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VOCATIONAL AGRICULTURE: SOME OBSERVATIONS AND PREDICTIONS

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The future of Agricultural Education is difficult to predict for the 1970's, but I don't suppose predictions have ever been simple. I suspect that in 1917 when the Smith-Hughes Act was passed predictions would have ranged from pessimistic to extremely optimistic possibilities for growth and outcomes. I submit that in 1971 predictions for the future are very little different.

The early architects of the program were dedicated men with a sincere conviction that rural students associated with the field of agriculture could contribute to society and benefit from educational programs designed for their particular needs. As I listen to the young agriculture instructors of today I find them equally as sincere and dedicated. They see enormous opportunity for good educational programs to enhance student opportunities for a livelihood in the broad field of agriculture.

Change is certainly taking place and at a more rapid rate each year but if we keep in mind that basic principles do not change, adjustment to the application of these principles may be less difficult.

In 1937 when I was given the responsibility for a classroom, I was 19 years old and armed with one year beyond high school of intensified teacher preparation. I was the classroom teacher, the curriculum director, the guidance counselor, the business agent, the administrator and, yes, even the custodial staff (janitor was the title then) in a school of 28 students ranging over the first eight grades of public education for a rural community. Certainly there have been many changes since that time, but most of the change has been in the educational jargon and not in basic principles.

Today we speak of **modular scheduling** as a sweeping innovation but how else could a one room rural school be conducted? With eight grade levels in one room and some five areas of instruction for each grade, a minimum of forty periods per day would be required if a daily class schedule for each area was to be followed. The program that was actually followed resembled present day modular scheduling in many ways.

Ungrading is supposedly a relatively new concept. Again, in principle, this is the way the one room school functioned. In fact, they were called ungraded schools and it has required legislative action to abolish them.

We read of "new" programs of **individualized instruction**. Any teacher of the vintage that might have had ungraded one room rural school teaching or student experience will be the first to tell you that there were no groups — nor could you find any two students — who were moving through the system at the same pace nor on the same program.

Dr. R. Paul Marvin, Chairman

The term **accountability** is the "in" term used to threaten educational programs today. Discussions along this line include the terms **performance standards** or **performance contracting.** Here again this principle was very obvious in the one room rural school. The students of the so called seventh and eighth grades were required to pass State Board examinations. If a passing mark was not received students were not permitted to advance, hence the standard was either met or the student remained some place within the one to eight ungraded system. Of course

we did exactly the same thing that some of the private agencies have done when they have contracted to teach a standard. We gathered old examinations and taught them so that students would pass and the school and the teacher became accountable; they fulfilled the contract and the taxpayers assumed they were getting value for their dollar. The teacher's salary might even have been raised from $60 to $70 per month.

The previous comparisons are cited to reinforce the point that the many changes taking place in educational programs and particularly in agricultural education do not, and probably should not, depart from the proven principles that have guided agricultural education programs from their inception.

Successful vocational agriculture programs have been developed by determining the needs of the people in the community and proceeding to implement a program to meet those needs. The underlying principle being that the school and the program belong to the people and not to a teacher or group of teachers. In this respect agriculture programs have and must continue to change as the needs of students change, but the principle of basing instruction on need is sound.

A second characteristic which has been unique to vocational agriculture instruction, but is now being recognized by other programs, is that instructors teach students and not subject matter.

Instruction must be individualized. The central idea is to build individualized instruction around the problems of students. This is done through a series of four steps or stages which might be called basic procedure or methodology of teaching to insure individualized instruction.

The first step is to lead or direct each student through an **Analysis of the Present Situation.** This means that a student assesses his situation in terms of his own particular aptitudes, opportunities, interests, home and family situation, etc. as a basis for future decisions. It is not enough for the instructor to understand the student's situation; the student must understand himself as a starting point.

The second step involves **Establishing Goals** based on a realistic appraisal of the student's situation as described in Step One above. A student may establish more than one set of goals as, for example, a long range or ultimate goal, a four year goal, and a series of more specific goals for the year immediately ahead. This will provide a set of targets or benchmarks in planning a program of work and study. It is not so important **what** the goals might be as it is that the student has an aiming point for himself. Certainly these goals may change as the future becomes the present. But the idea of setting goals as of **now** and under prevailing circumstances is one essential in the teaching-learning process (see article by Dr. Martin McMillion in **The Visitor,** Vol. LV, No. 1, Jan. 1968, "Occupational Choice, Motivation, and Perceptual Psychology").

Step Three follows naturally and leads to the development and execution of a **Plan of Action** for reaching the immediate goals. In carrying out Step Three the student will master subject content and factual information, develop a mastery of the necessary skills and techniques and as a result will form attitudes that bring him to and through the "doing" stage of learning by doing.

The fourth step in basic methodology of teaching is **Periodic Evaluation.** This is done throughout the year with special attention to the annual evaluation. To make teaching and learning individualized it is not enough to understand the present situation as a basis for establishing goals and work toward their attainment. It is vital that progress be checked periodically. On the basis of such evaluation it will be possible to make revisions in goals and procedures as conditions change.

This series of steps may be summarized in the answers to four questions to be asnwered by each student. These pose a challenge to teacher and student alike.

Question 1. Where am I?
This, in essence, is the question to be answered in the analysis of the present situation. What are the interests needs, abilities, and prospects of the student? Careful attention to this question provides the basis for intelligent planning.

Question 2. Where do I want to go?
The goals set in response to his question chart the direction the student will go. To be meaningful the answers to this

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question will depend to a large extent on the answers to Question 1.

Question 3. How do I get there? To get from where a student is to where he wants to be requires a blueprint of activities and learning experiences necessary for advancement. Just as the analysis of the present situation provides the basis for establishment of goals, and just as goals chart the direction, so the plan of procedure will determine the progress that will be made.

Question 4. How am I doing? Mere mastery of subject matter and proficiency in skills and techniques are not enough to judge progress. Progress must be measured in terms of abilities developed **and** things accomplished. Periodic checking will help to keep goals reasonable and plans of action practical.

This basic methodology applies in production agriculture, off-farm agricultural occupation instruction or any other aspect of vocational agriculture and at all levels.

A third basic principle recognizes that students learn and retain more of what they have learned if instruction results in activity on the part of the learner. In vocational agriculture this is commonly known as "learning by doing".

One of the major problems faced by people of all levels of income is money management. A student can learn this by managing some money and learning to utilize capital inputs through credit. Whether a student is learning and earning through a supervised farming program or by off-farm occupational experience, the same opportunity exists to plan, budget, invest and evaluate financial progress. Skills needed to carry out a program successfully can only be acquired by actually performing the activities under the guidance of an able instructor.

A fourth inherent characteristic of vocational agriculture programs is that of utilization of community resources to increase the relevancy of learning. Not the least of these resources is the parent and other human resources. Advisory councils have proven to be assets to vocational agriculture programs for 40 years. In addition, farm lands, school land laboratories and forests, and agriculturally related business play a significant part in the education program.

CHANGES

The principles cited earlier are basic, but certainly we cannot say that there have not been some departures from them. Programs certainly have changed more in the last five or six years than in the thirty previous years. But if any of the changes have varied from the four principles cited earlier I submit that the outcomes have been undesirable in terms of effective teaching and learning.

Some of the changes have been organizational within the school system. These involve modular scheduling, semester or quarter courses in the high school and structured year-round instruction for adults. In both the modular scheduling and semester course organization the potential to meet individualized needs is enhanced, but I have observed some tendency particularly in semester courses to teach subject matter and not students and to neglect some of the opportunities to involve parents and community resources. There is a tendency for instruction to become academic.

The changes in adult programs in Minnesota have been the results of analyzing farmers' needs. Management in terms of the available individual resources is the need and consequently the Minnesota farm management instruction program was developed as an integral part of vocational agriculture.

Other changes of a content nature include the addition of agriculture occupation programs to prepare students for occupations in related off-farm agricultural fields. These changes have been in response to expressed needs by schools for occupational instruction in horticulture, natural resources, agriculture mechanics, etc. With these changes came a different student body mix. Urban boys and girls are finding interest in courses within this broadened orientation. The broad field of agri-business is said to employ one-third of the nations labor force. The same principles of sound learning situations mentioned previously apply to any program that will meet the educational needs of all students.

THE FUTURE FARMERS OF AMERICA

The FFA has been an integral and effective tool in applying the basic principles of teaching and learning. The organization was founded over forty years ago by men of wisdom and foresight. The constitution, the ceremonial activities, leadership orientation, contest structure and the degree system has served farm boys very well. The time has come, however, when some rather sweeping changes are needed if the organization will serve the more heterogeneous student body in agriculture programs.

The genius and ability of the original authors of the program must be recognized, but at the same time we must recognize that conditions and objectives have changed. I believe that within the leadership of agricultural education today

we have men with the ability to adapt and plan an organization to meet the needs of the students being served today.

I would see two possible solutions to the youth organization problems for agriculture and agri-business students. One solution would be to virtually rewrite the entire FFA structure including constitution, ceremonies, creeds, degrees, contests, etc. keeping in mind the broadened student body of urban boys and girls, rural boys and girls who will not return to the farm as well as boys and girls who will return to production agriculturre. Another possible answer would be to work from a revised overall organization and develop subsidiary special interest branches. The subsidiaries may have common activities for specific areas of study such as forestry, horticulture, natural resources, and occupation programs. The subsidiary concept would seek to provide for the specific interests of students and yet bring them together for some of the educational experiences for cultural and social development such as leadership, cooperation, citizenship, etc.

The youth activities must be organized so that they are an integral part of the teaching program and not an extra-curricular activity. They must remain intra-curricular. One of the reasons the FFA organization has been more successful than extra-curricular "clubs" has been because it was interwoven throughout the entire instructional program. The subsidiary proposal would lend itself toward intra-curricular organization.

CONCLUSION

The adult farmer program based on farm business management has proven its worth and will continue to expand. Small business management education should, and very likely will, develop for those businesses, especially in rural areas, who do not have sufficient management information resources available. The responsibility for such instruction lies within the realm of agricultural educators because they have had the experience with farm business management and the principles involved.

As educational programs for youth in the agri-business complex continue to expand to meet the interests of students and the demands of the industry, agricultural education must continue to adjust to meet new community needs, keeping in mind the principles of (1) programs based on community needs, (2) student, rather than content, centered instruction, (3) activity on the part of the learner is necessary, and (4) education may be enhanced and made relevant by use of community resources.

The real key to the success of any educational program is the teacher. I have known teachers that could succeed in maximizing learning of students regardless of school organization or student body mix. Agriculture teachers must have the dedication and be willing to adjust and keep in mind the proven basic principles for effective education. If this is the case then the demand for their services in education program related to the broad concept of agriculture, will always exceed the supply as it has in the past fifty years.

Permanent Learning?

From Ken Nelson Associates, Advertisers, Minneapolis, Minnesota, comes an item of interest to teachers. Without suggesting it has any relationship to vocational agriculture, it is reproduced below.

We Forget in Rounded Curves

Just how much and how quickly we forget was documented by a German scientist named Ebbinghaus, who produced the classical "Curve of Forgetting". Ebbinghaus' curves will never be as famous as Raquel Welch's, but they reveal something too.

The classic Ebbinghaus memory curve measured the rate at which forgetting occurs. Testing himself with nonsense syllables, his "Curve of Forgetting" showed that after 19 minutes, only 58% of what he had learned was retained; after one hour 44%; after one day 34% and after 30 days 21%.