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REFLECTIONS AND PROJECTIONS

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PART I

Educators, parents, students, and others interested in the education of our citizens debate the need for replanning and/or restructuring our education institutions. Mass media address themselves to the need for RELEVANCE in today's schools. Education researchers are developing the "New Math", "New Physics", "New Social Studies", "Organic" and other curriculum efforts; defining behavioral objectives; experimenting with programmed learning, computer-assisted teaching, individualized instruction; and other presumed innovations. Some vocational educators are advocating the application of the "cluster concept". Agricultural educators are broadening vocational agriculture to include the preparation of persons for all occupations involving knowledge and skills in agricultural subjects whether or not such occupations involve the work of the farm or of the farm home.

A review of the literature suggests that each generation has debated the question of what should be taught in our schools, who should do the teaching, what methods of teaching should be used, and how the programs and students should be evaluated. For example, one can assume that Horace Mann, John Dewey and others were not willing to accept the *status quo* or they would not have devoted so much time and energy to the restructuring of the American educational systems of their days. Dr. Rufus Stimson was an innovator when he introduced the project method in 1905 as a new, improved method of teaching vocational agriculture – a method later adopted by many other fields of study. During the 1910-1920 era, Dr. A. M. Field of the University of Minnesota introduced the "Integrated Course of Study" model for curriculum development in vocational agriculture. Field emphasized that the interests, needs, aptitudes and abilities of the individual student were of paramount importance in designing curricula. He recognized that it is the student who learns, and that it is the function of the teacher to guide the student through a series of learning experiences uniquely appropriate to that particular student. Field's philosophy was characterized by expressions such as "Teach farming the way good farmers farm", "Take the boy from where he is to where he ought to be", "Teach agriculture as a learning by doing process", and "Agriculture should be taught on a year-around, seasonal basis". Dr. Field defined the integrated course of study as one which best integrates the individual with his environment. Thus, the integrated course of study is a highly student-centered curriculum model or design rather than one which is job or subject-matter centered.

Most vocational educators would accept the definition that a curriculum is a body of prescribed educative experiences under school supervision, designed to provide the best possible training and experiences to fit an individual for the society of which he is a part and to qualify him for a trade or profession. That is, a person's educational experiences should prepare him to live and to earn a living in our society.

BASIC COMPONENTS OF PROGRAMS OF INSTRUCTION

The three components basic to all teaching-learning systems, models or designs are (1) the *input* or student, (2) *learning* experiences, that is the curriculum, and (3) the *output* or graduate of the program. Remove or omit any one of the three components and the education process or system does not exist.

Agricultural educators pioneered, ably demonstrated, and successfully used the "Problem-Solving Approach" to program planning. The key points in this model are four questions: (1) Where are we? That is, where are the students now with respect to their abilities, attitudes, interests, skills, etc.; (2) Where do we want to be? What should the end products "look like"? What skills, knowledges, attitudes, etc. should the students possess after completing the curriculum?; (3) How do we get there? What learning experiences should be included in the curriculum? What methods and materials of teaching should be used?; and (4) How are we doing? Has the curriculum actually produced the desired changes in behavior (learning) in the student?

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An adaptation of the problem solving approach to program planning is the Program Planning Flow Chart. The first edition of this program planning aid was developed by Teske in the early 1950's. In a sense, it represents an early application of the systems approach to planning programs of vocational education. The Programs Planning Flow Chart has been successfully used by vocational educators in agriculture, aviation, health, and other vocational education areas. The Flow Chart depicts the planning of vocational education programs as a step-by-step process with each major step, and its respective sub-steps, occuring at an optional point within the teaching-learning process. The major steps, in sequence are: (1) Specifying the philosophy and concepts on which the program is to be based.(2) Identifying the students to be served with respect to their academic, social, psychological, economic, educational, and physical characteristics and the subsequent specification of each student's needs for education and training. (3) Specifying the knowledge and skills required by the individual for successful exploration, selection, preparation, establishment, and adjustment within or out of his chosen agricultural occupation and job. (4) Formulating a course training standard specifying the characteristics of student input, the specific knowledge and skills in which he will receive training; and the level of proficiency required of the student (student performance objectives). The course training standard specifies the qualifications of the graduate on his completion to provide the training specified by the course training standard, (5) Acquiring the human, physical and financial resources necessary to implement the planned program of instruction, (6) Implementing the program on instruction, (7) Evaluating the individual student and program to ascertain whether the student can perform as specified in the Course Training Standard, (8) Replanning to upgrade and improve the program of instruction.

Today's agricultural educator, whether he is a vocational agriculture teacher, teacher educator, or supervisor, must be knowledgeable and competent in how to (1) *identify* and *recruit* persons needing vocational agriculture, (2) *assess* the characteristics and capabilities of prospective and currently enrolled students, (3) *develop* vocational agriculture programs, curricula and courses of study including work experience activities, (4) *develop, use* and *evaluate* instructional materials, practices and educational technologies, (5) *develop* and *use* vocational trainee evaluation devices including tests and other measurements, (6) *plan, develop, use* and *evaluate* training facilities and allied equipment, (7) *provide* effective guidance, placement and related personnel services to vocational agriculture students, (8) *develop* and *use* effective organizational and administrative relationships and supervisory procedures, (9) *evaluate* the effectiveness of vocational agriculture programs and (10) solve other problems involved in the teaching-learning processes inherent in quality programs of agricultural education.

WHERE HAVE WE BEEN – WE ARE A PRODUCT OF OUR PAST

"The Student Comes First" has been, is, and must be the basic characteristic of high quality programs of vocational agriculture. Today's programs have not evolved by chance. They exemplify the current state of the art developed over the centuries in the quest for relevance in designing programs to meet the needs of persons who desire and can profit from instruction of agriculture. Man discovered early in his history that by work he could obtain more palatable foods, comfortable clothing and shelter. As man learned to work, he discovered that some individuals had the ability to perform certain tasks better than others. This lead to the selection of youth and adults with special abilities and their assignment to certain jobs. This, in turn, led to the need to train individuals for these jobs. Therefore, because all early men were agrarians, we may conclude that vocational training in agriculture is nearly as old as man himself. More specifically, we know that by around 4000 B.C. the men of the Nile Valley had learned to irrigate their fields; grow barley, wheat and flax; and to use domesticated animals for food and work. Historians tell us the concept of "learning by doing" was used during Cicero's time in teaching youth to farm. We can assume training for farming was being conducted in America as early as 1621 for it is well known that Squanto, the Indian Chief, taught the Pilgrims how to place a fish under each hill of corn as a way to improve corn yields. In 1642, the Massachusetts Bay Colony enacted an apprenticeship law requiring that each child be taught a trade and instructed in reading, the principles of religion and the laws of the Colonies. Thus, our forefathers conceived of general and vocational education as being inter-related in the total process of education.

In his first message to the Congress, George Washington urged the establishment of a national university in which there should be a chair of agriculture entrusted with the responsibility of diffusing information to farmers. In 1794, the Philadelphia Society For the Promotion of Agriculture appointed a committee to prepare a plan for extablishing a state society for the promotion of agriculture, connecting it with the education of youth in the knowledge of farming. The committee suggested, among other things, that the common schools of the State be used to educate the farmer in his business, that the school houses be used as the places for the farmers' meetings, and that the schoolmasters combine the instruction in agriculture with other parts of education. In 1846 the Buell Institute was organized at Lowell, Illinios. The major topic of the first meeting of this farmers group was "The Mode of Cultivating Corn". Each farmer was requested to keep a record of each crop he planted, what cultivation practices he used, and to report the results he obtained.

Clearly, 1862 was a significant year in the history of agriculture education in the United States. The Homestead Act provided a system for the settlement and development of the Nation's farmlands. The Department of Agriculture was created "to acquire and diffuse among the people of the United States useful information on subjects connected with agriculture, in the most general and comprehensive sense of the word . . ." The Morrill Act provided for the establishment of a comprehensive system of scientific, technical, and practical higher education where the leading objective is, among other things, to teach such branches of learning as are related to agriculture and mechanic arts to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

Some agricultural educators characterize the 1885-1910 period as the era of the agricultural high schools. The first of the agricultural high schools was established in 1888 at the University of Minnesota. The aim of this school was to educate persons to become good farmers and housewives as well as useful citizens. Each student was required to engage in work of the farm or in the home during the summer months. Supervisors from the school made "supervisory visits" to the students. During the same period, in 1901, Corn Clubs were started in the rural schools of Minnesota under the direction of the County Superintendent of Schools to make education more meaningful and to motivate boys and girls from rural areas. In 1903, the National Educational Association suggested that the larger, consolidated rural schools of America should teach nature study, elementary agriculture and handwork; and that the agricultural colleges should prepare teaching materials for use in elementary and secondary schools.

A philisophy and concepts were emerging as a base for future programs of vocational agriculture. In 1909, New York established a system of state-aided local public schools for the study of agriculture, mechanic arts and homemaking. The New York plan included day schools, part-time schools and evening school classes. It also provided for local advisory councils to consult with school boards on matters relating to instruction in vocational agriculture.

In the same year, 1909, Dean Davenport of the University of Illinois presented a paper at the annual meeting of the Association of Agricultural Colleges and Experiment Stations. He expressed the view that vocational agriculture should be placed within walking or riding distance of every farm boy. He advocated (1) that the instruction in agriculture, including horticulture and forestry, should be a part of the existing public secondary education system; (2) that the unity of our public educational systems should be maintained, but that the curriculum should be flexible enough to meet the various needs of people, (3) that the standard of the curriculum of secondary schools having agriculture courses should conform in a general way to those adopted for the general education system of each state; and (4) that the standard agriculture courses, whether in the ordinary high schools or in special schools should not be narrowly vocational, but should aim to fit the pupils for life as progressive, broad-minded, and intelligent men and women, citizens and homemakers as well as farmers and horticulturists.

Philosophy and basic concepts continued to emerge with the expansion and improvement of programs of vocational agriculture in the public schools during the 1910-1920 decade. As noted earlier, during this period, Dr. A. M. Field began formulating his Integrated Course of Study model which he defined as that course of study which best integrates the individual with his environment – a model which had "the student come first". The 1910-1920 decade also saw the emergence of H. M. Hamlin, W. F. Stewart, R. M. Stewart, A. K. Getman and others as leaders in vocational education in agriculture.

The Smith-Hughes Act of 1917 formalized in law the prevailing concepts of that era. In addition to other provisions, the Act provided for the cooperation of Federal and State governments through a State plan for the promotion of vocational agriculture, and provided for cooperation with the States in the preparation of teachers of vocational agriculture. The Act specified that the training: (a) must be designed to be fit for useful employment, (b) be of less than college grade, (c) under public super-

vision or control, (d) be designed to meet the needs of persons over 14 years of age who have entered or are preparing to enter the work of the farm or the farm home, and (e) that such schools shall provide supervised practice in agriculture, either on a farm provided by the school or other farm, for at least six months per year.

In 1928, the National Organization of Future Farmers of America was organized of, by, and for boys studying vocational agriculture in public secondary schools under provisions of the National Vocational Education Acts. The foundation upon which FFA continues to be based includes leadership and citizenship, cooperation, service, thrift, scholarship, improved agriculture, organized recreation, and patriotism. The accomplishment of the objectives of the FFA results in the development of the total individual in harmony with the objectives of general education, vocational education, and vocational education in agriculture. The role of the FFA as an effective teaching-learning device was recognized in the George-Barden Act of 1946 which appropriated funds "for vocational education in agriculture, including supervision of vocational agriculture teachers of the activities, relating to vocational education in agriculture, of the Future Farmers of America . . .".

Part II of this series will appear in the July, 1969 issue of the *Visitor*.