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## HOW DIFFERENT TYPE TEACHERS WOULD TEACH A UNIT OF INSTRUCTION IN AGRICULTURE

All educators realize the great variations to be found in teachers as to the characteristics of their teaching method. It is possible, however, to classify teachers according to certain types. The following descriptions of four types of teachers are from mimeographed material furnished by Professor L. J. Brueckner to a class in supervision at the University of Minnesota. Following each description of type will be an account by L. E. J. of how that type of teacher would teach the Babcock test as a unit of instruction in agriculture. The material taken from Prof. Brueckner is in quotation marks.

### "Type I—Compulsion"

The teacher is concerned with the practical utility in adult life of the subject matter that he teaches. All activity in the class is a means to the acquisition of subject matter, and the strict discipline which he demands is to prevent the entering of any activity which will lessen the time devoted to the development of this efficiency. The material is derived almost wholly from the textbook, practically no use being made of supplementary material. Little attention is given directly to the development of ideals, purposes, and standards. Stress is placed on the development of skills and factual knowledge. The teacher's activity consists mostly of assigning lessons from the textbook, in questioning to see how well the pupils have studied, and in explaining and drilling them on the parts needing it most. The pupils study their texts and try to answer in the words of the book. All activity is dominated by the teacher; and subject matter is chosen from logically organized materials."

Description of the teaching of the Babcock test by a compulsion type teacher:

The class had been following their texts very closely, going from one topic to another as the textbook presented them. The Babcock test was the subject of the next topic. The teacher, realizing the importance of the use of the test, decided that all students must become thoroughly familiar with the use and prin-

ciples of the test. The pupils were assigned the reading in their text concerning the test. During recitation periods, the teacher asked questions of each pupil concerning the test. In order to insure a mastery of facts, each pupil was required to write out the details of the test from memory. No pupil was excused until he could describe each step of the test. At the close of the chapter in the text was an exercise on testing milk. The teacher brought some milk to school and required each student to carry out the exercise until each one could make satisfactory tests. At the close of the work, each student was well informed as to the details and steps in the testing procedure and could make satisfactory tests of milk.

It will be noted in the preceding description that the teacher controls or dominates the situation entirely. All students are required to learn the test in the same manner regardless of their need for using the test. It appears that the test is being taught for the purpose of fortifying the student against some future need. There is little connection with the present. No attempt is made to acquaint the students with reasons as to why the test should be learned. No doubt, the importance of the subject matter is uppermost in the teacher's mind rather than the importance of relating the subject matter to the students.

### "Type II—Teacher Preparation"

The teacher's general aim is to determine the facts, knowledge, and skills necessary for adult life and to pass them out to pupils so attractively that absorption by the pupils will result. Many devices are used in the presentation by the teacher; these usually result in interest and voluntary attention by the pupils. Teacher-made outlines based on the text and enriched by references to supplementary books and other forms of pertinent materials are very evident. There is less studying from textbooks by pupils than in Type I. More variation in answers is allowed, and less emphasis is placed on repetition and drill. Supplementary material is used under the direction of the teacher. Discipline is more

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relaxed than in Type I, the teacher "talks down" to the pupils in a friendly way, and sometimes allows a class discussion. There is complete teacher control at all times."

Description of the teaching of the Babcock test by a preparation type teacher:

According to the teacher's outline of teaching material, for his class in agriculture, the Babcock test was to be considered as the next unit of work. The teacher read the text on the subject and also studied several reference books. The first class period was devoted to finding out what the students knew about testing and the reasons for using the test. The teacher then placed on the blackboard an outline of study which was copied by the pupils and used by them in their study. Recitations consisted of a question and answer procedure, which was continued until the teacher was satisfied that the students knew the facts concerning the test. During the next class period, the teacher gave a demonstration in testing milk. As the teacher proceeded, he asked various students to tell what step or procedure was being developed and what were the next procedures to be carried out. Following this, each student made tests under the careful supervision of the teacher. At the end of the work, all students had an excellent knowledge of the test and each student could make satisfactory tests of milk.

The preparation type teacher thinks of education as an "absorption" process on the part of the students and a "doing" process on the part of the teacher. Such a teacher will spend much time carrying out certain preparatory activities which, if left to the pupils to do under the guidance of the teacher, would constitute valuable educational practices. Why should a specially prepared outline for study made by the teacher be given to the students with directions to follow

it? Why not work out the study plan with the students, rather than for them? As in the compulsion type, the textbook is the rule and guide of nearly all activity, so in the preparation type the teacher might be said to have become the textbook, for the students must act as he acts, think as he thinks, and do as he does. It might be said that the teacher through his preparation becomes the model. A teacher of this type apparently assumes that students are incapable of self-direction.

"Type III—Motivation

The teacher's general aim is to teach pupils a body of subject matter through lessons in which activities are brought in by the teacher to arouse interest in the work and to bring about a better understanding of the material being developed. The activities are planned and motivated by the teacher, and are carried out by the pupils. Subject matter is grouped around major topics, often problems set up by the teacher. Subject matter limits are less rigorously observed than in the previous types. Desirable attitudes and ideals toward the work being covered are stressed. The teacher brings in pupil activity in the form of individual and group reports on assigned topics and in other forms of activity. He spends on drill only the time necessary to fix the subject matter. Much reference material is used, but it is mostly of the teacher's choice, although pupils are encouraged to look for pertinent material. Attempts are made to provide for socialization, but this is seldom real, usually consisting of the appointment of committees, chairman, etc., by the teacher. The teacher meets the pupils in a friendly way in class discussion, but retains for himself the directing of most activities."

Description of the teaching of the Babcock test by a motivation type teacher:

In order to promote interest in the Babcock test among his pupils, the teacher told them the interesting history concerning the development of the test. To further stimulate interest, the teacher arranged for his students to visit a local creamery when testing was being done. After this introduction, the teacher suggested that each pupil test milk from cows belonging to their home herds. With this in mind, the pupils under the direction of the teacher learned the facts about the test. This was done by studying the description of the test in the texts and by referring to reference books which were suggested by the teacher. The teacher questioned the students and had them write a paper setting forth the

facts concerning the test. The next step was that of making tests. After the pupils had become reasonably proficient in testing, the teacher allowed them to complete their testing work by testing milk from their home farms. The pupils enjoyed their work, and all pupils knew the important facts about the test and could make satisfactory tests.

The motivation type teacher marks a distinct advance over the compulsion and preparation types. Learning through doing makes its appearance in the motivation type, but there is still restraint and teacher domination. The teacher believes in student activity, but chooses to select and direct rather than stimulate and guide. The motivation type teacher is very prone to use artificial and external means of motivation. The procedure may lack when measured against criteria of genuineness. The weaknesses of the motivation type will appear further in discussing the following type.

#### "Type IV—Purposing

The teacher's general aim is to stimulate activities among his pupils which will enrich their present life in such a way that the experiences gained will be useful in adult life. The class work is markedly divided into phases, part teacher-controlled and part pupil-controlled. The teacher controls the activity during the periods of stimulation and reflection, the pupils determine the activities involved in the carrying out of the unit of work, with the teacher assisting where difficulty arises and guiding activity into fruitful channels. Subject matter is chosen and organized by the pupils, usually after stimulation by the teacher. The content and organization of subject matter is determined by purposes and not by logical sequence. There is almost complete socialization. Class work and disciplinary control are organized and administered by the group through pupil-appointed leaders. The teacher is accepted as one of the group. Group and individual reports of various kinds are very evident. Emphasis is placed on purposes, achievement standards, and ideals, not on results purely in terms of knowledge and skills. Memorization of facts is used only as a means to an end. Much supplementary material is chosen and used by the group. Little effort is made to restrict the material to the specific subject being studied, since a definite attempt is made to make the activity as many-sided as possible to establish contacts with other fields of knowledge."

Description of the teaching of the Babcock test by a purposing type teacher:

Students in this class, with the help of their teacher, made plans for keeping production records on their home herds of cows. The boys worked out the necessary details to put the plan into operation. They arrived at the conclusion that each one would have to learn how to use the Babcock test if he expected to keep worthwhile records. The boys asked the teacher to help them plan the testing program. A procedure was developed which each boy recognized as being the best plan for learning how to test in an efficient manner. As a result the boys overhauled the testing machine owned by the school, and fitted out a corner of the laboratory for convenience in testing. Each boy studied the procedure of the test and made tests. They called upon the teacher to help them when necessary, and to pass upon their test results. Soon the boys were carrying on the regular testing program necessary to make their production records complete. One of the boys discovered in his reading study that the skimming efficiency of farm cream separators could be checked by this test. This led to the boys' asking their teacher to send for the necessary equipment. The teacher made it possible for the students to order the necessary supplies. The test was used to the best advantage by these boys, and their interest in the test resulted in their becoming familiar with the history and principles of the test as well as its practical value.

In examining the last description, what are the evidences of self-control to be found? It is evident that the teacher did not assign the tasks, consequently, self control is expressed in the fact that the boys set themselves to the task of keeping production records. No doubt the teacher had much to do with the situation in a stimulative capacity, but in the last analysis, the members of the class make the decision.

Self-appraisal is apparent in the fact that the students must have analyzed their respective situations before arriving at the decision mentioned in the preceding paragraph. As each student strives for proficiency in the activities being carried on, self-appraisal is constantly necessary. It will also be exercised under the purposing procedure for the student will have a genuine interest in his own development.

Practice in self-direction is apparent when one notices that the students in the description have a part in organizing

their procedure. As various factors arise, a purposing teacher encourages self-direction rather than assuming directive activities himself.

Opportunity for self-control, self-appraisal and self-direction upon the part of students is negligible in the compulsion and teacher preparation type procedures, and appears in a somewhat repressed form in the motivation type.

From the description of the purposing procedure, it is evident that co-operation is exercised. The teacher and students plan out their work together and there is co-operation between the students in carrying out the various activities.

Facts and skills, otherwise designated as primary learnings, are effectively taught by the purposing type teacher. The subject material means much more to the student when taught by a purposing teacher because the student realizes his own relation to the program of study for he has had a part in planning it.

Because of the nature of the procedure, the student will find himself making contact with material other than the regular course of study which has been planned. These additional relationships have been termed "associative learnings."

The purposing procedure is then rich in the opportunity for developing primary learnings, associative learnings and those learnings coming through self-control, self-appraisal, self-direction, and co-operation. These terms are those used by William H. Kilpatrick.

The agriculture teacher should think in broad terms concerning his teaching activity. The vocational agriculture teacher is not dealing with facts and fact learners alone, but with the student

as a developing personality which must find expression. Distortion follows in the wake of a gross disregard of the law of effect. A farmer expresses his individuality through farming; therefore, we must deal with the complete individual in our educative process. The purposing procedure lends itself to this balanced development so desirable.

Theodore H. Eaton in his recent book, "Principles and Problems of Vocational Education," has defined "vocation" and "vocational education," pp. 17-25. By changing a few terms to make the definitions more specific in relation to agriculture, the following thoughts are expressed which may well summarize this paper.

1. For the individual, farming as a vocation, is an economic pursuit.

2. For the individual, farming as a vocation, is a calling or major interest.

3. Success in farming as a vocation is the full reconciliation in the same individual of farming as an economic pursuit and farming as a calling.

4. Vocational agricultural education from the standpoint of the individual is that part of education which is directed to the acquirement of skills, knowledges, and attitudes that make for efficiency in farming as an economic pursuit, and to the realization of a calling in that pursuit.

In addition, a fifth point might be added as follows: When the educative or developmental process provides for practice in co-operative effort, it is reasonably safe to assume that the individual participants in a vocation will work out the group relationships necessary to success in pursuit and calling.

L. E. J.