

A Reexamination of the Basics in Agricultural Education

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As I contemplated the many ways in which I might approach this moment - and I assure you it is a high honor to be asked to speak to you on this occasion - I reviewed the manuscripts of the previous mystery speakers. During this exercise it became apparent that the list of speakers was a veritable "Who's Who" in agricultural education. I do not purport to be in the same league as these giants of the profession.

Jasper Lee reminded us in his speech in 1979 that the first distinguished lecture was delivered by H. E. Bradford in 1930, followed by John T. Wheeler in 1931. If my calculations are correct fifty-three speakers have preceded me to this podium.

Then, in selecting a topic, I kept thinking of a story I heard recently about a fellow who died and went to Heaven. Upon arrival, he was welcomed by Saint Peter who assured him that Heaven was, indeed, a place where citizens had an opportunity to do that which they most enjoyed doing. Whereupon, the new arrival said "Well, I was in the Johnstown flood and I really enjoy talking to others about that experience." Saint Peter assured him that he would be given an opportunity to do this. The arrangements were made and he was told to talk to his heart's content, but "remember," Saint Peter added, "Noah is a member of your audience."

In reviewing topics of previous speakers, I discovered that McCracken reminded us that we are a program in need of academicians; Drake dealt with fantasies, facts, and futures; Cross reminded us of our roots; Love assured us we have a philosophy; Lee helped us to take inventory; and Anderson discussed standards on which our vocational agriculture programs are developed. I'll stop here, for I do not want you to get the idea that I am going to bore you by reciting the topics of all fifty-three speakers.

I mention this for two reasons. First, I discovered that we have always had an abundance of problems, issues, and concerns. In fact, when I first entered the profession some thirty-five years ago, every time I attended professional meetings, I would wonder whether or not we would still be in business the next morning after hearing of all the problems confronting us at the moment. But, survive we did and survive we have with a dynamic and viable program that far surpasses, perhaps, the fondest dreams of our early pioneers in vocational agriculture.

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Yes, we in education have always had and we will continue to have an abundance of problems. Just a little more than a decade ago the issue was career education. This concept was viewed by many as the vehicle by which the school curriculum would be refurbished and public education would become more responsive to the needs of all students. This approach was not, unfortunately, the panacea for educational ills. Today, education is back in the headlines.

As a result of reports by the National Commission on Excellence in Education, *A Nation at Risk*, and others, school leaders are again contemplating action needed to reconstruct the curriculum in order to make public education more responsive to the needs of students and to society. It appears the trend is toward an increase in the number of academic units required for high school graduation as a means of "curing" the ills of education. In fact, recommendation A of the National Commission on Excellence in Education (1983) is as follows:

We recommend that State and local high school graduation requirements be strengthened and that, at a minimum, all students seeking a diploma be required to lay the foundations in the Five New Basics by taking the following curriculum during their four years of high school: (a) 4 years of English; (b) 3 years of mathematics; (c) 3 years of science, (d) 3 years of social studies; and (e) one-half year of computer science. For the college-bound, 2 years of foreign language in high school are strongly recommended in addition to those taken earlier. (p. 24)

I interpret this to mean that the "New Basics" referred to are primarily more math, English, science, and social studies.

On the other hand, Dr. John I. Goodlad (Watkins, 1983), Dean of the Graduate School of Education at the University of California at Los Angeles, said his research "does not support the view that the elementary and secondary-school curriculum would be improved by a return to the basics. In fact, the schools never left them" (p. 7). He went on to say:

What the schools are not doing -- and what they should be doing -- is using the curriculum to develop the intellectual abilities of students, such as "the ability to think rationally, to use and evaluate knowledge, intellectual curiosity, and desire for further learning" (p. 7).

As the debate continues over American education, we in vocational agriculture need to articulate our concerns relative to the "back to the basics" issue. Before we become too involved in an assessment of the merits or demerits of academic basics, however, it behooves us to review and reassess the merits of our own instructional area. I suggest that the potential contribution of a sound vocational agriculture program constitutes a highly defensible basic component of a viable educational program. Further, to dismiss these values in response to a call for a return to the basics would constitute negligence on our part.

Much of the success of agricultural education can be attributed to the excellent foundations made by the early pioneers engaged in establishing the profession. The principles and practices they so arduously worked out and employed are still basic in the development of programs today. McCracken (1983) suggested that there is a body of knowledge and a set of attitudes characteristic of our profession. He asserted that "we have believed in supervised occupational experience programs, the intracurricular FFA organization, year round programs, problem-solving as an approach to teaching and learning, the college-prepared teacher, and continuing education for adults" (p. 4).

It seems to me that the basics most responsible for the success of the vocational agriculture program have been (a) the supervised occupational experience program to make instruction functional and realistic, (b) curriculum design and approach emphasizing problem solving and rational thinking, (c) the Future Farmers of America organization to provide incentive and motivation, and (d) well prepared teachers with requisite skills to utilize these basic tools. Let's examine each of these in some detail.

The Supervised Occupational Experience Program

The acceptance of the supervised occupational experience program (SOEP) as a basis for a highly functional instructional program has been a chief contributor to the success of vocational agriculture. This concept has withstood the test of time and has been used as a curriculum development model in other areas of vocational education.

The "home project plan" (Stimson & Lathrop, 1954) was first used by R. W. Stimson of Massachusetts in 1908. Students were expected to have projects consisting of crops and livestock at home rather than school owned projects. With this arrangement students would be able to make practical application of what they studied in school to a real-life situation in which they were personally interested.

The following year, in 1909, when C. A. Prosser (Stimson & Lathrop, 1954) came to Massachusetts as deputy commissioner of education and observed Stimson's "part time work plan" (p. 587), he was, no doubt, impressed with what he saw. For in these observations probably came the first and second theories of vocational education which Prosser and Quigley (1949) state as follows:

1. Vocational education will be efficient in proportion as the environment in which the learner is trained as a replica of the environment in which he must subsequently work.
2. Effective vocational training can only be given where the training jobs are carried on in the same way with the same operations, the same tools and the same machines as in the occupation itself. (pp. 217-218)

The authors of the National Vocational Education Act of 1917, commonly referred to as the Smith Hughes Act, were undoubtedly in-

fluenced by Stimson's work. They recognized the necessity of practice in realistic settings and wrote into the Act (Moore, 1979) "that in order to receive benefits of such appropriations ... such schools shall provide for directed practice in agriculture on a farm provided for by the school or other farm, for at least six months per year" (p. 4).

Many adaptations and modifications have been made since the concept was first conceived by Mr. Stimson. Today, we readily accept the SOEP as a basic necessity if we are to prepare youth for proficiency in agricultural occupations. Our instruction is intended to be vocational in nature. In order for instruction to be vocational, competencies needed by persons in agricultural occupations must be developed. Properly selected supervised occupational experiences can develop these competencies. In addition, the SOEP provides true-to-life problems for study as well as a realistic means of applying problem solution.

Quite often the specific relationship of the SOEP to the instructional program has been debated. The debate has centered around whether the instructional program should grow out of the SOEP or whether the SOEP should be planned around the instructional program. Rather than stating unequivocally that the instructional program grows out of the SOEP, I would propose that the SOEP should be carefully planned in keeping with the educational needs and vocational plans of the students. If this is accomplished, the instructional program may be planned around the SOEP. But the SOEP should be designed to provide specific kinds of learning experiences.

The SOEP should not be viewed merely as a source of income for students, as a miniature experiment station, or as just a vehicle for students to develop psychomotor skills. It is much more than all of these. It is an arrangement whereby students are placed in the ideal learning situation -- a problem situation -- which results in the most important learning attainable, the ability of an individual to identify and solve problems of life.

McCracken in his address last year reminded us, "There is an alarming trend of lower and lower percentages of students with SOE programs with evidence indicating that more than 40% of our students have no SOE project during every year they are enrolled" (p. 6). Several studies (Lee, 1980) over the last few years have revealed a declining interest among teachers to make use of the SOEP in their programs. There are other questions that have been raised concerning SOE programs, such as have we continued to place undue emphasis upon SOE programs being home based? Is it realistic to expect students who live in mobile home parks or apartments to have occupational experience programs at home? Have we over-emphasized production agriculture in our deliberation about SOEP to the exclusion of some of the more recent additions to our curriculum such as natural resources, ornamental horticulture, or agriculture sales and service occupations?

We have been searching for solutions to these and other problems associated with SOEPs for some time. A national workshop fo-

cused on this issue in 1982 and another is planned for 1984. If vocational agriculture is to continue to be a viable component of the secondary school curriculum, ways must be found to enable all students to have occupational experience programs either at home, through school provided facilities, through placement, or by some other means.

Problem Solving Approach

The problem solving approach to teaching has become almost synonymous with agricultural education. This concept first made the educational headlines (Stimson & Lathrop, 1954) at about the time Stimson was trying out the "Home Project Plan" in Massachusetts. Dr. W. W. Charters of Missouri is credited with first utilizing this approach about 1909. He held that education ought to function in satisfying needs, by solving problems in those needs. He had been a student of John Dewey at the University of Chicago and admitted to being a "Dewey disciple." Dr. Charters visited Massachusetts and observed Stimson's "home project plan in operation," whereupon he remarked, "It seems to me the project method is the problem method raised to the nth power" (p. 601). We have long recognized that one of the most fundamental values of the SOEP has been that of providing the vehicle for utilizing the problem solving approach.

If students are to learn how to make decisions and think rationally about problems in agricultural occupations, they must have experience in that occupation. A student must be placed in a situation in which he or she encounters real problems that demand solution. Once the problem has been identified, alternative solutions are projected. Then the student, under the supervision of the teacher, undertakes to find the best solution through classroom and, perhaps, laboratory exercises. The student may read, discuss, study, and evaluate until a satisfactory solution is determined. The next step is to put the solution into practice under supervision and observe the results. The student is then in a position to evaluate the practice -- and perhaps even to generalize regarding the practice and the situation. Students in a situation such as this have learned. But what have they learned? To feed pigs? Fertilize bedding plants? Yes, they have found out how to do these specific things, but in actuality they have accomplished a great deal more. Students have learned to think through a problem situation, to think for themselves and not rely upon someone else to furnish the answer.

Whenever students have reached the point when they can think through a problem to find a solution, then they have achieved the most important objective of the instructional program of vocational agriculture -- or of the entire school curriculum for that matter. The problems with which students are confronted will change, but the scientifically sound problem solving procedure they have practiced will aid them in solving other problems -- provided they have actually learned to use it.

I share the concern expressed by many in our profession who feel that this approach to teaching is being rejected by numerous teachers of vocational agriculture. Reasons cited (Auville, 1982) for

this rejection include changes in the agricultural industry, changes in the vocational agriculture curriculum, and changes in the type of students enrolled in vocational agriculture classes (p. 7). Irrespective of the reasons given for rejecting this approach, I am inclined to agree with Crunkilton (1982) that "agricultural educators must return to using problem solving as the way to teach or we as a profession must be willing to accept that our program is well on its way to becoming a nonvocational program" (p. 4).

Future Farmers of America Organization

The Future Farmers of America organization is a third crucial basic in the program of vocational agriculture. It has been so well integrated into the curriculum until we quite often hear some people refer to the "FFA teacher" rather than the vocational agriculture teacher. We have viewed the FFA as the vehicle through which critical affective behaviors and human relations skills may be taught. Certainly the FFA has caught the imagination of the American public and enjoys support unequalled, perhaps, by any other youth organization in the public schools.

The FFA has provided nourishment for the tremendous growth of the entire vocational agriculture program. Although the FFA was conceived originally as an extracurricular or supplementary form of instruction, good teachers actually made it a part of the agriculture curriculum. Through their vision and effort, the FFA became an integral part of instructional program, making it richer, more practical, more meaningful and more challenging to thousands of vocational agriculture students. In short, the FFA built a strong program on the foundation provided by the supervised occupational experience program.

Vocational agriculture programs are based on an educational philosophy holding that all instruction must grow out of student needs and desire to learn. With this aim in mind, teachers have developed instructional programs based on the students' own problems. The FFA has provided an opportunity to add zest and enthusiasm to what was formerly a factual approach to learning. Even though we have experienced great success with the FFA, there are some current problems facing this basic of vocational agriculture.

The FFA program which has been ultra successful with production agriculture still has limited appeal for many students enrolled in some of the other taxonomy areas. Some of the students being referred to as "future farmers" whenever the occupation for which they are preparing probably has no connection to producing crops or livestock. This may be one of the reasons the percentage of vocational agriculture students who become members of the FFA continues to decline.

In 1966, 87% of the students enrolled in agriculture were FFA members; by 1970, only 79% of student enrollment were FFA members and in 1982 of the 618,145 secondary students enrolled in vocational agriculture, 475,858 were FFA members or approximately 75% (Future

Farmers of America, 1982). This means that almost one-fourth of the students in vocational agriculture do not become members of the FFA and, theoretically at least, are not taking full advantage of learning experiences provided through this component of the vocational agriculture curriculum.

There are other concerns with which we are all familiar:

1. In some cases, too much time is devoted to certain FFA activities at the expense of instructional time dealing with agricultural problems. This tendency creates an imbalance between the two parts of the curriculum. No teacher wants to turn out students well versed in parliamentary procedure but entirely lacking in vocational proficiency.

2. Some teachers have placed an unhealthy emphasis on winning contests. No student should be indoctrinated in the belief that winning first prize is more important than doing an economical, profitable job with a project.

3. In some cases, undue emphasis on contests has caused students to over-emphasize production at the expense of other factors that contribute to efficiency. The student who learns to produce maximum yields without due consideration of the costs involved is not being fitted for a successful career in agriculture.

Despite these apparent deficiencies, the many opportunities for enriching instruction through the FFA program far outweigh the weaknesses. Most vocational agriculture teachers would be reluctant to teach without having the FFA to augment their efforts. We as educators must continue to search for ways to overcome these weaknesses and make the FFA appealing equally to students enrolled in all taxonomy areas of the vocational agriculture program.

The Teacher

In any human enterprise, personnel is the most important ingredient. John I. Goodlad, (Watkins, 1983) commenting on the report by the National Commission on Excellence in Education said "if the schools are to be turned around, it will not be done by these reports. No commission from Washington, and no school superintendents or principals can solve the problems. They will only be solved at the local school level in the classroom by teachers" (p. 7). Teachers are the key, for they deal directly with the individuals the program is designed to serve. The other basics mentioned count as nothing unless there are competent teachers to use them in planning and executing quality programs of vocational agriculture.

Historically, teachers of vocational agriculture have held the BS degree and have completed a teacher education program. Coupled with this, we have emphasized the necessity of teachers continuing to keep up-to-date professionally and technically, resulting in teachers of vocational agriculture gaining a reputation of being among the most skillful teachers in the public schools. However, as a result of recent developments, this reputation appears to be in danger of being tarnished if not altogether lost.

We have been plagued with a shortage of teachers for several years and it looks as if this shortage will continue. In an attempt to overcome this shortage, I'm afraid we have tended to lower our standards, and when standards are lowered quality declines. One way in which quality has been affected has been the practice of employing provisionally certified teachers and/or non-degree teachers.

Moore (1980) asserted that this practice leads to a decline in FFA membership, a decrease in professionalism, a decrease in the supply of degree teachers and an overall decline in program quality (pp. 8-9). We have employed provisionally certified teachers in Georgia for several years and I agree with these assertions. A few excellent teachers have entered the profession through this means, but many become thoroughly frustrated before completing requirements for professional certification and seek other employment.

This issue was debated at the AVA Convention in 1975. As reported by Cross (1976), the thought prevailed at the time that the solution to the teacher shortage problem did not lie in lowering standards, quality should be maintained at all levels even at the risk of having fewer vocational agriculture programs. I have heard some supervisors say that they have found there are some things worse than a vacancy.

The other manner in which quality has been affected has been the acceptance of individuals into our teacher education programs who have no occupational experience in any area of agriculture. While many of these individuals have a sincere interest in agriculture, they are devoid of practical knowledge and basic skills needed for the job of teaching vocational agriculture.

The outlook is that we will face even stiffer competition in the future in attracting students with agricultural backgrounds into our programs. Dr. Chris Smit, (1983) Director of Resident Instruction, College of Agriculture at the University of Georgia recently stated:

Enrollments in Colleges of Agriculture have declined by 15 percent in the past four years. Each year more than 59,000 University and College graduates are needed to meet the scientific, professional and managerial positions of American agriculture. We are producing slightly more than 65 percent of what we need. At the other end of the spectrum, more and more agricultural scientists and educators who began their careers shortly after World War II are retiring. (p. 4)

I know in my home state this is a matter of some urgency with no simple solutions. What about yours?

Summary

We should all be concerned about what will happen to vocational agriculture as the movement to "return to the basics" is debated by

legislators, school leaders, teachers, and the general public. In *a Nation at Risk*, (1983) the authors refer to the promise first made on this continent that:

All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgment needed to secure gainful employment and to manage their own lives, thereby serving not only their own interests but also the progress of society itself. (p. 8)

I think all will agree that this is a worthy promise. However, there is considerable discussion on how education will make delivery on this promise. Will the promise be realized by requiring more and more math, English, science, and social studies?

I believe this promise includes some of the basics which have characterized vocational education instruction. I further believe that we in vocational agriculture have a unique set of basic tools which can be utilized to make a significant contribution toward the realization of this promise.

We in teacher education need to provide the leadership required to resharpen these tools, to restore the cutting edge where it has become dull, in order that vocational agriculture will continue to be a viable component of a functional public school curriculum.

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