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NEEDED — MORE FUNCTIONAL UNITS OF INSTRUCTION

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The development of functional units of instruction is a problem of much concern to every teacher education department. Teaching success depends to a very large extent on the teacher's ability to organize instruction. A major goal in teacher education is the cultivation of this ability in its students and graduates. Yet, it is apparent that we have not been fully successful. Two rather significant facts support this observation.

First, teacher education departments all over the nation are participating in crash programs to readjust instructional programs. Second, teachers are still very much concerned about the problem of organizing instruction even though a larger supply of instructional guides is available. The National Vocational Education Act of 1963 could be considered the cause of the crash program in which we are involved. But, the fact is, programs were in need of adjustment before the Act was passed. There has been no significant change in the need for assistance with the problem of organizing instruction among teachers in the

past several years. The problem was as real ten years ago as it is today. A simple analysis of the factors and the circumstances which determine the structure and organization of units of instruction might help improve the choice of an alternative for approaching the problem.

A variety of names is used to describe different approaches to the problem of developing instructional guides. Among these are Resource Unit, Source Unit, Subject Matter Unit, Experience Unit, Teacher's Unit Plan, and Student Resource Unit. The list is extensive. However, when the fundamental purposes of each type of unit planning are examined, they may be divided into two basic groups. One is aimed at the needs of the teacher and the other is aimed at the needs of the student as well as those of the teacher.

The vast majority of units of instruction presently available were prepared in response to the needs and urging of teachers. Because most departments of agricultural education are in close contact with their graduates, teachers have an influential voice in the affairs of the department. This influence is desirable but because teachers do not have the time to carefully identify their needs, it can be undesirable. Unfortunately, teachers' needs for instructional planning are largely determined by the pressure of unreasonably heavy class schedules and a pressing, hard-to-describe feeling among teachers to be in charge of every class and to "cover" a "respectable" amount of subject matter. In other words teachers are so busy taking care of their needs they do not have the time to be concerned about the individual needs of their students. Teachers of agriculture, because of the nature of their programs, are open for less criticism than most other teachers. But they do share the basic problem with their academic colleagues.

Most instructional units of the type that are generally available have been initiated and largely developed by teacher educators. It is only natural and logical these units would reflect the past experiences of the former secondary teachers who compose most teacher education faculties. Consequently, we can account for the frequent use of the approach to unit planning that centers on a logical organization of subject matter which caters to the teacher's needs.

Let's look for a minute at the type of unit described above. A typical objective might be "to develop an appreciation for how plants grow." How does a teacher help a student to develop an appreciation? Does he do it by teaching the student to grow plants? If so, why shouldn't "growing plants" be the objective? To carry the analogy a step further, having learned how to grow one plant, does a student appreciate how all plants grow? Aren't appreciations long-range outcomes? If so, wouldn't learning activities be more meaningful if they were based on more specific objectives which are simple and clear to the student? For high school students, this seems to be especially true.

Successful teachers know that a unit of instruction must center on the needs of the student as well as the needs of the teacher. But the student's needs must come first. Even those teachers who develop and use subject-matter oriented units admit this fact. Yet, we have only a few functional units generally available. There are several reasons.

It takes time to identify student needs and to psychologically organize student learning activities. Heavy, eight o'clock to four o'clock teaching schedules, common for high school teachers, do not encourage the careful planning necessary to accomplish such organization. Individual differences among learners is a real problem. Some teacher educators say the best we can hope for is to suggest useful references and student activities and let each teacher do the rest. There is much evidence to support this conclusion if we are concerned only about the teacher's needs. But what about the student's needs? Isn't there something that can be done to make available to students the facts, facilities, and experience opportunities that will permit them to rapidly achieve instructional objectives? Teachers complain about the myriad of sources of information and the conflicting facts they encounter in different references. It is no less a problem to students.

A carefully prepared source listing is an aid to teachers but it is not an answer to all his needs. It is very questionable how many teachers will take the time to purchase and use the extensive lists of source materials frequently found in such units without some form of encouragement or instruction. In this approach the most difficult problem is avoided, that is, the evaluation and organization of supporting technical information that undergirds the key problem areas in a unit of study. If instruction is going to be effective at the high school level, a careful evaluation of subject matter to determine what is and what is not of consequence to the learner must be made.

Field-testing has proven to be an effective means of ensuring the validity of unit planning. It adds two very important steps to the sequence for developing a functional unit of instruction as shown below:

1. Selection of a realistic unit and meaningful problem areas for study
2. Evaluation and organization of technical information and supporting facilities and equipment, and the development of a resource handbook
3. Exploration of alternative learning activities and the development of a teacher's unit plan
4. Evaluation of unit materials in schools where they are to be used
5. Introduction of materials to teachers through inservice education classes

The job of identifying a unit and key problem areas is basic. If the vocational objectives of the students are clearly seen, the job is much easier. For example, a unit on turf grass maintenance should help a student learn how to maintain lawns, golf courses, athletic fields, etc. The student sees the problem of maintaining a lawn, golf course, or athletic field as a vocational goal. On the other hand, if the unit is centered on a logical organization of the subject matter, such as fertilizing, mowing, watering, etc., then the student may not clearly see the maintenance as his major objective. Even the teacher can become so engrossed with the science of fertilizing, mowing and watering that he forgets the student's needs.

Evaluating and organizing technical information and utilizing supporting facilities and equipment is a long and laborious assignment. It requires the skill of an experienced teacher, the knowledge of a technical specialist and the special training of a curriculum specialist. The aim is to reduce the technical information to its simplest form and relate it to the objectives, and to note the facilities and equipment needed for proficiency. Information is organized into a student resource handbook. The unit is usually divided into key problem areas.

Teachers can profit from an exploration of possible learning activities. Although all teachers have individual techniques, most can benefit from the methods of other teachers. Consequently, a teacher's unit plan which describes the teaching situation, outlines the objectives, suggests advance teacher preparation, offers alternative student activities, and lists references, sources, and teaching aids is of considerable value.

No unit of instruction is really completed until it has been used by those for whom it was designed. Afterwards it must be revised before it can be disseminated. To omit this step is to seriously reduce the value of the unit.

Finally, it is a mistake for teacher educators to assume that because they spent much time preparing a unit teachers will use it. Teachers need to be introduced to new units. Inservice teacher education courses are ideal for this purpose. The support and enthusiasm of supervisors is essential. Frequent visits to schools where the unit can and is being used are also helpful.

There is much evidence to support the hypothesis that functional units of instruction, developed in the manner described, can answer many of our current curriculum ills. The teaching profession could profit greatly by an increase in the number of curriculum specialists on teacher education faculties. The development of instructional units is a science which requires considerable skill. It is not a part-time duty to be added to the responsibilities of busy teachers. It deserves the full-time attention of creative people. Perhaps what we need are regional curriculum laboratories to properly emphasize the development of functional units of instruction.