. Not to be thought of as embracing every aspect of learning or every type of useful experience.

E. A natural method of learning, that is of growing, which teachers may stimulate, guide, and render more effective. In essence this method is that of full participation in typical experiences generally involving group activity or group relations.

III. Why the name?

A. "Method of experience" is too broad and too vague.

B. "Problem" suggests a purely intellectual process.

C. "Project" is ordinarily associated in educational discussion with shop practice.

D. "Problem-project" emphasizes both thinking and doing and points to an objective result.
IV. Nature and value of the project in education.

A. A project is a complete "life-unit." Its elements are as follows:

1. Situation
2. Consciousness of a problem.
3. Purpose to solve the problem (end in view).
4. Plan conceived.
5. Criticism of the plan.
6. Execution of the plan.
7. Organization and use of results.
8. Judgment and appreciation of results.

B. It enables the learner to make progress in gaining for control of experience those parts of the social inheritance (solutions of life problems) which the school is commissioned to hand on.

C. It gives due emphasis to attitudes (interests and ideals) both as necessary for the acquiring of skills and knowledges and as of prime importance among the results aimed at.

D. In other words, it provides the best conditions for learning, namely, a definite end, vigorous exercise, sufficient duration, trying on of solutions use of previous experience, satisfaction in achievement, and occasion for thinking and organization of knowledge and skill.

E. It is economical in that it provides for a wealth of related and concomitant ideas centering about the core
of experience which constitutes the given "lesson"; also in that it concentrates attention upon the larger things and tends to eliminate much useless formal detail.

F. It adds to the units of organization now available for class work or individual study—namely, the question, the topic, the chapter, the assignment, etc.—a new type of unit with unique possibilities.

G. It is indispensable to education for democracy. It provides for initiative.

1. It develops foresight.
2. It cultivates efficiency.
3. It invites serious and sustained thinking.
4. It imposes responsibility.
5. It gives opportunity for cooperation, leadership, and division of labor.
6. It exercises discriminating judgment and hence awakens appreciation of value.

V. The teacher's part in enabling full participation in a complete experience.

A. Preparation.

1. Study the subject matter generically, that is, from the standpoint of control of actual life-problems, past, present and prospective.
2. Plan for managing and carrying through the project about to be launched.

B. Classroom procedure--the roles of the teacher.

1. Make a tactful approach; create, if need be, the appropriate situation.

2. Stimulate the pupils to define the problem and to set up the end.

3. Help and guide in the planning.

4. Supervise, coach, inspire, lead the pupils in the execution of the project, including all necessary practice, that is, drill.

5. Direct the organization of results in the form of systematic knowledge and thoroughly coordinated habits.

6. Encourage expression by the pupils of judgment and appreciation of values.

C. Cautions.

1. The problem-project unit is a new type of unit calling for a new method of organization.

2. The project is not a mere formal procedure.

3. The project is not an end in itself.

4. Avoid waste of time through dwelling too long on some phases of the process.

5. Do not expect the impossible; let pupils do all they can; the teacher should supply the rest.

6. Avoid an exaggerated emphasis on liberty.

   (a) Habits of obedience should be in reserve.
(b) Skillful stimulation should be in reserve.
(c) A wise selection among the responses of the children must be made.

7. Follow through, that is, make sure of sufficient practice and organization--always with adequate motive.

3. Keep the outcomes in mind and be sure that the pupils do so.

9. Devise adequate tests of results so that mere supervi-soriality is avoided.

VI. The problem-project method in relation to present school practices.

A. Serious difficulties lie in the way of an attempt to introduce in a thorough-going way the problem-project method into our schools as now organized and conducted.

1. A different tradition prevails.

2. More knowledge of learning processes, more technical skill, and more scholarship are required than for the use of "logical" or "formal" methods--the teacher must play various roles.

3. It is difficult to organize a system of projects so as to provide for the entire body of attitudes, skill and knowledges which at present we wish children to gain in school.

4. Time is easily wasted by over-emphasis on some phase of the process--even on "teaching children to think".
5. The ordinary course of study must be largely re-organized and rewritten.

6. School equipment must be adapted.

7. New measures of results must be applied.

b. But the method employed by the nation is the method to be used in the schools.

From the many sample projects available which were in use by the Education Department at that time, only one is presented to illustrate their practical nature. In Appendix B there is presented a project for use in assembly. It has popular appeal in that dramatization is utilized to such an extent.
CHAPTER V

THE UNIT METHOD

As modern methods of teaching became more and more scientific, there was need to restrict the scope of the project, which was entirely too broad to be adaptable to the changing needs of the curriculum. Although projects had greatly enriched the environmental aspects to the learning situation, there was need of delimiting the scope of activities to include only one part of one thing studied, so that an emerging unity could be secured. As early as 1926, Morrison wrote:

The teaching problem hangs upon the selection of the units, upon the critical insight which distinguishes the teaching unit from mere topical collections of incidents and masses of historical material which cannot be focused upon any particular understanding.¹

Early formulatores of the unit concept outlined three stages through which such activities should pass. They were the periods of planning, of executing, and of culminating the activities involved. At this point the function of each of the three unit divisions will be discussed.

With the early attempts to utilize the unit method with practically all school subjects, in both elementary and secondary divisions, there came to be a general agreement as to what should be included in a unit. Especially was there

¹Henry C. Morrison, The Practice of Teaching in the Secondary School, p. 139.
consistent agreement, in the early stages of unit acceptance, regarding the form it should take. Wynne has pointed out that units, in the truly modern sense, were formulated according to three movements: first, the orientation phase, or the setting forth of the nature of the undertaking; second, the working-out phase, in which individual pupils, guided by their teachers, were to follow the laboratory technique; and third, the culminating phase, in which the whole unit emerged with a student participation characteristic of the socialization movement.2

Units came as a logical product of the problem-project method. Strictly speaking, the unit method did not replace these former methods but built directly upon them, merely enlarging on their objectives. Further characterization of these three movements will make the transition plain.

To answer the need for developing within pupils a problem-solving attitude, it is the purpose of the first, or problem-raising, movement to present a challenge. It is largely one of orientation, in which questions are raised, either by pupils or teacher, sufficiently to stimulate interest and determine what tasks individual pupils will select. The second, or directing-study, period is the working-out section, where pupils follow the laboratory technique. The teacher acts as a guide and helper, rather than a taskmaster. This is characterized as a period of individualization because the teacher directs.

2John P. Wynne, The Teacher and the Curriculum, p. 179.
the study of each pupil. The third phase is one of culmination, in which all the individual projects of the study periods come together for an emerging unity. Some tangible results must accrue if the pupils are to work with proper motivation all along in the unit procedure. Since this culminating phase is some form of a concerted effort, such as a dramatization, debate, exhibit, or assembly program, the period is characterized as one of socialization.

When units were first taking definite form, in respect to both content and method, there was considerable difficulty as to how the activities should be chosen. The following criteria for the selection of unit activities appeared in 1932, and appear to represent the best in practice up to that time:

The activity should be interesting to the children.
It should grow out of their background and experience, their play-life, and their natural and social environment.
It should be within their range of satisfactory accomplishment and yet complex enough to challenge them.
It should lead into further activities and present a variety of real problems.
It should be rich in content, full of meaning, and provide genuine possibilities for change and growth.
It should furnish opportunity to the children for real purposing, planning, self-direction, and evaluation.
It should furnish opportunity for creative expression, personal initiation, problem solving, experimentation, manipulation of materials, and cooperation in group endeavor.
It should provide for participation by all in educative social relationships.  

4Lucy Clouser, Wilma Robinson, and Dena Neely, Educative Experiences Through Activity Units, pp. 4-5.
Wynne lists the following criteria as essential in planning unit activities: (1) experienced need, (2) justifiable objectives, (3) units of experiencing, (4) selective choice, and (5) contingency.5

Formulators of the unit method have always insisted that a prime essential in its success is the choosing of activities and interests that enter directly into children's experiences. For this reason the teacher should be alert to recognize and capitalize on children's interests. Moreover, she can supply and create interest by providing a rich environment of pictures, books, slides, exhibits, aquariums, pets, and various other concrete material.

Two purposes will become apparent in this procedure, namely, the purpose of the child, and the purpose of the teacher. The child must see some significance in the unit activity if he is to pursue it. The teacher must see the child develop because of and through the activity. Plans must be flexible enough to provide for individual preferences and variation. Seasonal topics are found to be very convenient in the selection of topics of timely interest. Several units may be in progress at the same time. There may be one large unit, around which are grouped several smaller ones.

Although the origin of the unit of life is in the need of the child, there must be definite planning on the part of the teacher. The idea that careful planning will remove the

5John F. Wynne, The Learning-Teaching Unit, p. 71.
element of spontaneity is erroneous. Waiting for pupils to propose fruitful undertakings is sometimes a wasteful process. To avoid this, Wynne has suggested several devices for what he calls "stage setting". One form of procedure consists in placing the classroom materials, such as drawings, pictures, maps, or posters, in such a way as to stimulate interest. Another form consists in the reading or telling of a story, or the review of a previous class activity, which may be a point of new departure for the group.

Perhaps the most advantageous method used, because it is within the reach of all, is the method of raising of questions for the stimulation of interest. Usually the teacher will assume the leading role in this phase, since guidance and direction are particularly needed. After an activity is launched, however, the teacher should retreat perceptibly from the picture, so that pupil initiative and a sense of responsibility may be developed. Whatever helps and adaptations are needed can be selected as a result of the cooperative attitude maintained throughout the unit.

Developing further the ideal of experience integration, Smith explains how such integrative processes must depend on the utilization of a well-formulated learning situation. He contends that the learning situation, to be true to the ideal of integrated sequence, must meet the following conditions:

1. It must revolve about problems which are germane to youth.

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2. It must be concerned with vital and crucial aspects to the world in which youth is learning to live.

3. It must call for dynamic and creative behavior on the part of the learner.

Finally, the ideal of integration is bringing order out of the chaos of perplexing opinions arising from the complex conditions of life. If learning is essentially the liberation of the individual, through progressive growth and adjustment, then the movement for integration of the unit method will have achieved its full purpose.

Proper flexibility in unit procedure provides that the unit may be prolonged somewhat beyond the original time planned. There must be a sense of completion to make the activity satisfying. But a unit that is found to be incapable of satisfying the experience needs of pupils can be modified or abandoned at will. Care should be taken to merge, in this case, into another unit that promises to fulfill the life needs of pupils. Because of this merging tendency of units, some teachers tend to neglect the third or culminating phase. This is a mistake, since all activities need to enter a stage of retrospect, where there can be a realization of the progress achieved. There must be some type of red-letter procedure which will formally exhibit the experiences through which the pupils have passed.

One of the truly great values of the unit method is the opportunity it affords, in its culminating sense, of the fruitful

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sharing of experiences. The individual efforts of the comprehensive undertaking are blended into a unified whole.

Herein lies the origin of the final emphasis which has been placed on the unit method. It is the emphasis on integration. The idea in integration is to blend all the interrelated parts of an activity into a harmonious whole. The influence of the Gestalt psychology of learning is, in a large measure, responsible for the growth of the concept of integration.

In one of the greatest compendiums yet published on the subject, Hopkins suggests that integration must be the shorthand word to describe the process involved in intelligent, interacting, and adjusting behavior. Nine laws of integration are set forth in this treatise, as follows:

1. The condition of being integrated is primary and applies to the whole, rather than to the parts.
2. Integratedness depends upon energy potentials, which follow the laws of dynamics.
3. The whole conditions or regulates the work done by the parts.
4. Wholes evolve as wholes.
5. The identity and integratedness of the whole is preserved while the parts change.
6. The evolution of the whole is an exchange process between homogeneity and heterogeneity.
7. The activity of the part within a whole, no matter what the conditions, obeys the law of least action.
8. All the available energy of the whole will be expended for the maintenance of its integratedness.
9. The whole responds relationally to a total situation.

L. Thomas Hopkins and others, Integration, p. 2.
Ibid., pp. 43-48.
These laws have been applied to the learning situation for the purpose of rounding out the unified effect of a good activity program. The school environment has taken on the aspect of life situations to the extent that it is usually termed the "experience curriculum". In this type of set-up, the teacher becomes a true guide and servant of the pupil. Into the learning situation the guide brings these factors: an integrating personality, an intelligent interaction with the culture, an understanding of children at various age levels, and a capacity, desire, and realization for continued growth.

The Unit Method in Education Methods Courses

From the two basic text books still in use for the advanced methods course there is presented in the following excerpts the core of the principles of the unit in practical usage. First, there will be given the principles as expounded by Melvin; then the refreshingly modern views of Miller will follow.

If living is to be the basis of schooling, it will be necessary to discover some unit of living, some unit of life, which may serve as a philosophic basis for the guidance of teaching.11

The unit of living has been variously called an activity, a complete act, and a unit of work. It seems more logical to use the term "unit of conduct". Such a conception makes it possible to find

10Ibid., p. 255.
in conduct that least common denominator between the school and the world which the teacher must find if the life of the school is to be the living of the children.12

The root and origin of the unit of life is not to be found in the purpose, but rather in the need. Consequently the unit of conduct is to be regarded as an act dealing with the need, which may be analyzed into the five processes of needing, purposing, planning, executing, and using or evaluating.13

Thus it is that the unit of life or the unit of conduct provides a basic concept for the analysis of school living. It lies at the basis of the treatment of teaching which is discussed in this book. So we may develop a plan of school living which will involve the children in a series of units of conduct which interweave and intermingle in the very texture of life itself.14

The distinction between types of units of conduct may be made in two ways. It may, figuratively speaking, be made latitudinally and longitudinally. The former consists of the two divisions, namely, physical and mental. The latter consists of the three types, namely, constructive, play, and work.15

There is the greatest necessity for children to learn the demands of thoroughness and to recognize the compulsion of the spirit. The community needs persons who are unwilling to fall below the standard of excellence in whatever they do, persons who not merely post-judge, but pre-judge their own conduct. It is only when children are trained in school to carry out units of work or duty that they will attain all the higher values of training.16

Thus Melvin sets forth the basic concepts of unit construction and administration. His ideas are closely in harmony with the consensus of opinion regarding the essentials of the

12Ibid., pp. 46-46. 13Ibid., p. 46.
14Ibid. 15Ibid., p. 49.
16Ibid., p. 57.
unit. Clearly, there is a shift in emphasis from content to method, from the what we are to teach to the how of teaching.

In the companion text of the above source of quotations, there is set forth more succinctly and comprehensively some parallel observations regarding the nature and function of the unit as a method. In the following quotations from Miller, one readily observes the distinctly modern trends implied.

The daily "lesson" must go...A clean sweep will have to be made. A working group will be substituted for the conventional class organization. Units of learning, comprehensive in their nature, will be substituted for "lessons".17

We are now prepared to discover certain guide lines which will serve to illustrate a plan of securing two aims in every significant learning unit: (1) unifying principles, (2) differentials to minister to individual differences.18

If not a lesson every day and the familiar motions connected therewith, what is to be done? A unit of learning is to be substituted. It ought to be, in so far as possible, a comprehensive and creative unit in which a genuine and fruitful recognition of individual differences may be realized.19

Three major movements were set out. They are the
1. Problem-raising movement
2. Directing study movement
3. Organizing, unifying movement20

In other words, the two aims, the demand of the specialist for exhaustiveness, and the demand of the administrator in public education for general education, must be caught up in an emerging unity and realized to some extent in every class-group beginning with the junior high school and running up through the senior high school, at least, with an increasing emphasis on both aims in the same class group.21

17Harry L. Miller, Creative Learning and Teaching, p. 10.
18Ibid., p. 12.
19Ibid., pp. 28-29.
20Ibid., p. 32.
21Ibid., p. 31.
These gleanings from Melvin and Miller summarize very well indeed the parallel method of the unit as it has been taught in the advanced methods course of the Education Department. The following chapter will take up the further emphasis which was a direct outgrowth of the unit method discussed in this chapter.
CHAPTER VI

CREATIVE LEARNING AND TEACHING

The purpose of this chapter is to formulate the principles of creative learning and teaching which have exerted a powerful influence in shaping trends in methods for the past several years. Educators have realized that it is not enough to provide adequate educational opportunity. Nor is it sufficient to integrate units in the modern activity program. The demand has grown that pupils be identified with their unit activities to the extent that creative attitudes shall result.

The realization that a conservative attitude will never produce creative citizens has prompted educationists to formulate a method which faces the future rather than the past. The world is in desperate need of originality, in every phase of democratic living. A conservative attitude in education is dominated by fear. Crow points this out in his statement:

The conservative attitude in education fears the new in methods, fears the new in pupil control, fears the new in extra-curricular activities, fears life and the spontaneous, creative impulses of life, and above all fears the new of independent thinking.¹

It has been pointed out that, properly speaking, man can neither create nor destroy anything. Yet this most recent method seems to strive for a creative type of education as if

¹Charles Sumner Crow, Creative Education, p. 53.
it were entirely possible. No law of creativeness is violated. What is sought is the development of originality which resides within every student. The integration of all life’s experiences has made every student the possessor of a certain amount of originality. This may vary greatly with individuals, because of their variety of experiences, but originality does exist, nevertheless. The great problem is to get pupils to identify themselves with unit activities of life so that this certain, though variable amount of originality can be developed. This is the essence of the task which creative education seeks to perform.

Whenever a person becomes identified with a life experience, that activity takes on a new character. A distinction should be made, in this connection, between creative learning and creative production. Creative learning is a continued and steady process of growth. Attitudes, purposes, imperfect projections of ideas, all have a part in the continuous progression. The end sought in the creative method is not the finished product of the pupil but the subject changes wrought in his life experiences. Creative production, on the other hand, seeks to present some tangible evidence of the mastery which has been growing, in attitudes, through the years. Inspiration produces the artist; but it takes inspiration at flood tide to produce art. And art is always more powerful than the artist. Educationally, then, the purpose of the creative method of learning and teaching is to formulate, through
an experience curriculum, patterns of creative behavior. These, in turn, enable the pupil to attain the necessary mechanisms for creative work which will serve as a supreme order of life. Such an attitude will cause the pupil to recognize a challenge when he sees it; and meet it with confidence.

One of the pioneers in the use of the creative method was Hughes Mearns, who contended that pupils who are properly stimulated and guided will produce a type of creative work rarely ever observed as an integral output of the school curriculum. A passage from his widely heralded book emphasizes the subtleness of inspiration and its tremendous motivating power.

Everyone is conscious of the curious personal phenomena, not easily explained, by which art comes into being. It is accompanied by elation, by an almost unnatural feeling of well-being. Young people know all about this characteristic of vital energy; their lives are rich in the experience of its ways.... In this respect pupils do not differ from adults, except that children are in the main still artists, while adults have too often ceased to be.2

Educators are fully aware of the world's desperate need for creative thinkers. But since education has given so little attention to building in the lives of pupils generally, they have developed talent largely on their own initiative. The creative method sees its great task as that of bridging the gap between education as it is and education as it might be in this scientific and creative age. Creative learning constitutes an essential phase of every worth-while school activity, even though the participants in the process may not be aware of it.

2Hughes Mearns, Creative Youth, p. 4.
Creative work may be successfully undertaken in any school subject where unit procedures are applicable.

Writing a poem, painting a picture, sketching a cartoon, preparing a report, designing a pattern, understanding a process or operation, learning new things of all sorts and applying them in new ways, constitute a group of activities which involve considerable creative endeavor on the part of children. Wherever children are allowed to purpose and plan, a certain amount of creativeness will always be involved.3

Like the steps that were followed in the Herbartian method, or like the successive steps in unit procedure, the creative method follows four fairly well-defined stages, namely: preparation, incubation or extension, illumination or inspiration, and verification. In the first stage, the pupil gathers his material on the basis of a common research pattern that every attempt to discover a cause or effect follows. In the second stage, the pupil elaborates, under the experienced watchcare of the teacher as guide, the raw material gleaned in the previous stage. In the third stage, the pupil catches gleams of light which indicate the ultimate direction the creative process is to take. Quite often a considerable period of maturing must elapse to bring this about. In the final stage, the pupil subjects the evidence of his originality to a systematic reasoning process. This is the culmination of his endeavors and proves whether or not the end crowns his imaginative efforts.

Commenting on the significant educational outcomes of the creative method, the same authors state:

The most significant outcome of creative endeavor is not to be found alone in the finished product of that endeavor, but rather in the many abilities acquired in producing that product and in the satisfaction derived from the activity. In other words, children develop expert skill through successful practice in creating something. They learn to plan, to compose, to initiate, to undertake, to organize, in fact to develop all those important abilities involved in creative production. The pure enjoyment which children obtain from creating something, even though it be a picture of their teacher, is often a great stimulus to activities of a similar character.\(^4\)

The ultimate problem seems to be that of freeing our educational system from the powerful web of tradition and academic prejudice, which have dominated our methodology for so long. With the further liberation of our teachers will come a desire to make the extension of creative privilege the divine right of every pupil. Then more and more spontaneity will come into the learning process, making it an active, living reality. Mastery of this method, combined with a sympathetic cooperation, will achieve the desired results in pupil training and welfare.

The Method of Creative Learning and Teaching in Education Methods Courses

Probably the most valuable single textbook in methods used at North Texas State Teachers College, from the standpoint of conciseness and revolutionary ideas, is Miller's \textit{Creative Learning and Teaching}. It appeared when the unit movement was first supplanting the various contract schemes and the project method. Its purpose was to inject new life into the outworn and moribund

\(^4\textit{Ibid.}, \text{ pp. 354-355.}\)
methods which had been in constant use for more than a century.
The following excerpts from this remarkable volume reflect the
best in creative methods which are in usage today in the
methods courses.

Freedom in work and liberty under the law may
be conceived to be a third system of life, and may
become a basis for a new philosophy of education,
only by appreciating the need of a compass and
and then a modus vivendi which will suggest a libera-
by using it with fine courage will it ever be possible
ting technique for the schoolrooms of the land.\(^5\)
to live by realization. The challenge is, to become
the creative worker moves along in the pro-
participant and not to remain a spectator.\(^6\)
duction of such an array of patterns, emphasis on
"seeing in imagination" what he is about to repres-
"seem in imagination" what he is about to represent
ent in his drawing should not be lost sight of.\(^7\)
in his drawing should not be lost sight of.\(^7\)

No upper limit for any pupil, working, working
no upper limit for any pupil, working, working
within the general circle described, is a phrase we
within the general circle described, is a phrase we
need to get into action and attach to it a teaching
need to get into action and attach to it a teaching
verb that will have no equivocal meaning. No pupil
verb that will have no equivocal meaning. No pupil
is denied a full and realizable opportunity. No pupil
is denied a full and realizable opportunity. No pupil
is held back on account of another; no pupil is rushed
is held back on account of another; no pupil is rushed
forward for the purpose of covering the ground. Each
forward for the purpose of covering the ground. Each
works in every wholesome way up to his best capacity.
works in every wholesome way up to his best capacity.
pupils are not segregated; their work is constantly
pupils are not segregated; their work is constantly
integrated.\(^8\)
integrated.\(^8\)

The pupil as we have explained is to learn the
The pupil as we have explained is to learn the
art of criticizing his own productions in the light
art of criticizing his own productions in the light
and under the control of our common guide-line prin-
and under the control of our common guide-line prin-
ciples. The teacher is concerned with the problem
iples. The teacher is concerned with the problem
of directing thought in terms of central ideas.\(^9\)
of directing thought in terms of central ideas.\(^9\)
The purpose in the suggestion bears upon the
The purpose in the suggestion bears upon the
proposition that one does not find a joyous and a
proposition that one does not find a joyous and a
productive release of creative power, if criticism
productive release of creative power, if criticism
is constantly injected.\(^10\)
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\(^5\)Harry Lloyd Aller, Creative Learning and Teaching, p. 6.
\(^6\)Ibid., p. 17. \(^7\)Ibid., p. 21. \(^8\)Ibid., p. 26.
\(^9\)Ibid., p. 40. \(^10\)Ibid., p. 49.
Each individual is expected to make an increasingly intelligent use of his environment in a self-discovering process.\(^{11}\)

Looking at the learning situation as a whole with a critical eye, one begins to see how every part of it is literally comprehended within a moving principle...This comprehending principle is the vital common essential.\(^{12}\)

The enormous complexity of the human brain has led to the creation of a new environment of mental images, emotions, ideas, forces prejudices, ideals which may have little relation to the physical and material, but under the influence of which intelligence builds itself up and the mind becomes creative or moribund, progressive or stagnant. The self is literally the integration of organism and environment.\(^{13}\)

The central idea, the underlying hypothesis of this book, is conceived to be an application and an elucidation of the doctrine that every individual is what he may become.\(^{14}\)

Freedom is an earned capacity and ceases to be when it ceases to be a becoming. Many of us have never consciously engaged in creative work. We have been too busy absorbing other people's conclusions. In the new adventure we are seeking some way of promoting and securing the self-discovering, the self-realizing individual who can be trusted with power.\(^{15}\)

Thus Miler has outlined the great and challenging sphere of activity in which the pupil of the creative order works. Attitudes of creativeness are attainments of lasting value to the individual and to the social order in which he lives. The new order in education is fully aware of this need, and had revolutionized the curriculum to provide for this need. By the use of creative methods teachers are enabled to face the order of the new day in education.

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\(^{11}\)Ibid., p. 51.  \(^{12}\)Ibid., p. 57.  \(^{13}\)Ibid., p. 117.  
\(^{14}\)Ibid., p. 120.  \(^{15}\)Ibid., p. 191.
CHAPTER VII

SUMMARY AND CONCLUSIONS

This study has set forth the principles underlying five methods of teaching, and has shown how these methods have influenced the teaching of methods courses in the North Texas State Teachers College Department of Education during the years 1920 to 1940.

The methods were first delineated by collecting data representing a consensus of opinion from authorities in the field. As a criterion supporting this exposition of each method, the writer gleaned from the teaching material used in the Education courses what was taught and practiced in North Texas State Teachers College. Conclusions based on this analytical and comparative treatment may be drawn up as follows:

1. Each of the five methods has been used extensively in the College Education courses.

2. The herbertian five formal steps; the problem, and the project methods were the chief ones used during the first decade of the study, or from 1920 to 1930.

3. The methods of the unit, and creative learning and teaching, were the ones in popular use during the second decade of the study, or from 1930 to 1940.

4. The extent to which practice in the College Education methods courses agrees with theory is readily observed to be quite high, as is demonstrated in the parallel citations.
5. Although no theory of method has completely monopolized the field at any one time, the periods of popularity and decline for each of the five theories are fairly well worked. This indicates that the picture of progress in educative method is similar to that in other fields of gradual progressive development.
APPENDIX A

WHEN THE I. D'S SCORED

Not once in a blue moon could one find such a class. Gathered from the ends of the earth they seemed. It was almost impossible to find a common appeal. Three boys were old repeaters, who tolerated school because there wasn't anything else to do. There was Charles, a non-thinker, a non-producer, a non-everything. Even his disposition was negative. And Zeke, he of the flat-boat feet and floating-raft mind-floating with the current and never arriving anywhere. As to the raft, will rafts are wooden, aren't they? Then there was Bert with a full set of Hun ancestors, a "me and God" attitude, and a really likeable side which he succeeded in hiding most of the time. Frank was more nearly normal, except that he was careful not to take his imagination out of its tissue paper. One supercilious youngster, son of an Army captain, informed us early in the game that he didn't expect to get much. The Eastern schools which he had just left were so superior to the Mid-West brand. He carried about with him an air of aloftness that was maddening. A great, over-grown, long, thin, bashful boy hailed from St. Louis. His vocabulary consisted of "yes" and "no", seldom vocalized, however, but always decorated with intense apoplectic blushes. But then, there never was a thirteen-year-old boy who could be himself with legs too long and pants too short! The remaining boy was the blond better half
of a pair of twins. The girl was pretty and pleasant but not over-burdened with intellectuality. Her chum, Mary, was the most aggressive member of the class, having had the supreme courage once to suggest a picnic. Nita of the bovine eyes, two drab frightened little sisters, a girl with movie queen ambitions, and our Erma constituted the list. Erma was from an obscure Kentucky town and was overwhelmed and dazed by the multitudinous intricacies of a "town" school.

It was to this array that we tried to teach Miles Standish. For days and days, we tried to teach Miles Standish. Tried--the word took on new meaning. It involved a display of colonial relics, groups of pictures of the times, a set of crayon drawings, questions finally answered by the teacher in desperation, and at last, a dramatic monologue in which teacher figured as director, orchestra, usher, and leading lady. No dent of interest appeared on the serene placidity of the class. Not a flicker of an eyelash, not a solitary sign of life, not a token of response. Still we labored.

One day when purple despair was about to engulf us, the little god who watches over teachers who think they have done their best, literally yelled (I heard him!) right out in class, "Quitter! Why don't you wake these kids up? Why don't you think up something for them to do?"

"Do," we screamed, "We've done everything!"

"That's the trouble," he bawled, "You've done it all your- selves. Get busy. Isn't there anything that THEY can do?"
We were on tiptoes in a minute. Idea began to come and as they came, we talked. "Children, would you like to do something different?" There was an almost imperceptible change of expression. "Wouldn't it be fun for the boys to build some little log houses for Priscilla and Miles Standish, and wouldn't it be jolly for the girls to dress some dolls to represent the characters of the story?"

I was reminded of a dangerous railroad crossing judging from the way they stopped, looked, and listened. A few seconds and came stumbling, pushing, hurrying up to the table desk where they leaned and hung over the book racks, eager to question and plan.

"I'll bring the nails." "We've got a saw." "We can go out tonight and get some branches for logs." These and sundry other remarks from the boys. The girls offered dolls, material and time. At last here was something our little Kentucky girl could do. She knew how to sew. "Says, Miss," she said shyly, "I reckon I can tote one of them dolls home tonight and make it a little Miles Standish suit, if you all is willin' for me to."

And so, before the zeal could waver, committees were appointed; they met on the spot; the project was launched. This was the first of innumerable consultations and hours of hard, happy work before and after school. There were adjustments to be made of misfits on committees, a few complaints of slakers to be investigated, and at least a semi-daily inspection of the
progress being made. Our assembly room was on the top floor and the youngsters worked in the basement. We contemplated asking the school board to put in an elevator. (You know you can ASK the school board for anything.) There were three groups of boys working in three different parts of the basement; they were making a house for Priscilla, one for Miles Standish, and one group was building a church. The girls sewed at odd moments in the recitation rooms or Domestic Science Department. We literally walked miles trying to keep tab on every activity at once, but the results justified the expenditure of every ounce of energy. When the other departmental teachers began commenting on the marvelous change in the I. D's., we knew the objective was already won.

One noon I came upon St. Louis sitting flat on the basement floor, his attenuated legs half covered with twigs and chips. He was faithfully working to complete the church in time. When we entered, he looked up, smiled, and uttered the first full sentence he had had the courage to deliver. This was just the beginning of longer bursts of oratory later on. Zeke and Bert voluntarily instituted a continuous prodding process in order to keep everyone active. There was daily evidence of much thought and planning. The girls came up to the mark wonderfully. Our little Kentucky maiden outdid herself. She cut out tiny patterns and with infinite pains and unbelievable fine stitches made the most cunning little garments for Miles Standish. "Clad in doubled and hose and boots of
Cordovan leather" were almost too much for her, but she had experimented until the results she produced were marvels of ingenuity. Besides dressing Friscilla and the Indians and other varied characters in the story, the girls had manufactured diminutive curtains for the windows, neat little braided rugs, table covers, etc. The boys added simple chairs, tables, and shelves in soft wood for the houses, and benches and pulpit for the church. How they did read and discuss that text to find out what to do! Nice old Zeke in his zeal found a worn leather-backed memorandum book. His clumsy fingers, grown skillful with ardor, cut three small sections through the binding and all. He came proudly bringing them up like three grains of sand in his big Sahara hand, and announced that they were the books "prominent three, distinguished alike for bulk and for binding, Siriffe's Artillery Guide and the Commentaries of Caesar--and between them was standing the Bible." They gave just the right air when placed on the tiny shelf. When someone suggested moving the table, Frank, who had arranged the simple furniture, objected, saying that it must be "a table of pine by the window," and so it remained. In the church they put some very realistic paws and a wee pulpit, while on top was the "howitzer planted high on the roof--a preacher who speaks to a purpose." And horror of horrors, on a pole in front was the head of the brave Wattawamat, an old doll head bloody with raspberry juice and red ink!

Then, as is oftentimes writ, came a day when our erstwhile solemn, stolid Charles stumbled into class shaking with silent
laughter. The other boys had been quiet all right until this unforeseen spectacle arrived. They, too, succumbed to some secret humor and giggled and snorted in a helpless chorus. When asked for the cause of this mirth, the blond twins came quickly to the desk and whispered that it was a secret but that they would tell later. More than once that hour we suspended operations entirely until the masculine builders could control their responsibilities. At recess down we flew to the basement. Being urged to look, we looked. As a final touch of realism there on the door of one log house was carefully stretched and fastened a skin. We looked more closely. Could it be? It could have been and was the silvery skin of a too adventurous mouse sacrificed in the name of Literature. We all shouted together. No one was ever able to tell me the how of the capture. Every time one started the tale, he was overcome by some mental vision of the scene itself and was unable to go on.

No how friendly they all became! How freely they talked together, praising and criticizing each other in much more extreme terms than we felt at liberty to use. And all to such good purpose.

The final date arrived at which suspicious time the exhibit was to be made, the story reviewed, and all things connected therewith finished. Teacher was to be surprised; she was to be led into the classroom with eyes closed and was then, at a signal, to open then upon the finished spectacle adjusted according to the best judgment of the class. It was their own idea and teacher played the game. There on the sandcovered table
was the Standish house, and the church and a tiny Plymouth Rock looking more like the original than Plymouth Rock itself. The Puritan dolls and the Indian runner were grouped in appropriate positions. Crowding closely around were eager-eyed youngsters gazing with pride on the results of their combined labor. Little lumps tried to gain a foothold in teacher's throat. And we had called them the I. D's! When the teacher inspected, praised, and questioned, her attention was attracted to something under the table. A quiet voice explained that the two successful committees finding that committee number three had failed to finish Misscilla's house on time, had decided that, in all justice, it would be exhibited in its incomplete state. A card tacked on red "Unfinished by...." with names attached. Mr. Eastern Culture's cognomen was among them. It had its effect.

Did it pay, this social problem? Time and energy and patience in large amounts had been consumed. We knew and the children knew that we were repaid a hundred times. They knew and understood the story; they liked the swing of the poetry; they could quote therefrom; they had lived it all. They had become acquainted, the barriers were down, they were receptive. The advance was not brilliant, but they improved correspondingly in all branches. And think what it did to Charles! Charles chuckled! Then, too, there was that mouse. There's something in that! I. D's----We deserve that name ourselves.
APPENDIX B

A PROJECT FOR ASSEMBLY

Early in September a circular appeared from the office of the principal of our high school requesting each department to prepare a program for an assembly which would in some way be representative of the work of the department.

The request, when brought to the classroom, suggested a motive for initiative on the part of a group of pupils and, when submitted to a class in tenth-grade English, met with a ready response leading to a spirited discussion of the purpose of assembly programs. The class agreed that whatever the nature of the program decided upon, it should be not only entertaining and interesting but also thought-provoking. It was decided to devote the recitation period next day to a consideration of the different ideas submitted regarding what we, as a class, could do to fulfill our conception of a suitable program.

After putting a number of the suggestions made by the pupils the next day to the three tests determined upon—probability to interest, to entertain, and to provoke thought—a decision was reached in favor of presenting in pantomine characters from books which most of the students in the audience should know. The pupils immediately began to think of characters so vividly portrayed in the literature they knew that they were real personalities. How could these be presented in a novel and engaging
way? The answer to this question we determined to leave until our array of characters should be marshalled.

As finally selected, these included Scrooge when he was visited by the Spirit of Christmas; the shipwrecked pirates in Treasure Island; Gulliver when he was searched by the Lilliputian policemen; Rownes, Elgitha, and the Palmer when the Palmer was taken to Rownes’s room; Ruck, Oberon, and Titania with her fairy attendants when Oberon was waiting for Titania to appear; Galahad on his quest; Robin Hood, Will Scarlet, and Allen-A-Dale when they defied the Sheriff of Nottingham; Tom Sawyer in the white-washing scene; the Pied Piper of Hamlin; Rip Van Winkle with his dog and gun; Ichabod Crane wending his way to school; Little Nell and her grandfather wandering from hamlet to hamlet. Topsy, the girl from the Limberlost, and Pollyanna formed a group from modern stories.

As a novel and engaging way of getting the characters upon the stage, the idea that met with most favor was that of a magician who might summon them from the past with his magic wand. A reader, too, was suggested who should read a passage from each story appropriate to the incident which the character represented.

Then the costuming. Two departments were asked to cooperate, the art department and the domestic art department. Designs for the costumes went forward as planned by the pupils in the classrooms after looking up the setting in the stories. The cutting and making of the costumes became a problem of the domestic art classes.
In the meantime pupils were chosen for the different characters, and problems in stage arrangement and management were assigned. Each pupil in the class was responsible for something essential to the success of the undertaking. Soon inquiries began to come in about rehearsals. We had to decide whether each pupil would be responsible for his own interpretation of the character he represented and training be limited to the reader and the magician, or whether the impersonator should be trained to his part also. It was decided that the reader should have much practice with the class acting as critics, but that the impersonators should have only sufficient practice to accustom them to ease on entering the stage. The interpretation of the character, it was felt, must be individual and be left entirely to the impersonator and his study of the book itself. The impersonators were to remain on the stage after entering and the whole was to be arranged in an effective ensemble. The magician should be costumed as an Oriental and have at his side a jar of incense, the curling smoke from which would give an air of mystery to the scene. The costume of the reader would be the white robe of prophecy, with a style of richly hued purple and green.

At this juncture the proposal was offered that the audience be made participants by the class preparing and having printed sheets of paper with blanks for the writing in of the name of each character as it appeared, the title of the book from which it was taken, and the name of the author. These sheets would be passed by the assembly ushers and their purpose
explained by the stage manager. They would be scored later by the group who gave the program, the names of those with highest scores would be posted on the general board.

The program was given twice, once for the senior high school of about seven hundred, and once for the junior high school of about a thousand. Judging from the scored sheets the impersonators really interpreted their parts for more than twenty per cent of the scored sheets were above ninety.
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