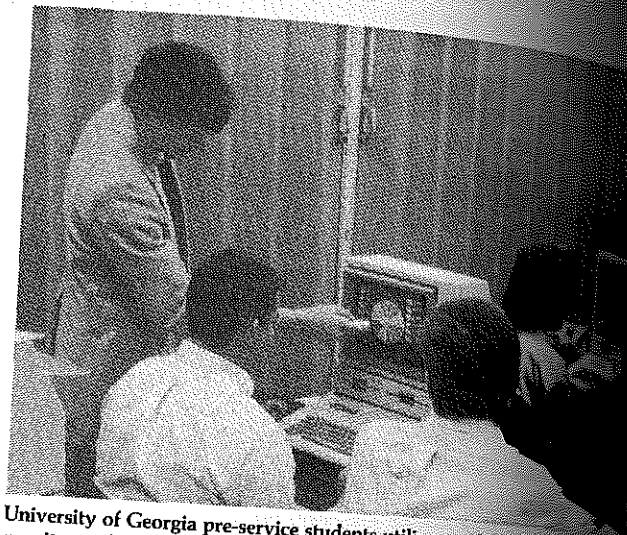


Stories in Pictures



AVA Agricultural Education Policy Committee Executive Members meeting with Dr. Guiton, Assistant Secretary for Vocational and Adult Education. Shown left to right: Dr. Kirby Barrick, Secretary; Dr. Dewey Stewart, Vice President, AVA; Dr. Bonnie Guiton; Dr. Phillip Zurbrick, President AATEA; Mr. Duane Watkins, President NVATA; Mr. Tommy Johnson, President NASAE. (Photo courtesy The National Council)



University of Georgia pre-service students utilize graphics software in community studies. State Agricultural Education Specialist Dennis Ashworth provides instruction. (Photo courtesy Maynard J. Iverson)



Nursery Judging Team with ribbons. (Photo courtesy Katherine Day)



Kentucky FFA Leadership Training Center. (Photo courtesy Katherine Day)

The Agricultural Education Magazine

July, 1989
Volume 62
Number 1

HIGH SCHOOL YOUTH WITH AN INTEREST IN AGRICULTURE



PLUS



THE EXPERIENCES OF AN AGRICULTURE/FFA PROGRAM



EQUALS



YOUNG ADULTS WITH BRIGHT FUTURES



THEME: Value Adding

THE AGRICULTURAL EDUCATION MAGAZINE



July, 1989

Volume 62

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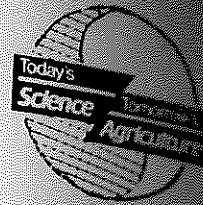
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Occupational Value Adding



By PHILLIP R. ZURBRICK, EDITOR
(Dr. Zurbrick is Professor in the Department of Agricultural Education at The University of Arizona.)

This issue of *The Agricultural Education Magazine* is devoted to the theme "Value Adding." The concept of value adding has been used for a number of years in the fields of production and marketing, but not nearly so extensively in education. The concept is very simple. A person determines the increased value of a product or commodity resulting from transportation, storage, processing (change of form) or enhanced utility. The calculations involved in determining the value added for an agricultural commodity are rather simple. The selling price minus the purchase cost represents the increased (added) value. When the value added is greater than the cost of the activity involved, you have value added to the product, but have done so at a profit for the owners of the business.

The problem we have in using the value added concept in education is placing a value on the students prior to the educational experience and again after they have completed an educational program. Dr. Persons' article on value adding for adults in the Farm Business Management program approaches the concept as closely as any in education using dollars and cents calculations. Many times the concept of value adding in education must rely on the self perceived value of the program to the students who were enrolled. If these perceptions are a reality for the individual, they can be influenced and/or changed rather quickly by a variety of factors not directly related to the educational program.

The vocational agriculture program can and does add value to the students enrolled in a variety of ways. Many of these are discussed in this issue. If students were cognizant of this concept and were encouraged to actively pursue their education in that manner our educational program would be quite different! Can you imagine the changes that would occur in the school curriculum if every teacher would identify how their daily lesson would add value to the students and would communicate that to their classes? How would teachers of agriculture at the secondary school level market their programs? Would we be moving away from supervised occupational experience programs and towards supervised agricultural experience?

Occupational value adding can be defined as the increased worth of the individual from an occupational standpoint. More specifically, it might be defined as the increased productivity of the individual resulting from education or experiences which allow the individual to be a more effective and efficient worker.

Surely there can be no question that our competitiveness as a society is directly related to the productivity of our citizens. David Kearns of Xerox has commented, "Education is a bigger factor in productivity growth than increased capital, economics of scale, or better allocation of resources." It is refreshing and encouraging to hear business leaders acknowledge the essential centrality of education to productivity and the economic well-being of our society. Hopefully, this signals a substantive change in the way the

country approaches education. For this to become a reality, the country must develop an enlightened mentality toward education.

We must recognize the inadequacy of our present mentality toward education and the resulting effect on our productivity. An estimated 27 million United States adults are "fundamentally illiterate" which allows them to function at only the most minimal levels. When you consider that we have some 72 million adults in this country, we have a situation in which one out of three adults do not possess adequate skills to find jobs, or the flexibility to meet changing job requirements. It is essential that prospective employees have basic literacy skills. Further, these individuals must possess an attitude that work is important and needs to be pursued diligently. Industry is losing more in productivity via employees who have poor work ethics than is being lost by employees who lack basic literacy.

The narrow-minded employer who fails to recognize the essentialness of developing individuals with a strong work ethic leaves the impression that vocational education is not necessary. I would challenge the business leaders who advocate only basic academic education to take students with poor work attitudes and make them into an efficient, dedicated, labor force. While it can be done, the cost by comparison with a similar group of people possessing a positive attitude towards work is significantly higher.

Vocational education programs in agriculture that help students develop a positive understanding of the work ethic are contributing significantly to both the students future and that of our country and our own standard of living. Students need to understand that work is psychologically necessary. Further, we must develop the idea that the measure of a person is not what they do, but how well they do it. We need to recognize and reward teachers who are effectively developing occupational value adding among students in their vocational agriculture programs.

About the Cover

The drawing for the Cover was provided by Dr. Lou E. Riesenberg, Theme Editor and Head, Department of Agricultural and Extension Education, University of Idaho, Moscow, Idaho.

Agricultural Education - Value Adding

It seems reasonable to assume society would survive if agricultural education was discontinued at the secondary, postsecondary and the university level. To assume differently would be quite pretentious.

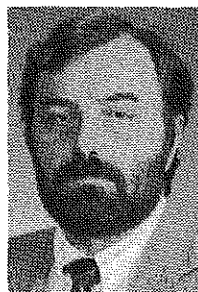
However, it would be portentous to assume the lives of the students that have and will participate in agricultural education would be considerably different; the lives of those students would have less value to the individual and less value to the constituent society in which those students participate.

Without agricultural education, less value would be added to the lives of those students; value that cannot be added by any other form of education or training. While the previous statement may be very bold to some, those of us in agricultural education believe it to be fact. Notwithstanding, agricultural educators encounter some difficulty when attempting to convince the rest of society of the value added by agricultural education.

American society invests in public education for two basic reasons. Individuals are important to our society, and therefore, as with health and safety, we provide some form of public education to each individual within our society. Education is good for the individual. The education of individuals of our society is also good for society as a whole. This publicly supplied education adds value both to the individual and also to society as a whole. American society has never wavered on this matter since public education was instituted.

American society has debated and deliberated extensively on the type and form of the public education it provides. History abounds with examples of debate within society concerning the form and type of public education to maximize society's investment. The debate has focused on the process, but more importantly, on the outcome or value gained from the investment; the value gained by the individual and the value gained by society.

Many different constituent groups in our American society hold the opinion that the value added by the type and form of public education they advocate is vital and should receive preference. The number of different constituent groups is extensive and so the competition for influence on the type and form of public education provided by society is colossal. The advocates of agricultural education's value adding ability, be they the consumers or the providers, are but one of the constituent groups. The advocates of agricultural education represent a small minority of American society and the competition is colossal.



By LOU E. RIESENBERG, THEME EDITOR
(Dr. Riesenbergs is Associate Professor and Head, Agricultural and Extension Education, University of Idaho.)

What is the value to the individual and to society by agricultural education? Is the value added to the individual and to society by agricultural education essential? Can the value added to the individual and to society by agricultural education be provided by another type or form of public education? Agricultural educators know the answers to these questions. But, are our answers convincing enough to the other constituent groups so agricultural education will remain vital as a type or form of public education?

The agricultural education profession has long expounded on the value added to the individual and to society by agricultural education. Few in society would question whether agricultural education adds value to the individual or to society. But some have and will continue to question whether the value added by agricultural education is essential and whether agricultural education is the most appropriate type or form of public education to add that value to the individual and to society.

This issue of *The Agricultural Education Magazine* develops the theme of **Agricultural Education - Value Adding**. The concept value adding has been a staple in the world of agricultural business for describing processing farm commodities before the farm gate or very near the farm gate to add value to the commodity which in turn would increase the profitableness of the commodity both to the producer and to the local community. If we in agricultural education do not add value to the individuals that participate in our programs and do not add value to society, there seems to be little reason for agricultural education to be a part of public education.

The authors of the articles in this issue define the outcomes of agricultural education in terms of value added to the individual and to the community. It is an attempt to identify the value added by agricultural education.

Agricultural Education - Value Adding

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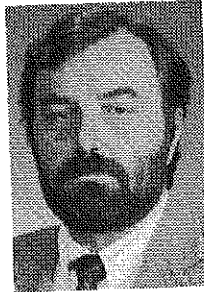
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Agricultural Mechanization Roger Has the Right Idea!



By JOE G. HARPER, SPECIAL EDITOR
(Dr. Harper is an Assistant Professor, Agricultural Education and Communications, University of Nevada-Reno.)

Every once in a while, you have the opportunity to meet someone in action, someone who is simply a step ahead of everyone else. Someone who is so successful at what they do that they become the symbol for excellence. You do not have that opportunity every day to see such a person in action, but several months ago, I was fortunate enough to be in the right place at the right time. This individual is not involved in either agriculture or education, but rather in mechanics, the ultimate in mechanics. I did not get a chance to meet with him personally, but rather to admire his expertise. With thousands of other people around, it would be difficult to participate in a meaningful exchange, especially since he was extremely busy trying to redefine the concept of perfection.

I really have not given you enough information to figure out who this individual is, so I'll just say this person is Roger Penske. The event was an Indy car race held this past fall at Laguna Seca Raceway outside Monterey, California. Earlier in the year, Rick Mears had won the Indianapolis 500 and this race would prove to clinch the championship for Danny Sullivan. I had gone to the event to see some great racing, fine automobiles and yes, I'll admit it, some of California's finest scenery. However, the most impressive aspect of the entire weekend was observing the ultimate professional do what he does best, win.

The question you are in the process of asking is, what does Roger Penske have to do with agricultural mechanics? The answer is quite simple. If we, as teachers of agricultural mechanics, were to manage our team, i.e. students and facilities with the same degree of intensity, perfection, and professionalism, as Roger Penske does with his operation, then our programs would be as successful as his programs.

To see the Penske racing operation in action is an enlightening experience. The facilities are absolutely perfect. Every tool, nut, bolt, and washer has its place. The workers are organized, efficient, friendly, and very professional. Everything is absolutely spotless. The cars are worked on in public view, for all to see, and the workers carefully and precisely perform their duties. The organization operates like the fine machinery they are working with, smooth and impressive. If only we could get our agricultural mechanics programs to be as well organized, neat, clean and operating as smoothly. I looked everywhere around the Penske paddock area and did not see a single scrap of rusty, welded metal lying around. The image of the operation as perceived by others is as important as being successful. Every tool is clean, in proper working order, and neatly organized. Take a look at your agricultural mechanics facilities and instructional program and ask yourself the fundamental ques-

tions, is my program projecting a positive, professional image? The image our programs project is an important component of providing an effective learning environment.

Well, we do not have the funds and facilities of Roger Penske, but that is not the point. The important concept is that the professionalism is the critical element. We may not have the best stuff in the world, but we can have the best program. Successful programs are made by professionals and to be a professional requires motivation, organization, dedication, enthusiasm, and the willingness to learn.

We, as instructors of agricultural mechanics, can benefit by following the example of Roger Penske as the model of professionalism. The model can be described based upon the following criteria.

1. **Motivation.** In order to be successful, we need not only motivate students, but ourselves as well. A successful team is willing to go the extra yard to gain the significant edge. We, as teachers, must possess motivation in order to carry out the objectives and direct our programs.
2. **Organization.** An important concept of effective instruction is that the program is organized. Success is directly dependent upon being organized. Take a look at your course of study, facilities, and most important, your instruction for organization. If your programs are not organized, how can you expect your students to learn?
3. **Dedication.** To what extent are you committed to the instruction of your students. If you are not willing to dedicate yourself to your students and instructional program, then a successful program is not possible. You must dedicate yourself in order to achieve a successful effort.
4. **Enthusiasm.** This teaching behavior has long been associated with student achievement. A successful effort is dependent upon the enthusiasm of the teacher and students to achieve the goals and objectives of the program.

(Continued on page 8)

Farm Management Education: Does It Pay?

Since education becomes a part of a person receiving it, I shall refer to it as human capital . . . it is a form of capital if it renders a productive service of value to the economy (Schultz, 1960).

Almost all would agree that education is good. Most would agree that more of it is even better. But few could give a definitive answer to the simple question - Does it pay? Education is simply one of the "givens" in our society for which we assume there is a good return. Some would define the return by citing economic benefits. Some would argue that creation of the educated individual is enough reward. Others would point to the good created in society by education through its contribution to the social, moral and economic growth of mankind.

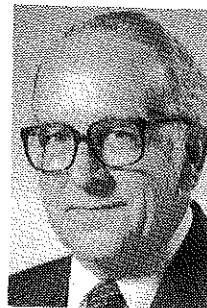
Adult education continues to be a growing business. In 1984 over 25 million job related courses were taken by adults in the United States compared to about 15 million in 1978. It was big business. Adults paid over \$2.9 billion to enroll in 19 million courses for which a fee was paid by individuals or their family. Agriculture and its related forestry and fisheries industry make up a small, but significant part of the 23 million adults who enrolled in some form of adult education in 1984. In spite of the sometimes sparse density of the agricultural population, 388,000 or 2 percent of the adult enrollment in 1984 was in the farm, forestry or fishery business. (Hill, 1987)

Theodore Schultz (Schultz 1963) would view the \$2.9 billion spent by individuals and the untold amount spent by society on adult education as an investment. Investment in education was the basis for his theory of human capital development. He wrote extensively about the two components of the educational investment - consumption and production. The consumption component represented values such as "refinement in tastes" and is an enduring component. On the other hand, educational investment in skills and knowledge which enhances future earnings modifies producer capacity and therefore, is more than consumption. It is an investment in human capital. Education in agriculture may be some of both - consumption and production - with the major emphasis on production.

But what of those who actually make the investment of their time and resources in education? Does education pay? There is strong evidence that education in agriculture at least that education directed at adults, is a good investment. Good investments should pay good dividends.

Benefit-Cost Analysis: A Beginning

Almost all of the benefit cost studies in agriculture have been done with adults engaged in some form of fairly intensive management education. The logic for using this group has been simple: it is a group that normally has an actual economic record from which benefits can be



By Edgar A. Persons

(Dr. Persons is Professor and Head, Agricultural Education, University of Minnesota.)

measured. Likewise, it is generally a systematic program of instruction where the costs can be readily computed. Thus it has the two elements necessary to look at the effect of investment in education in a micro-analytical way: a verifiable measure of benefits and a calculable measure of cost.

The first studies to answer the question "Does it pay?" were studies that used actual measures of benefits and costs as derived from records of farmer clients. While the sophistication of the process varied, benefits were gathered from records or from the farmers recollection of records. Costs were either assumed or calculated based on program organizational characteristics (Rolloff, 1966, Cvancara 1964).

Cvancara studied the direction or degree to which agricultural production units responded to educational investment. The major outcome of his work was to demonstrate relationships to instruction in farm management to various farm measures, including farm income. Using matched pairs of farms, Cvancara was able to demonstrate that the net benefit of the management program was about \$550 per farm. While in 1989 \$550 may not sound impressive, at the time of the Cvancara study (1962) this modest return represented about 10 percent of the average cash income of the matched pair farm that was not part of a management program (Cvancara 1964).

Rolloff developed and tested a model for determining the influence of the farm business analysis phase of instruction in farm management upon factors of economic efficiency and management and the understanding of economic principles. Rolloff based his benefits on gains in net cash income adjusted for inventory change. He found a mean dollar output of over \$4,500 per farm attributed to instruction. Perhaps most important in Rolloff's work was his ability to demonstrate that participants made gains in the understanding of economic principles as they participated in management instruction (Rolloff 1966).

As more was learned about the methodology of benefit cost analysis, the procedures became more precise. In a study by Persons, et al., (1968) the actual benefits were derived over a longer period and the present value concept applied

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Almost all would agree that education is good. Most would agree that more of it is even better. But few could give a definitive answer to the simple question - Does it pay? Education is simply one of the "givens" in our society for which we assume there is a good return. Some would define the return by citing economic benefits. Some would argue that creation of the educated individual is enough reward. Others would point to the good created in society by education through its contribution to the social, moral and economic growth of mankind.

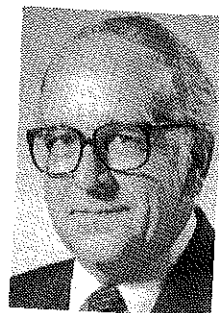
Adult education continues to be a growing business. In 1984 over 25 million job related courses were taken by adults in the United States compared to about 15 million in 1978. It was big business. Adults paid over \$2.9 billion to enroll in 19 million courses for which a fee was paid by individuals or their family. Agriculture and its related forestry and fisheries industry make up a small, but significant part of the 23 million adults who enrolled in some form of adult education in 1984. In spite of the sometimes sparse density of the agricultural population, 388,000 or 2 percent of the adult enrollment in 1984 was in the farm, forestry or fishery business. (Hill, 1987)

Theodore Schultz (Schultz 1963) would view the \$2.9 billion spent by individuals and the untold amount spent by society on adult education as an investment. Investment in education was the basis for his theory of human capital development. He wrote extensively about the two components of the educational investment - consumption and production. The consumption component represented values such as "refinement in tastes" and is an enduring component. On the other hand, educational investment in skills and knowledge which enhances future earnings modifies producer capacity and therefore, is more than consumption. It is an investment in human capital. Education in agriculture may be some of both - consumption and production - with the major emphasis on production.

But what of those who actually make the investment of their time and resources in education? Does education pay? There is strong evidence that education in agriculture at least that education directed at adults, is a good investment. Good investments should pay good dividends.

Benefit-Cost Analysis: A Beginning

Almost all of the benefit cost studies in agriculture have been done with adults engaged in some form of fairly intensive management education. The logic for using this group has been simple: it is a group that normally has an actual economic record from which benefits can be



By Edgar A. Persons
(Dr. Persons is Professor and Head, Agricultural Education, University of Minnesota.)

measured. Likewise, it is generally a systematic program of instruction where the costs can be readily computed. Thus it has the two elements necessary to look at the effect of investment in education in a micro-analytical way - a verifiable measure of benefits and a calculable measure of cost.

The first studies to answer the question "Does it pay?" were studies that used actual measures of benefits and costs as derived from records of farmer clients. While the sophistication of the process varied, benefits were gathered from records or from the farmers recollection of records. Costs were either assumed or calculated based on program organizational characteristics (Rolloff, 1966, Cvancara 1964).

Cvancara studied the direction or degree to which agricultural production units responded to educational investment. The major outcome of his work was to demonstrate relationships to instruction in farm management to various farm measures, including farm income. Using matched pairs of farms, Cvancara was able to demonstrate that the net benefit of the management program was about \$550 per farm. While in 1989 \$550 may not sound impressive, at the time of the Cvancara study (1964) this modest return represented about 10 percent of the average cash income of the matched pair farm that was not part of a management program (Cvancara 1964).

Rolloff developed and tested a model for determining the influence of the farm business analysis phase of instruction in farm management upon factors of economic efficiency and management and the understanding of economic principles. Rolloff based his benefits on gains in net cash income adjusted for inventory change. He found a mean dollar output of over \$4,500 per farm attributed to instruction. Perhaps most important in Rolloff's work was his ability to demonstrate that participants made gains in the understanding of economic principles as they participated in management instruction (Rolloff 1966).

As more was learned about the methodology of benefit cost analysis, the procedures became more precise. In a study by Persons, et al., (1968) the actual benefits were derived over a longer period and the present value concept applied

to account for the present value of future earnings. In this study economic benefits were calculated for both the individual and for society and estimates made of how the community could benefit from the increased business generated by a management education program. The results were impressive, with a \$9.00 increase in business activity for each dollar of expenditure or as high as \$36-\$73 increase per dollar expended if the multiplier effect of 4 to 7 times was assumed. The benefit cost ratio caught the attention of both farmers and policy makers. Even when the social benefits of education were ignored, the economic benefit was significantly high to promote added investments in management education programs.

The Perceptions of Benefits

Perceptions are often stronger than truth. Even though an educational program might in truth pay good dividends, unless the recipients and society perceive it to be beneficial, it will not prosper. By the same token, a program that may be neutral in benefit, if perceived to be highly beneficial, will be strongly valued and supported.

To test perceptions of benefit, Richardson (1979) undertook an extensive investigation of the perceived benefits of a random sample of participants in 40 organized farm management programs. By simply asking the question "How much do you think your annual income has improved as a result of participation in the farm management program?" Richardson was able to measure the perceptions of what farmers thought the program to be worth. The responses from the 305 farmers who participated in his study averaged about \$4000. The range of response was from \$0 to \$15,000.

What is the value of an expression of benefits when it is only a perception? It must be assumed that there is some basis for the perception. In the case of Richardson's respondents, all families had access to a complete financial record of their business. It could be assumed that their perceptions were data based drawn from their memory of financial progress over the years of their program interpretation.

Even without a financial data base, there are everyday clues to progress. Machines, equipment, buildings and added comforts to the home are all visible reminders that progress has been made.

But farmers can perceive other benefits that do not necessarily hinge on increased income. In a replication of the Richardson study by Persons et. al., (1987), farmers were asked to rank 10 contributions that accrue to farm families as a result of participation in management programs. The result of that ranking is shown in Table 1. Except for a slight variation in ranks in the middle ranges, the rankings were almost identical to those shown by Richardson.

Table 1

Contributions to the farm family from participation in the Adult Farm Management Program, ranked in order of importance.

Contribution to Family	Rank Order of Importance
Improved management skills	1
Better knowledge of capabilities of yourself and your business	2

Increased earnings	3
A feeling of greater security in the business decisions made	4
Improved outlook on farm business opportunities	5
Exchange of ideas, skills and techniques gained through class discussion, tours and instructors visits	6
Development of greater confidence in action taken and a feeling that greater goals can be accomplished	7
Considering the farm operation more as a business than a way of life	8
Less workload	9
Community social aspects gained through attendance at banquets, tours and class meetings	10

Respondents reinforced the fixed list of potential benefits by responding to the open ended question "In your own words list two things you like best about the farm management program." The 573 who responded to this question gave answers that were categorized into 21 general responses. The top 10 are listed in Table 2.

Table 2

What farmers liked best about Farm Management Education Programs.

General Response	Number Responding
Quality and availability of individual instruction	216
An easy, accurate, and thorough record system	127
Availability and interpretation of record analysis	117
A source of current, reliable information	105
Tax management assistance	57
Aid in goal setting and financial planning	42
Comparison with other farms	40
Computer and software availability and assistance	30
Like the program in general	25
Decision making assistance	23

Some of the typical responses to the question were:

- Goal setting and progress reports.
- Our program offers so much - marketing skills, production, cost analysis, budgeting, etc. Growth potential is strived for an most of the time reached.
- Instructor helps customer with questions regarding changes in farming operations either taking place or needed.

It is clear that farmers look beyond the monetary rewards when they reflect upon the benefits they receive from education. They do have clear cut and definitive perceptions of the dividends they receive from education.

Most educators would reach beyond the pure economic benefits of an educational program to describe its impact. Value added need not only be monetary. There is evidence in the research that participants both achieve and value non-economic benefits. Young and adult farmers place value on the social interaction they enjoy, the new friends they make, and the general camaraderie that develops among group members. They value the chance to exercise their leadership skills and often demonstrate their skills through active leadership positions in the community. On none of these

(Continued on page 18)

Teaching Tips

How's Your "Learning Mix?"

There it was, staring me in the face again. This time it was at a community education advisory committee meeting. The last time it tugged at my educational conscience was while I was reading about it in a journal article the week before. It's been gnawing at me for a long time now, especially when I've been in the classroom — supposedly teaching.

Learning styles — or rather, teaching to different learning styles — has been the culprit. The research is mounting. Students achieve more when their individual learning styles are used as the mechanism for learning. And yet, many of us are still not truly adjusting our classroom teaching styles, our daily assignments, and course projects to meet our students' learning styles.

Ah, come on, how can we really teach to those varying styles? That's what many have been asking me and I've been asking others.

Have you heard of these terms: concrete sequential, abstract sequential, abstract random, and concrete random? They're learning styles as described by Dr. Anthony F. Gregorc. He's developed a rather quick-to-complete word matrix test that identifies learning styles. His colleague, Dr. Kathleen Butler, has summarized each of these four learning styles in her book *Learning and Teaching Styles in Theory and Practice*. What's particularly useful about her summary is that it lists the learning strengths and weaknesses of each style.

For instance, individuals who have an abstract sequential style of learning like to debate points of view, possess a structured thinking pattern, like to research information, and are patient learners. On the other hand, they struggle with creative writing, flounder when asked to role play, lack tactfulness in persuading others, and abhor being criticized. These students learn best by reading, attending lectures, conducting research, taking notes, and writing term papers.

Want another example? Let's take the concrete sequential learners. While the abstract sequential students have been wolfing down theories and pondering the most abstract of thoughts, the concrete sequential students have been begging — perhaps silently — for a touch of reality. They like to proceed in an orderly fashion, step-by-step. They like directions that lead to correct answers. They're good at obtaining and giving facts, but they take a nose-dive if asked



BY ROSE JONES, SPECIAL EDITOR
— TEACHING TIPS

(Dr. Jones is Director of Communications, College of Agriculture, University of Minnesota)

a "What if" type of question. They flourish when there's an accepted way to completing a task and they wilt when they're asked to look for a new approach. Give these learners a quiet learning environment, specific directions, examples, and guided practice.

Abstract random students learn best when they're working with others, when given interpretive assignments, when the environment is pleasant, and when competitiveness has been removed. In contrast, the concrete random students are self-directed, competitive individuals who like to find a myriad of solutions to problems. They enjoy brainstorming.

So what's the point of all of this? Whether we like it or not, we have these four types of learners in our classes everyday. If we want them to achieve to their potential, we must attempt to teach to all four styles as frequently as possible. Dr. Butler would admonish us for not providing a learning environment that reaches these different styles EVERY day. Being the abstract/concrete random person that I am, I know that we should set high, but realistic standards for ourselves.

Let's strive for a better mix of learning activities within our classrooms. No one interest approach, no one type of assignment, no one type of environment will meet the learning needs of an entire class.

Where do we begin? We must identify our students' learning styles. After this first crucial step, we can start carefully, deliberately selecting a variety of learning experiences targeted to those styles. It's time we began achieving a better "learning mix."

Roger Has the Right Idea!

(Continued from page 5)

5. **Learning.** A successful team never stops learning. Success is dependent upon learning new knowledge, skills and attitudes. Even when someone comes in first, the experience must be built upon, because you can rest assured that the folks in second place are learning how they can be first next time.

The success of our agricultural mechanics programs is dependent upon a variety of factors. However, the single most important factor of which we have the greatest control is our professionalism. To be successful, we should model our behaviors after those who are successful. A successful program of agricultural mechanics will be based upon an instructor who is a model of professionalism. If you want to be successful, remember that Roger has the right idea.

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Value Adding: The Impact of Vocational Agriculture on the Community

Value adding has become a popular buzz word in recent years. The meaning of value adding has been derived from the business world, where it refers to treatment of a product in such a manner the treatment increases the overall value of that product.

One of the overall goals of schools is to add value to young people in our society. Vocational education programs are excellent examples of how schools have been adding value to the lives of students. Vocational agriculture programs have been successful in developing a number of desirable qualities in students, in providing educational services to the community, and in enhancing the overall image of schools. All of these factors contribute in many ways to the community. This article will explore and identify several areas where vocational agriculture programs add value to the community.

Value to the Student

Life Skills - Some vocational agriculture programs cannot be sustained solely on the premise of training for agricultural occupations. The goal of some vocational agriculture instructors is to prepare students for success in life rather than for careers in agriculture. Students can develop numerous life skills in vocational agriculture programs. Communication, decision-making, problem-solving, accounting, interpersonal relations, job acquisition and advancement, opportunities for vocational maturity, an understanding of the political process, and social skills are all taught or reinforced in contemporary vocational agriculture programs. In addition, vocational agriculture programs prepare agriculturally literate citizens for our country.

Dropout Rate - Vocational agriculture students have higher high school completion rates than the general student population. High school graduates are better able to contribute to the community than non-completers. The authors have experienced this phenomenon with traditional students as well as with disadvantaged and minority students. In one example in Elko, Nevada, a minority student acquired skills in the agricultural mechanics laboratory which he now uses to earn \$15.00 per hour at a local mining company. The excellent wages paid by local industries coupled with their minimum employment requirement of a high school diploma provide local vocational agriculture instructors with rationale to counsel potential dropouts to remain in school. Students who readily apply learned skills to the world of work serve as role models for all vocational agriculture students in the program.

Basic Skills Reinforcement - Vocational programs provide numerous opportunities for students to practice basic skills learned in other classes in school. Students must apply math skills for record keeping requirements of the Supervised Agricultural Experience (SAE). Application of students'



By TOM KLEIN AND GEORGE C. HILL

(Mr. Klein is a Vocational Agriculture Instructor, Elko Senior High School, Nevada; Dr. Hill is Associate Professor and Head, Agricultural Education, University of Nevada-Reno.)

learned communication skills can be evidenced in the composition and delivery of speeches in public speaking contests. Many skills such as library research, proper grammar, vocabulary building and expansion, proper techniques of verbal delivery, and critical thinking are required in preparation for public speaking. In addition, the development of self-confidence in students is immeasurable.

Employment Rates - Former vocational agriculture students are employed and employable as productive contributors to society. In a ten year follow-up study of program graduates, the primary author found that virtually no unemployment exists. Regional and national studies confirm these findings throughout vocational agriculture. While the technical skills gained through instruction are important, the authors believe that the values, attitudes, and much broader life skills that students acquire in vocational agriculture make the difference.

Value to the School

Leadership Roles - The FFA organization in vocational agriculture programs provides excellent leadership training and development in the school and community. Many vocational agriculture instructors can recall chapter officers who became student body officers, later to become state FFA officers. While these examples are appropriate, we often overlook the leadership that rank and file members provide within the school. Vocational agriculture students often serve on school committees or act as catalysts for action and change. These student leaders often provide leadership for their communities upon adulthood. Documentation and reporting of the success of our student leaders should be a priority for our profession.

Community Linkage - Few instructional programs offer a better opportunity for positive linkage with the community than the local agriculture program. Vocational agriculture

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Maximizing Experiential Learning: Key to Value Added Education

Experiential learning is to many of us just a new name for an old concept — learning by doing. This simple idea has been imbedded in the basic philosophy of agricultural education, it is a learning principle which we accept. However, if by learning by doing we mean reinforcement of technical skills through application or hands on learning, then our understanding of experiential learning is simplistic and flawed.

It is true that our primary experiential learning vehicles, SOE and the FFA, were originally intended to reinforce technical skills. Supervised farming or practice provided students a chance to apply learning from the classroom, and make the classroom instruction more relevant. Habit development, the use of approved practices, and similar concepts have dominated the writing and thinking on supervised experience. The FFA too, was originally seen as a mechanism for motivating students and reinforcing agricultural concepts through competition and recognition. While the development of technical skills is an important part of agricultural education there are other skills developed by SOE and FFA which have made a unique contribution to the value added, quality education of agriculture students.

Early on, the development of problem solving skills, communication skills, and the capacity for independent thought and action were cultivated as part of these programs. Such skills have contributed greatly to the development and success of our students. Few would argue with the claim that SOE and FFA activities have added value to the education of vocational agriculture students. Agriculture students, over the years have distinguished themselves as workers and citizens. Many have become civic leaders and captains of industry, giving our programs a unique reputation.

We take great pride in hearing business leaders say, "We'll hire anyone who comes to apply for a job wearing an FFA jacket." However, technical skills learned in agriculture programs were probably not the traits of our students which most impressed these executives. It is more likely that skills such as the ability to communicate effectively, a sense of self-confidence and mature deportment figured high on their criteria for selecting employees. Other desirable qualities which impressed CEO's may include the ability to handle oneself in a business situation, to take action independently when appropriate and to seek out assistance when needed, to have an understanding of the bottom line concerns of business and to take personal responsibility for attending to these concerns. In short, these added value traits that vocational agriculture students have developed are the worker traits desired by business and industry.

The skills listed above are becoming increasingly more important today. Changes in the nature of work are demanding workers with more of the added value skills experiential learning can provide. In an article entitled "Workplace basics: The skills employers want" (Carnevale, 1988) the author lists the traits of "upskilled worker."



By GARY LESKE AND ERIC ZILBERT

(Dr. Leske is Associate Professor, Agricultural Education, University of Minnesota; Mr. Zilbert is a Research Assistant, Agricultural Education, University of Minnesota.)

1. Learns how to learn - understands own learning style
2. Listens well - clarifies understanding of work group members.
3. Problem solves - trouble shoots problems encountered by self or workgroup.
4. Thinks creatively - contributes innovative solutions adding to the competitive nature of the company.
5. Demonstrates self-esteem - experience based.
6. Self-motivates/sets goals - less "other" directed.
7. Demonstrates teamwork skills - interpersonal skills negotiating skills and leadership skills.

The above are precisely the types of skills fostered by experiential learning. Do we continue to actively foster the development of these abilities as a part of our experiential programs? Or have we fallen into a content trap of our own making?

In light of the present and continuing need to justify our programs, we need to consciously foster the development of the added value traits of our students. The growing body of literature on experiential learning confirms the assertion that experiential programs can develop value added traits in students. Experience based programs (beyond vocational education) are not advocated for their ability to develop specific technical skills. Rather, the greatest benefits claimed are in the interpersonal skills and character traits which they develop (Conrad & Hedin, 1986). In many programs, specific attention is given to developing and reinforcing these skills. Processes such as "guided reflection" help students to gain meaning from experience. Various follow-up procedures are used to enhance the development of skills the experiential program demanded (Kraft & Kielsmeier, 1986; Keeton, 1976).

Emphasis needs to be placed on the process whereby these more generalized skills are developed. Shows, judging contests, public speaking, and parliamentary procedure contests develop our students abilities to communicate with adults

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Maximizing Experiential Learning: Key to Value Added Education

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It is true that our primary experiential learning vehicles, SOE and the FFA, were originally intended to reinforce technical skills. Supervised farming or practice provided students a chance to apply learning from the classroom, and make the classroom instruction more relevant. Habit development, the use of approved practices, and similar concepts have dominated the writing and thinking on supervised experience. The FFA too, was originally seen as a mechanism for motivating students and reinforcing agricultural concepts through competition and recognition. While the development of technical skills is an important part of agricultural education there are other skills developed by SOE and FFA which have made a unique contribution to the value added, quality education of agriculture students.

Early on, the development of problem solving skills, communication skills, and the capacity for independent thought and action were cultivated as part of these programs. Such skills have contributed greatly to the development and success of our students. Few would argue with the claim that SOE and FFA activities have added value to the education of vocational agriculture students. Agriculture students, over the years have distinguished themselves as workers and citizens. Many have become civic leaders and captains of industry, giving our programs a unique reputation.

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The skills listed above are becoming increasingly more important today. Changes in the nature of work are demanding workers with more of the added value skills experiential learning can provide. In an article entitled "Workplace basics: The skills employers want" (Carnevale, 1988) the author lists the traits of "upskilled worker."



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(Continued on page 16)

Efforts Times (Education Plus Activities) Equals Value Added

Value added is an economic term. It also defines a concept that describes what we all have tried to do: add value to ourselves.

The challenge is convincing today's youth of the importance of adding value to themselves. Their efforts can result in marketing their accumulated value added skills to employers.

Most of the time individuals consciously add value to themselves. When opportunity knocks, they take full advantage of it. However, at the same time they could subtract or not add the full amount because they did not take advantage of an opportunity.

The term value added is traditionally associated with production agriculture. If farmers want to make more money, they have to add value to their raw products. The value of commodities increase after the farmer plows, plants, fertilizes, prays for rain, harvests and delivers to the local grain terminal. In today's market, however that process sometimes is not enough. The real profit lies in the secondary value-adding stage. The processor purchases commodities such as corn, wheat and soybeans, and increases their value by producing flakes, bread, and hamburgers. As a result, the processor becomes the price setter. The farmer, who has added the less profitable value, is the price taker and continues in that role.

The challenge is convincing today's youth of the importance of adding the profitable side of the value adding process to themselves. Their efforts can then result in the marketing of their accumulated value added skills to employers.

Kindergarten is where the seed is sown. Each individual has the potential of being the latest engineered hybrid variety. Young students not only learn how to finger paint and glue things, but during this first stage of the value adding process they are taught the most important rules in life: do not hit or fight, share with others, cooperate, don't steal, and play fair.

As the sun shines and the rain hopefully falls, the seeds will germinate and start appearing above the soil. Some will appear quicker than others; some will not appear at all. But each one has been given an equal opportunity.

Germinating and growing through elementary school with the sun, rain, fertilizer and cultivation provided by parents, friends, and teachers are essential to the value adding process. Learning to read and write, add and subtract, multiply and divide; learning about America's past, the wars, the leaders; learning about the future, problems the current generation is leaving for the next generation; and learning about different parts of the world, different cultures and different people are cornerstones of value adding. Toward the end of the elementary years, some students will have developed a strong and deep root system. Just as a corn stalk finds it hard to support itself with weak roots, these students



By SCOTT EVERETT

(Mr. Everett is a Senior, Agricultural Communications, Michigan State University.)

will also find it hard to excel if a sound, strong foundation is not developed.

During the growing season, good farmers keep a close watch for insects, disease and additional moisture requirements. Their crop may need pesticides, herbicides, or irrigation to keep the value of their commodities maximized. Good teachers and parents also keep a close eye on their crops, their students. Just as an agricultural crop may suffer damage from insects, disease, drought, wind or fire, young people often face obstacles. Good teachers and parents pick them up by their boot straps and help the young students to set goals for adding value.

The growing season is now in full swing. The corn is starting to develop ears, the wheat is three feet high, and the soybeans are developing pods.

High school starts the profitable value adding process where students start developing in areas that interest them. Sports, student clubs and vocational education programs are just a few value adding activities available. Agricultural Education and the FFA provide students opportunities to value add in many diverse areas. Leadership responsibilities, organizational skills and working with peers to accomplish tasks, adds value to each individual person. The FFA thrives on adding value to its members, whether it's participating in public speaking contests, judging livestock or putting together a Good for America program for elementary students, the FFA is value adding at its finest.

Teachers, advisors and parents provide the sun, rain, fertilizer and cultivation to ensure that valued added benefits from this organization are fully utilized. Some students in high school will excel, taking advantage of every value adding opportunity and drinking from the fountain of knowledge. Others will not; they only gargle.

It is now harvest time. Most commodities are transported to local terminals. Processors purchase these raw commodities for additional value adding.

Graduation is also the point of decision for students. To add more value or not to add more value, that is the question. A student must ask herself: have I added enough profitable value to myself to be competitive in the marketplace? Do the real profitable value adding skills still lie in the second

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Value Adding — The Leadership Component

The benefits to a high school student from participating in a high school agricultural program are multiple and varied. The diversity of the total program in its curricular component, the individual student's supervised occupational experience (SOE) program and, of course, the leadership component through the FFA are all important parts of the total program from which participants derive benefits.

When former students cite the benefits of their agricultural program experience, almost invariably the benefits of their FFA participation are enumerated. The leadership experience is heralded over and over again as one of the most important components of our program. It has not only proven to be beneficial for the outstanding student - the elite or the star; they will be successful in spite of what we do - but it has also proven to be beneficial to the average student. The leadership benefits for the average student, however, are often manifested at a later time as opposed to the immediacy often seen in the FFA elite or star.

Leadership is one of the most difficult words to define. The word has a multitude of meanings as described and practiced by the earliest of scholars, prophets, and politicians to those of the present day. Leaders possess and practice certain inherent qualities which are manifested as caring, trusting, intelligent, confident, humble, etc. to those with whom they interact on a daily basis. To the author, leadership means "responsibility in service to others." Others have described leadership as "the process of helping others achieve individual and organizational goals."

The noted author, William Manchester, describes leadership as:

... the relation between an individual and a group built around some common interest in a manner directed or determined by him.

... strictly speaking, the relationship of leadership arises only where a group follows an individual from free choice and not under command or coercion and, secondly, not in respect to blind drives, but on positive and more or less rational grounds.

Another definition liked by the author originated from a girl in an agriculture classroom; a rather "average" student, but one who spoke from the heart when asked to describe leadership: "Leadership is a state of mind. It's self-confidence. It's also knowing your strengths and weaknesses and being able to build on the one and improve on the other."

What is it that causes the agriculture/FFA program to be recognized again and again for its ability to develop this quality we call leadership? Is it the instruction in public speaking and parliamentary procedure, or is it the contest program, committee work or community service projects? Those are important components, but in my judgement, it is more. We often infer because students can stand before a group and think and speak fluently, they are leaders. Or



BY JOHN P. MUNDT

(Dr. Mundt is Assistant Professor, Agricultural and Extension Education, University of Illinois.)

if they can exercise the skills of parliamentary procedure they are assumed to be leaders.

Wrong - wrong - wrong; leadership is more!

What is it about the agricultural program that enhances leadership development? What is it that takes the raw products, the students, and adds the value of leadership? When students enter our programs many are indeed rough-cut, a sort of raw product in a sense, but because they have participated, somewhere down the line when the need arises they reach down, back, or somewhere within and exhibit qualities of leadership which make them successful in their job, family, social, and civic responsibilities. In short, they bring out the best in themselves and more importantly others as well.

Even in today's highly technological and ever changing society, we are judged not so much on our technical knowledge but on our potential for leadership. Studies have shown that approximately 80 percent of the time the success of an individual is influenced by the potential for leadership, the ability to lead, think, solve problem, and arouse enthusiasm. The remaining 20 percent is governed by the technical knowledge base. Obviously individuals must have technical knowledge, but the greatest success and amount of reward will go to those who have more than technical knowledge: those who can "express ideas," "arouse leadership," "arouse enthusiasm," and "bring out the best in others."

We, as agricultural educators, cannot take all the credit for the development of leadership abilities in our students. Certainly the emotional, physical, and intellectual maturation of the student is part of the process. Other school and school activities play an important role. School activities, extracurricular clubs, and student government all play a role in the student's leadership development. Robert Hammond, a noted leader in our profession, essentially said at the 1988 American Vocational Association Convention in Las Vegas that leadership through the FFA is not necessarily the vocational education. It is, and we would all have to agree, general education - good for all students. We happen to use the agricultural program and the FFA as an integral component to make our leadership education a real life situation.

(Continued on page 20)

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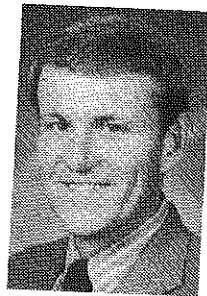
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(Continued on page 20)

French Fries, Farms and Reforms



By L. DEVERE BURTON

(Dr. Burton is State Supervisor of Agricultural Education, Idaho State Division of Vocational Education.)

A profound concept has surfaced in rural America over the past few years. It can usually be traced to somebody's grandfather (usually an aging family patriarch with a large posterity), who is most often associated with his fatherly advice to his sons and daughters about how to raise children. The concept is quoted faithfully by children and grandchildren, and the statement usually goes something like this: "The most valuable crop you will ever raise is your kids."

The concept of the above statement is simple, yet profound. And it should lead us, as agricultural educators, to ask some interesting questions. Dare we risk *crop failure* as we prepare the next generation of agricultural leaders and managers? Where does the law of diminishing returns fit in the management plan for this *crop*? What role should agricultural education play in the development of such a valuable resource?

Another interesting concept, similar in many ways to the "gem of wisdom," has arisen in the world of commodities as it relates to basic resources. Rural economics are enhanced by value adding to agricultural products, timber, and other natural resources before they leave the local community.

The value adding concept assumes that a raw product or resource can be refined, processed and packaged to satisfy the requirements of a specific market. For example, Idaho potatoes are peeled, sliced, pre-cooked, quality-checked, bagged, frozen, and shipped in a very precise manner to meet the exact specification for McDonald's French Fries. The expectations for this product are high, and the characteristics of the product must fall within the specific parameters which define quality. A product which fails to meet the standards is rejected and diverted to other uses.

How does value adding apply to agriculture education? Do students represent the raw, unrefined product with which the process begins. Agricultural education program objectives should very clearly define our expectations as they relate to "the most valuable crop we will ever raise" and value adding. A good measurement of how well your program objectives fit this concept can be obtained by asking these questions about each objective:

Does the program objective relate directly to the needs of students (students centered) or is it more concerned with program facilities and resources (program centered)? Is each program objective relevant to life and work in the real world?

Does at least one program objective deal with adapting to changes in the lives and careers of students?

Consider the following Secondary Program Objectives in terms of the value adding concept:

Develop agricultural competencies and the basic background knowledge to become successful in agriculture and related occupations.

Develop entrepreneurial, business and management skills needed by students preparing to enter agriculture and related occupations.

Develop an understanding of career opportunities in agriculture and the preparation needed to select and enter an agricultural occupation.

Develop career objectives along with job-seeking, employability and job-retention skills.

Develop abilities to advance in an occupation through a program of continuing education and life-long learning.

Develop communication skills and abilities which are essential in any occupation.

Develop abilities needed to exercise and/or follow effective leadership in fulfilling occupational, social and civic responsibilities.

Unlike the production line for McDonald's French Fries, a single process is not appropriate for all students. Too often we have attempted to load groups of students into hoppers at the doorways to our classrooms, extrude them through a particular die, and deliver a uniform finished product via a four-year processing sequence as prescribed by our local curriculum. We apply our own brand of quality control measurements to the process and assume that any "spud" that resists our mold is a "bad potato." Could this approach to agriculture education in our schools be a contributor to the enrollment declines we have experienced?

In the potato industry, not every potato can become McDonald's French Fries. Some potatoes qualify as #1 Bakers. Others may find that they can make a greater contribution by becoming tater tots or dehydrated potato products or as sliced, diced or spiced potatoes.

The acid test of the value adding concept for educational purposes is how applicable the learning of students is to the real world of work. Students enter our agriculture programs with a broad array of expectations, dream and career objectives. Our refinement process (curriculum) should track through several product lines (career tracks) which produce a variety of useful products (skills).

Some students may use the skills which they have acquired to enter the agricultural work force immediately. Others will refine their skills through additional education at the technical or baccalaureate degree level. Others may use their skills on a temporary basis to "earn while they learn." Many

(Continued on page 19)

Education in Agriculture: Not Just a High School Matter

The success of American agriculture might be referred to as *The Greatest Story Seldom Told*. But, too often agriculture is perceived as a world apart: a limited world of farmers in bib overalls with chickens scratching about the barnyard.

To a large extent, the very success of American agriculture has made such misconceptions understandable. Also, the effort required of most of us to drive to the supermarket to purchase a staggering variety of foods makes it easy to lose sight of the agricultural source of our foods. Complicating the issue even further, agribusiness operations involving processing, storage, transportation, and marketing are completely separated from production agriculture and grouped in such a way that, again, we lose sight of the extent to which all owe their existence to the industry.

Statistics show that the steadily increasing productivity of the American producer means that fewer and fewer producers provide for the needs of more and more people. As the land becomes more productive and the population grows, less land is needed for agriculture and more gives way to the growth of cities and suburbs. It is a small wonder that few Americans have an accurate understanding of modern agriculture.

But does that make it any less important for people to understand what agriculture really is, where it is going, or what its purpose is in our society?

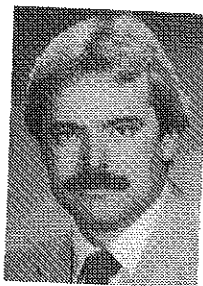
How are we going to redirect our sights to see that the success story of American agriculture is told? One solution is through education.

Education in agriculture can never start too early? We could develop many of agriculture's practices into everyday situations even in the confines of the elementary classroom, and as a direct result, students can develop an appreciation for the activities, energy, and knowledge required to bring food and other consumer items from their agricultural raw state to the processed commodities we recognize on the store shelf.

Our target audience should be aimed at the elementary grades and continue through the student's senior year in high school. We have to realize that agriculture is important. It serves our three most basic needs of food, clothing, and shelter, and each person needs to be made aware of how these three needs are met.

We need to educate our youngsters about agriculture, for their chances of being involved in an agricultural profession when they enter the world of work is very high - 60 percent (The National FFA Center, 1986). And that figure is continually growing because of the tremendous need to supply the food and fiber needed for an ever-increasing population. In addition, new jobs in the agriculture industry not even thought of twenty years ago will supply millions of people the chance at an occupation in agriculture.

One of vocational agriculture/FFA's traditional services has been its involvement with grade school youth through



By WAYNE DEWERFF

(Mr. DeWerff is a Vocational Agriculture Instructor, Plainville High School, Kansas.)

the Food for America program. This program provides an excellent learning experience for the elementary and high school students involved. It provides vocational agriculture/FFA members the opportunity to develop and practice communication skills, and it helps elementary students understand the crucial role played by agriculture in history and modern society. Since many adults, who have participated in this program, can still recall those experiences, there is no doubt they learned from this educational exposure to agriculture. These individuals benefited from an experience at a young age that helped them become more literate about agriculture.

Reinforcing this concept, Dr. Robert Warmbrod, professor of Agriculture Education at The Ohio State University, stated, "The purposes of agricultural education in the public schools must be broadened beyond current programs of vocational agriculture. Instruction about agriculture for a wide range of students in all grade levels as well as instruction in agriculture is justified and needed" (Warmbrod, 1987, p. 11).

The definition of education in agriculture and its effect upon agricultural literacy needs to be understood by the public, for it goes far beyond the traditional agriculture program offered at the secondary level. Agriculture is too important a topic to be taught only to the relatively small percentage of students considering careers in agriculture and pursuing agricultural studies - thus, the idea of agricultural literacy.

The goal of education about agriculture needs to be proclaimed. An agriculturally literate person's understanding of the food and fiber system includes its history and current economic, social, and environmental significance to all Americans (DeWerff, 1988). Achieving the goal of agricultural literacy will, through time, produce informed youth and citizens able to participate in establishing policies that will support a prosperous vocational agriculture/FFA program and a competitive agriculture industry in this country and abroad.

"If the purposes of agricultural education are to encompass instruction about agriculture - agricultural literacy - as well as instruction in agriculture, then it is evident that students to be served far exceed the traditional agricultural clientele" (Warmbrod, 1987, p. 6). Beginning in kindergarten

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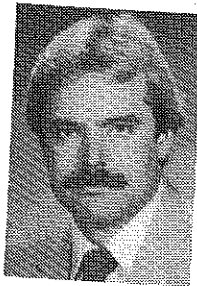
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continuing through twelfth grade, all students should receive systematic instruction about agriculture. Training attempts in this direction have already begun in the grade levels (DeWerff, 1988).

A tremendous marketing point for integrating agriculture at the elementary level is that it can be tailor-made to meet specific needs in many areas of instruction commonly used. It can readily be incorporated into the subject matter of geography and social studies by showing the relationship of climate, terrain, and location to agriculture production and productivity and the effects of agricultural technology on society. In the area of career education, it can provide an orientation to production and agribusiness. Likewise, in the area of vocabulary and spelling, the program can focus on words unique to agriculture. The same aspect is a valid and important one, covering such areas as the study of plants and animals and modern technology in agriculture. The area of mathematics also can be taught well, as measurements can be taught: pounds of a particular commodity in a bushel, land measurements, and problems on production expenses and income, to name

some. In the last five years have seen a push for a back to the basics. It should be rather obvious that agriculture should be regarded as a basic. In most instances, elementary school students and their teachers have only a clouded view of what the agriculture industry is. They see agriculture in its narrow sense of interpretation: the farmer, the cow, plow and man, the wheat farmer and livestock rancher, and many stereotypes. Through the introduction of agricultural topics into the normal classroom setting, elementary

Value Adding: The Impact of Vocational Agriculture on the Community

(Continued from page 9)

Instructors are trained to recognize the value of a public relations program. Vocational agriculture programs are often viewed as an example of an effective school program. Both the SAF program and the community advisory committees contribute to good community relations. In addition, vocational agriculture instructors often act as informal links for the community to learn more about what is happening in the schools. They often interpret school policy for citizens, thus preventing misunderstandings from becoming problems. The more traditional public projects are also very valuable to communities.

Pride in Achievement - In our highly competitive society, healthy competition based on skills learned through vocational agriculture programs is beneficial to students. Appropriately designed competition allows students to develop attitudes and values necessary to compete in today's world. In addition, students have opportunities for achievement in more areas than athletes or academics. Through the pursuit of achievement, students are better able to analyze successes and failures, providing a good foundation for the future.

Instructional Alternative - Vocational agriculture programs are often perceived as a "dumping ground" for students. Yet, the authors believe that vocational agriculture programs often offer an appropriate alternative for students lacking focus or direction in school. Many instructors have

students should gain a clearer insight of the overall agricultural picture.

Providing this type of service through the agriculture department, the FFA, or other related affiliates may assist the elementary school teacher in teaching an instructional area in which he or she may have only limited knowledge. It is a tremendous learning and teaching experience - one in which all can gain valuable confidence, exposure, and a working knowledge of the exciting agricultural industry.

Yes, the agriculture/FFA program and its members can make a difference in telling the agriculture story. But members cannot do it alone; it takes the cooperation of many people working together for a common cause to help insure that the greatest story seldom told becomes a reality. Highly dedicated and deeply committed students, teachers, supporters, and legislators alike need to band together to see that the story of our nation's most important industry be told: not just to those students interested, but to students at all levels of our educational system. It is our job not only to serve as spokesperson, but also to insure that education in agriculture becomes more than just a high school matter.

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experienced taking a potential dropout into their program to see that student's life take a positive turn. Vocational agriculture programs are often the catalyst for students in need of direction and motivation in the school.

Value to the Business Community

Local focus - effective vocational agriculture instructional programs are based on local needs. Local advisory committees suggest and approve of major changes in curriculum. Through advisory committee input, programs are able to respond to changing local needs. Without such input, programs tend to stagnate or take on inappropriate direction. Advisory committee input often focuses more on teaching life skills such as communication, business management, and computer skills rather than the more traditional kinds of agriculture training.

Source of Competent Employees - Vocational programs have traditionally been a critical source of competent employees for local industry. Recruitment and training of employees is a major expense for businesses. A community benefits more when industry invests in capital goods rather than recruitment and training. Successful programs which are based on and planned around local needs provide support for the health of local business and industry.

Educational Center - Vocational agriculture instructors are often viewed as an important source of current educational information. Vocational agriculture instructors who are active participants in their professional organizations have better developmental opportunities than the typical instructor.

(Continued on page 17)

Maximizing Experiential Learning: Key to Value Added Education

(Continued from page 10)

in an adult fashion. This learning needs to be fostered. Likewise SOEs provide opportunities for students to interact with the business community, either through cooperative placement or simply in finding buyers for project animals.

We have choices of how to implement programs that can make a difference in developing desired "added value" traits. If functions such as record keeping are routine duties required to complete a successful program, then many of the benefits of studying record keeping will be lost. If all of the information required for conducting a project is spoon fed to the student, then the ability to learn independently may not be developed. If FFA officers handle all contacts with the business community in selling projects or soliciting the participation of the community, then only they, and not the members at large, will benefit.

Some suggestions for assuring that our experiential programs continue to add value to student learning include:

1. Independent or autonomous learning skills, effective communication skills and problem solving skills need to be identified as specific objectives of our programs.
2. Time must be spent with the student looking back on an experience and asking why problems arose and how they might have been better handled or prevented.
3. In addition to documenting their experiences, students should be challenged to provide evidence that they have defined problems, learned some new skills, sought out necessary information and solved problems.
4. Students should be encouraged to identify their needs for information and find it on their own. Teachers need to encourage, and if necessary force, students to communicate with agencies and individuals in the community who can be of help.
5. Require students to provide evidence of learning which has taken place through experience. For example, third party testimony or evidence of performance in addition to wages or net worth.

Efforts Times (Education Plus Activities) Equals Value Added

(Continued from page 11)

dary value adding person? Just as most farmers are finding it difficult to profit from raw commodities without additional value adding, a high school diploma seems inadequate today.

Many high school graduates choose to add more value to themselves by attending a four year value adding university. The value adding process extends beyond the selection of a value adding major. Sitting in a classroom taking value

Many have promoted appropriate activities. Anthony Gosboro, in the October 1984 issue of *The Agricultural Education Magazine* listed a number of activities for a forestry SOE. Many of the tasks he identified were concerned with technical skills in forestry. Included were "Locating literature, acquiring information, preparing radio/tv public service announcements, keeping information in current events and understanding their impact on business, and taking part in decision making processes. These are good examples of activities aimed at developing communication, interpersonal and independent learning skills.

We have argued that the value added to our students by experiential learning must go beyond the acquisition of technical skills which, while important, are not sufficient. Agricultural educators must understand the specific attributes of experiential program in order to recognize that there is more to know than simply the process of implementing SOE and FFA. An understanding of the principles of experiential learning should be an important part of every agriculture teacher's professional knowledge base. This is necessary if we are to maximize the added value from students' experiences. A claim which we will need to prove over and over again is that our method produces "added value" with substance of agriculture as an applied science providing the context for this process. It is important to recognize, indeed advertise, the value added by our experiential education. Yet, more importantly, teachers' maximizing the effectiveness of experiential learning activities is the key to value added learning.

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adding notes and tests in only a step. Going above and beyond is what will separate one from others who try marketing themselves in similar career fields. Involvement in college activities, clubs, internships, and one's willingness to create and take advantage of all value adding opportunities are most important value added activities.

Value adding is the name of the game. The winners are the people who successfully add the right amount of profitable value to themselves at the right time, then sell those accumulated added values, in the right market. So in the end, when you are selling yourself, you can become a price setter and not a price taker. You have successfully added the most value possible.

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Efforts Times (Education Plus Activities) Equals Value Added

(Continued from page 11)

dary value adding person? Just as most farmers are finding it difficult to profit from raw commodities without additional value adding, a high school diploma seems inadequate today.

Many high school graduates choose to add more value to themselves by attending a four year value adding university. The value adding process extends beyond the selection of a value adding major. Sitting in a classroom taking value

Many have promoted appropriate activities. Anthony Gosboro, in the October 1984 issue of *The Agricultural Education Magazine* listed a number of activities concerned with technical skills in forestry. Included were "Locating literature, acquiring information, preparing radio/tv public service announcements, keeping informed in current events and understanding their impact on business, and taking part in decision making processes. These are good examples of activities aimed at developing communication, interpersonal and independent learning skills.

We have argued that the value added to our students by experiential learning must go beyond the acquisition of technical skills which, while important, are not sufficient. Agricultural educators must understand the specific attributes of experiential program in order to recognize that there is more to know than simply the process of implementing SOE and FFA. An understanding of the principles of experiential learning should be an important part of every agriculture teacher's professional knowledge base. This is necessary if we are to maximize the added value from students' experiences. A claim which we will need to pass over and over again is that our method produces "added value" with substance of agriculture as an applied science providing the context for this process. It is important to recognize, indeed advertise, the value added by our experiential education. Yet, more importantly, teachers measuring the effectiveness of experiential learning activities is the key to value added learning.

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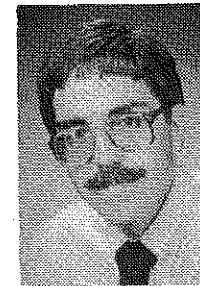
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adding notes and tests in only a step. Going above and beyond is what will separate one from others who are marketing themselves in similar career fields. Involvement in college activities, clubs, internships, and one's willingness to create and take advantage of all value adding opportunities are most important value added activities.

Value adding is the name of the game. The winners are the people who successfully add the right amount of profitable value to themselves at the right time. When all those accumulated added values, in the right market. So in the end, when you are selling yourself, you can become a price setter and not a price taker. You have successfully added the most value possible.

FEATURE COLUMN

Computer Technology Resources He Who Steals My Hard-disk Steals My Soul



BY NAT JAEGLI, SPECIAL EDITOR

(Mr. Jaeggli is Coordinator, California Ag. Ed. Computer Network, University of California-Davis.)

The phone rings, you check your watch, it's late, nearly 11:00. Hello... Yes, speaking... Yes, sure I'll be right there. Your office has been found broken into and security guards are on their way to identify what's missing. You know what they say, you don't even have to go. You're hoping it's not true; you don't want to go through the hassle. Securing your computer didn't seem important until now. The type of computer security device best for you depends on two factors: the degree of risk or danger to which your computer is exposed, the flexibility or portability you require of a computer system.

The degree of risk involved is the danger to which your computer(s) are exposed. If you are purchasing security for a computerized "lab," open to students 24 hours a day, your security will be very different than if you are securing the computer on your desk. The risk involved may be very slight if the physical security surrounding the computer is very good.

The degree of flexibility necessary after the device has been installed is a consideration to anyone who travels with a computer or uses it in a variety of situations. The types of peripherals installed also determine the degree of flexibility needed. If computers are used for a single application at one location, flexibility may not be an issue.

Security devices can be divided into 3 different groups, anchor pads, and cabinets, according to their degree of flexibility and the amount of protection provided. The anchor pads offer the greatest flexibility and uses. They consist of steel security pads attached with acrylic adhesives; metal anchors which attach to computers using existing screw holes in the case; and for Macs and Apple IIgs's, security adapters which lock into the security slots provided in the case. Cables are made of flexible, high strength steel with vinyl coatings and loops or shackle ends and locks. Sam Systems, Inc. offers the best selection of kits and component parts for this type of system. Cost: \$30-50 per system secured.

"Anchor Pads" are devices that secure your equipment to the desktop, using a series of interlocking plates, adhesives and locks. Although the equipment secured is permanently attached to the desk until you choose to release (unlock) it,

access to the ports and cables is retained. While the cable system can be installed by almost anyone, "pads" require greater skill. Anchor Pad International is a leader in the design and installation of security pads. Their products come with a three-year equipment replacement warranty if their device fails to prevent a theft. Cost: \$70-200 per system secured.

Cabinets or enclosures generally provide the greatest degree of security. The computer and peripherals are entirely enclosed in a steel case, leaving only a switch, drives, keyboard and monitor exposed. Slots or fans are provided for proper cooling of the computer and components. Ports and cables are also enclosed so that tampering with the equipment is nearly impossible. These devices are generally bolted to the surface of the desk or table, and can only be removed when the cabinets have been unlocked and removed. FMJ Security Systems and Anchor Pad Int. both offer a complete line of cabinets for many popular computers and peripherals. Cost: \$120-300 per unit secured.

What will it take for you to invest in a computer security system? Contact the following companies for information about their products:

SAM Systems, Inc.
P.O. Box 2339
Hammond, IN 46323
(219) 844-2327

Anchor Pad Int.
4483 McGrath
Ventura, CA 93003
(800) 426-2467

FMJ Security Systems
1954 Gladwick St.
Compton, GA 90220
(213) 632-9751

Value Adding: The Impact of Vocational Agriculture on the Community

(Continued from page 15)

In an example, the primary author will participate in a minimum of eight professional development activities in the next year. In addition, the instructional facilities are often the most important training crucial to local industry. The primary author's home community has experienced a gold mining boom over the past several years. The welding training available through the vocational agriculture program is one of the crucial skills needed in the gold industry. The instruc-

tors have conducted concentrated welding courses for mining employees. In addition, a number of graduates have been placed in local mines. The vocational agriculture instructors have modified courses to emphasize skills and attitudes required to succeed in the industry. An articulated program with a major company is in developmental stages to insure a trained and steady work force in welding. In return, the company is providing equipment and materials to support this educational effort. Future plans call for the company to assist in developing additional instructional space for the program.

(Continued on page 18)

Value Adding: The Impact of Vocational Agriculture on the Community

(Continued from page 17)

Summary

Studies which document the true value of the vocational agriculture program to a community or the individual are not available. Nelson (1987) urged the profession to consider research that measures the total impact of the vocational agriculture program on students. In practice, however, instructors, state supervisors, and teacher educators can all identify indicators of value adding. This article has touched on several of these factors. The future

of strong, well supported vocational agricultural education programs lies in identifying and publicizing those elements of the program which benefit the local community and society in general.

Intuition tells us that vocational agricultural education programs have been a valuable part of the community since their inception. We must all work to articulate the value of vocational agriculture programs add to communities. We view a more productive, progressive community as an outgrowth of quality local vocational agriculture programs.

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Farm Management Education: Does It Pay?

(Continued from page 7)

activities do they place an economic value, yet all would likely agree that they represent value added by education.

The concept of value added is not lost on education for farmers. Significant returns from both public and private investment in education programs can be repeatedly demonstrated. But the questions of who benefits and how much are important ones. They hinge on the philosophical arguments related to public versus private benefits.

The private benefit cost ratio when calculated from actual farm records for management education in agriculture has been demonstrated to be about 4 to 1 when individual gains in farmer income is the only measure of benefit. (Persons, et. al., 1968). Experience in Minnesota would show the farmers' perceptions of benefits to be at about the same ratio. The farmers' perceptions of \$4400 of improved annual income would compare with the estimated \$1000 cost per family in the program in 1987, giving a modern benefit-cost ratio of 4.4 to 1 (Persons, et. al., 1987).

Public benefits, on the other hand are more dependent upon how benefits are measured. If the public benefit is measured only as the collective private benefit of participants, then the benefit cost ratio is estimated to be closer to 2 than 1. But if public benefit is measured by an increase in community business activity, then the ratio may range from 9-73 to 1 depending upon the application of the principle of the multiplier effect (Persons, et. al., 1968). Again, farmers' perceptions of income and their economic performance relative to farmers in general suggest that the increase in business activity generated in the 1980s is not unlike that generated in the 1960s (Persons, et. al., 1987).

Kittleson (1969) was one of the first to conduct a sophisticated investigation of the effects that management education might have on attitudes toward farming and education in general. He concluded that the relationships

between instruction and attitudes was significant in well organized management education programs. The more intense and better organized instructional program caused some change in attitude, even though the relationships were not strong. This study demonstrates, however, that a good program of instruction has effective consequences. When coupled with the cognitive skills and knowledge farmers report, it is clear that the benefits of instruction are broad based.

Does education for adult farmers pay? The answer is a resounding yes! It pays in both economic terms and in the social and moral benefits which participants describe. It is truly an investment in human capital that pays big private and public dividends.

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FEATURE COLUMN

International Agriculture Opportunities for Educators



BY JANET L. HENDERSON, SPECIAL EDITOR
(Dr. Henderson is an Assistant Professor, Department of Agricultural Education, The Ohio State University.)

may have asked yourself "How can I go overseas? Do I have any contacts, or the funds to travel abroad; how long will I be away for long periods of time." For many international teachers, traveling overseas may seem like an insurmountable task. However, there are several short-term international opportunities available for interested teachers.

Partners of the Americas is one organization that provides a vehicle for international cooperation. Partners of the Americas is a private, voluntary organization dedicated to promoting economic and social development throughout the Western Hemisphere. Since it was founded in 1964, it has emerged as one of the hemisphere's most influential forces in building goodwill and private sector cooperation among people of the Americas. More than 15,000 people in 43 states and 27 Latin American and Caribbean nations call themselves "Partner volunteers." Together, these volunteers contribute their time and energy to self-help projects at the grassroots level.

Over 1300 projects are carried out by Partner volunteers each year. These volunteers work in an organized but non-hierarchical structure. Partners of the Americas pairs U.S. citizens with sections of Latin America and the Caribbean in bilateral "partnerships." For example, Texas is paired with Peru, Wisconsin with Nicaragua, and Kansas with Guyana. Volunteers on the two sides — north and south — work together. Together they identify a needed project. Country travel usually involves a 2 to 3 week time commitment; funding for individual travel is provided by the sponsoring organization. Partner volunteers do not go in with expensive projects, sophisticated equipment, overwhelming numbers. They go into communities because they are asked and work with people on a one-to-one basis. The Partners' program is funded by major corporations, foundations and government agencies. Currently, every \$1 of seed money invested in the partnerships by these sponsors is "multiplied" \$12 worth of goods and services. The projects they carry out are valued at nearly \$40 million a year and estimated

to benefit 100,000 people annually.

Many of the Partner projects involve agriculture. "Our biggest problem has been storing our crops," a woman in Pearl Lagoon, a small town on Nicaragua's humid Atlantic coast, told the Wisconsin-Nicaragua Partners. Citizens in Pearl Lagoon - Like most people in Central America — lack refrigeration or any way of saving food from season to season. More than half the food they grow rots before it can be consumed. To respond to this problem, the Wisconsin-Nicaragua Partners have designed a simple, lightweight food dryer which can be constructed by Nicaraguan families at home for as little as \$15. In nine communities, including Pearl Lagoon, volunteers have shown residents how to build and use the low cost dryer. Through this continuing project, the Partners hope that one day food drying will provide a widespread solution to the problem of preserving food throughout Central America.

The exchange of technical information and cultural heritage can be a positive experience for all. For more information about the Partners program, agricultural teachers should contact:

Partners of the Americas
1424 K Street, N.W., #700
Washington, D.C. 20005
Telephone (202) 628-3300

French Fries, Farms and Reforms

(Continued from page 13)

can be documented wherein students have been self-supporting while completing advanced education. All of these activities are appropriate end products of secondary agriculture programs. In each case the students have applied "learning to living" and value adding has occurred.

How can traditional curricula and delivery methods be modified to facilitate the value adding concept? The relevance of many traditional production agriculture programs is challenged by the decline in the farm population. Our philosophical approach to agricultural education must change from preparing students for farming to preparing

agricultural students for meaningful agricultural careers in an international society.

One argument which many traditional program instructors have proposed for resisting change has been that isolated communities have different program needs than communities which are close to population centers. An aspect of the problem which is ignored by this argument is that many young people move away from these same communities in search of employment, and they must be equipped with appropriate "tools" to deal with the realities of living and working in a complex world. This is not to suggest that we should throw out traditional programs; it is simply a plea for evaluation and, if needed, modification of such programs to best meet the needs of the students we serve.

(Continued on page 22)

Instructional Materials: Textbook Selections: What to Look For and How

Mr. Easley pulled the Interstate Publishers, Inc. catalog from his faculty mailbox. It reminded him that he had approval to purchase new horticulture books and needed to notify the office of his choice by next week. He also had various other publisher's catalogs gathered at the AVA convention while browsing through the exhibits at the trade show. Several possibilities were on the state-approved adoption list, but which was the best one for his class?

Mr. Easley, like most other vocational agriculture teachers, does not rely on a text as the only source of information for his students: many experiences and materials are used for instructional planning. But because textbooks do constitute an authoritative portion of the curriculum, they should be selected with great care.

Textbook Evaluation Checklists

Checklists can be valuable tools for evaluating texts. They help the teacher focus attention on specific aspects of the materials which might be overlooked. The following criteria adapted from Irwin and Davis (1980) might be used when reviewing a textbook for selection.

Title of Textbook _____
 Author(s) _____
 Publisher _____
 Cost _____ Copyright date _____

Value Adding — The Leadership Component

(Continued from page 12)

tion. The FFA is a learning laboratory where students, through hands-on learning-by-doing situations, participate and practice in real-life leadership experiences. The benefits of these experiences often come to fruition well after the students have left the program.

Perhaps, we are now ready to answer the questions, "What is it about the agricultural program that enhances leadership development? What is it that takes the raw products, the students, and adds the value of leadership?"

First, the FFA program of activities thrusts students into problem solving situations where they must use planning and decision-making skills. Further, the students are involved in the implementation and evaluation of events and activities.

Secondly, students in an FFA program are held accountable. A good teacher won't let students off the hook. They are encouraged and motivated to follow through with various activities and events.



BY JEFF MOSS AND KAY MOSS

(Dr. Jeff Moss is an Assistant Professor in the College of Agriculture at Louisiana State University; Dr. Kay Moss is an Assistant Professor in the Department of Education at Southeastern Louisiana University.)

Readability

- _____ 1. Does the text introduce abstract concepts by using concrete examples?
- _____ 2. Are the main ideas of the chapters and the subsections clearly stated?
- _____ 3. Is new vocabulary introduced in the context of a sentence or paragraph which helps students understand the new word?
- _____ 4. Are new words defined in the margins or at the bottom of the pages where they are introduced?

(Continued on page 21)

Finally, and perhaps the most critical element is that of a caring teacher. Madeline Hunter, the noted educational author and researcher, defined leadership as using one's own skills to move people forward in a desirable fashion. She further implied that the word leader is synonymous with the word teacher. In that sense, good teachers are also models for leadership.

Could this be why many students say the following of their former agriculture teachers?

... someone who really cared about me and had faith and confidence in my abilities ... was a parental figure to me.

It has been said that "I care not what you know until I know that you care." A quality teacher models that statement to its fullest. We have many agriculture teachers who do just that and, therefore, have a lasting influence on young people.

The FFA component of our agriculture program is a good model itself for bringing out the best in students, especially when a quality teacher is present to guide and direct.

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(Continued on page 22)

Instructional Materials: Textbook Selections: What to Look For and How

(Continued from page 20)

1. Are the assumptions about students' vocabulary knowledge appropriate?
2. Are the assumptions about students' prior knowledge appropriate?
3. Does the text include an index, glossary, and table of contents?
4. Is there an organizational pattern relating the chapters to each other?
5. Does each chapter have a clear organizational pattern?
6. Is an introduction provided in each chapter?
7. Is there a summary provided in each chapter?
8. Are their coordinated tests, activities, and questions that interrelate well with the chapter?

1. Does the text provide opportunities for students to practice using new concepts?
2. Are their summaries at appropriate intervals in the chapter?
3. Does the text provide adequate illustrations, figures, or graphs, etc. to reinforce concepts?
4. Are there literal recall questions provided for students' self-review?
5. Do some of the questions encourage students to draw inferences?
6. Are there discussion questions which encourage creative thinking and problem solving?

1. Does the content match state-approved curriculum guides?
2. If the text is a revised edition, have significant new topics been added?

3. Has the textbook been reviewed by qualified subject-matter reviewers?
4. Is the writing style appealing to students?
5. Are the cover, format, print size, and pictures appealing to the students?
6. Does the text provide positive and motivating models for both sexes, as well as for different racial, ethnic, and socioeconomic groups?

Two qualifications should be kept in mind about the textbook selection procedures described. First, checklists are useful for evaluating texts on a somewhat general level. They are not designed to pinpoint all of the specific strengths and limitations of texts. Second, certain items on the checklist may be of greater value than other items on the checklist. Merely adding up the scores on the available textbooks may not be a valid way to judge the texts.

Field Tests

Using a textbook selection checklist can give the teacher some very good quantitative data. Teachers can get much more qualitative information by field testing the texts with their students. Field test tryouts consist of classroom trials using materials being considered for selection. Teachers use samples of the materials to conduct lessons as part of their everyday classroom routine. The teachers pay close attention to their students' reactions to the materials. Do students correctly answer questions about much of the material? Do students comment that the materials are interesting? Do students have difficulty with the language or vocabulary of the author? By using field tests with the material, teachers have important information to add to the quantitative data gathered through the checklists.

Making the Decision

Mr. Easley has a critical task before him — one which calls for sound professional judgement and decision-making. Through the use of a checklist and actual field tests with the textbooks, he will be able to gain important information about which text will be the most useful in his classroom.

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NOTICE

Share your ideas with the Profession!

See page 23 for list of 1990 themes and theme editors.
 Contact the Theme Editor and put your ideas in writing.
 Prepare an Article for the Profession.

French Fries, Farms and Reforms

(Continued from page 19)

Perhaps the time has come to serve the curriculum to the students "cafeteria style." Open entry/open exit semester courses allow students to design their own agricultural education experiences to more appropriately address their individual career interests. In these difficult times, we may find it to be advantageous to everyone to allow students to move in and out of the agriculture program as their individual needs dictate. Is it not better to offer classes which contain some program completers and a few interested students than to close small classes down because our prerequisite courses exclude those students who have a passing interest? Is it not advantageous to a student to have some experience in our programs as compared to none? What about the student whose agricultural career interest requires a heavy secondary course load in the sciences and mathematics? Many high schools don't offer enough elective class time to accommodate the pre-veterinary science

student or the future geneticist who would like to take four years of agriculture classes and participate in a college prep track. What is reasonable in the "all or none" approach to agriculture program enrollment for these students?

The traditional "cast in stone" approach to agriculture education must give way to more flexible, student centered curriculum and delivery system. This approach to program planning will require increased consultation with each student to plan his/her individual program, but the outcomes have great potential in terms of value adding in an educational setting.

It little matters whether we are discussing students or spuds; if the raw product is of reasonable quality when it enters the production line, the processing institution should be able to add a few inputs and substantially increase the worth of the final product. Not every potato may become McDonald's French Fries, but every potato product, whether extruded, dehydrated, flaked, baked, sliced, diced or spiced reflects greater value than the spud from which it was derived.

Value Adding — The Leadership Component

(Continued from page 20)

Robert DeBruyn, in *The Master Teacher*, cites eight criteria in identifying leadership potential in students. The eight criteria could, in fact, be used as objectives of the value we want to add to the students enrolled in our agriculture/FFA programs.

1. Look for students who are doers, and display initiative. Action-oriented students who don't wait for others to get things done yet they are sincere and conscientious.
2. They have insightful and reflective minds. They study problems and situations and don't jump with their first idea.
3. They anticipate both problems and opportunities. In doing so, they reveal imagination, creativity, and the ability to stay with a problem until it is solved.
4. They are flexible in attitudes, ideas, and actions. They are risk takers, but they take calculated risks, not foolish or thoughtless ones.
5. They have positive and practical outlooks. Often they are idealists, but they make the ideal practical and workable.

6. They self-evaluate. Without hesitation they work objectively at their strengths, weaknesses, personalities, and work performance. Their aim is self-improvement, and they worry more about their own inadequacies than those of others.
7. They are persistent workers, not clock watchers. They are willing to put in long hours to get the job done properly.
8. They are enthusiastic and excited about work and achievement. They take pride in what they do.

As professionals we must look for these qualities in ourselves and, through the FFA program, develop these qualities in our students. If we do, we will develop our raw product and add tremendous value to our most important resource. If we do, we will continue to hear comments like

Of all the people who have great influence on my life, my agriculture teacher stands among them. He caused me to risk, care, get involved, develop my abilities - truly he added value to my life.

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French Fries, Farms and Reforms

(Continued from page 19)

Perhaps the time has come to serve the curriculum to the students "cafeteria style." Open entry/open exit semester courses allow students to design their own agricultural education experiences to more appropriately address their individual career interests. In these difficult times, we may find it to be advantageous to everyone to allow students to move in and out of the agriculture program as their individual needs dictate. Is it not better to offer classes which contain some program completers and a few interested students than to close small classes down because our prerequisite courses exclude those students who have a passing interest? Is it not advantageous to a student to have some experience in our programs as compared to none? What about the student whose agricultural career interest requires a heavy secondary course load in the sciences and mathematics? Many high schools don't offer enough elective class time to accommodate the pre-veterinary science

student or the future geneticist who would like to take two years of agriculture classes and participate in a college track. What is reasonable in the "all or none" approach to agriculture program enrollment for these students?

The traditional "cast in stone" approach to agricultural education must give way to more flexible, student centered curriculum and delivery system. This approach to program planning will require increased consultation with each student to plan his/her individual program, but the educational setting.

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Value Adding — The Leadership Component

(Continued from page 20)

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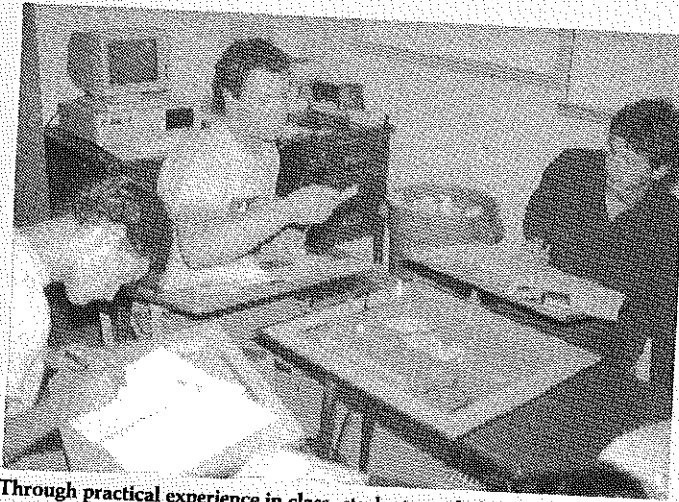
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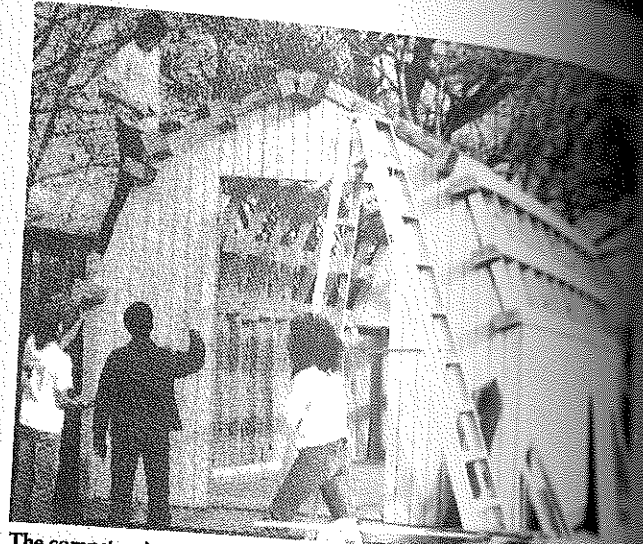
1990 Themes

Issue	Date Due	Theme Editor
JANUARY A Mission Statement for Agricultural Education	October 1, 1989	Alfred J. Mannebach Dept. of Educational Leadership Box U-93 University of Connecticut Storrs, CT 06268
FEBRUARY Agricultural Literacy at Secondary Level	November 1, 1989	James Leising Dept. of Applied Behav. Sci. University of California-Davis Davis, CA 95616
MARCH Delivering Agricultural Literacy	December 1, 1989	Warren D. Reed State Dept. of Education 4th Floor, State Ed. Bldg. 721 Capitol Mall Sacramento, CA 95814
APRIL Global Education - Role for Agricultural Education	January 1, 1990	Robert Martin Agricultural Education 201 Curtiss Hall Iowa State University Ames, IA 50011
MAY Reshaping Experiential Education	February 1, 1990	Thomas L. Grady Dept. Continuing & Voc. Ed. 112 Teacher Educator Bldg. University of Wisconsin-Madison Madison, WI 53706
JUNE A Health Profession in Unhealthy Times	March 1, 1990	Paul Vaughn Dept. Ag. & Extension Education Mississippi State University P.O. Drawer AV Mississippi State, MS 39762
JULY Pre-Secondary Agricultural Education	April 1, 1990	Joe Townsend Dept. of Agricultural Education Texas A & M University College Station, TX 77843-2116
AUGUST Expanding Audience Base	May 1, 1990	Blannie Bowen Dept. of Agr. & Extn. Education Amsby Building Pennsylvania State University University Park, PA 16802
SEPTEMBER Focus on Teaching (Annual Issue)	June 1, 1990	Stacy Gartin Dept. of Agricultural Education Agricultural Science Bldg. West Virginia University Morgantown, WV 26506-6108
OCTOBER Urban Agriculture	July 1, 1990	Margaret Elliber State Consultant - Ag Ed Dept. of Education Grimes State Office Bldg. Des Moines, IA 50319
NOVEMBER Changing the FFA	August 1, 1990	Jeff Moss School of Voc. Ed. & Technology Old Forestry Bldg. Louisiana State University Baton Rouge, LA 70803
DECEMBER Developing Entrepreneurship	September 1, 1990	Layle Lawrence Dept. of Agricultural Education Agricultural Science Building West Virginia University Morgantown, WV 26506-6108

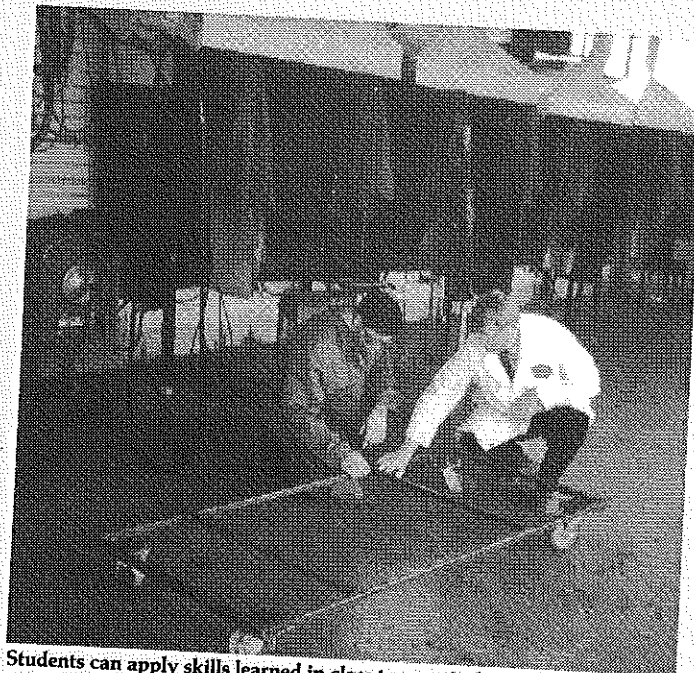
Stories in Pictures



Through practical experience in class, students apply learned skills, record keeping, mathematics, budgeting, marketing, and other management skills. (Photo courtesy of K. Lakey, Cambridge High School, Cambridge, Idaho.)



The competencies and work habits developed by students while completing a major project make those students more valuable to prospective employers. (Photo courtesy of M. Pratt, Firth High School, Firth, Idaho.)



Students can apply skills learned in class to practical projects for personal improvement. Students take pride in their work and are often enthusiastic about making goals and striving to successfully achieve them. (Photo courtesy of G. Orthel, Twin Falls High School, Twin Falls, Idaho.)



The added value of being able to apply classroom learning in a real situation is a significant opportunity offered by many agriculture programs. (Photo courtesy of M. Beitia, Raft River High School, Malta, Idaho.)