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## Motivating Students



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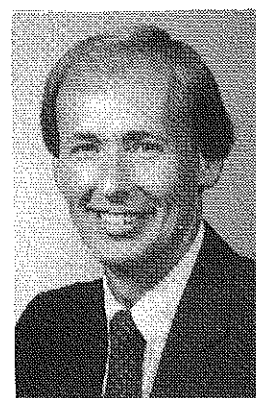
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# When Students Stop Asking Why



BY ED OSBORNE  
Dr. Osborne is associate professor and program chair of agricultural education at the University of Illinois.

I have been blessed with two young children, now ages 6 and 10, who continue to make life more lively and enjoyable for me. Having never really taught young elementary-aged students, I have been fascinated with the natural curiosity for learning that these two girls possess. They both love school. They respect and admire their teachers - sometimes more than their parents. For these young girls school is fun, school is exciting, school is cool.

There is one obvious difference between these two young students and many of the high school students that I taught several years ago. These girls enjoy school and they enjoy learning. I've often wondered how long this natural curiosity and love for learning will last. It seems that many students reach a point where they just stop asking those "why" questions. Do parents and teachers encourage children's natural curiosity, or do we unconsciously (or perhaps consciously) tell them to be quiet and listen so we can tell them all about the topic? Wouldn't it be nice if your sophomore students asked more thoughtful "why" questions, like they used to do when they were kids?

As a third grader my daughter was lucky enough to have a teacher who believed in learning through experience. These students conducted plant science experiments, wrote journals and stories, finished many art projects, were given weekly "stage" time, and used their thinking and creativity to participate in numerous other experiential learning activities. Learning in this class was fun! Compare this design to the familiar classes where students complete one worksheet after another under the guise of discovery learning. And there's the all-too-familiar scene where teachers tell the students all there is to know about a given topic. I cringe every time I hear a teacher say, "Today we're going to *talk about* \_\_\_\_\_, or today we're going to *cover* \_\_\_\_\_." No wonder many students don't seem to care about learning.

Educational psychologists have told us that when students reach 12 years of age, they can effectively learn through abstract and conceptual modes. While this is true, students still need to participate in concrete learning experiences for learning to be enjoyable and motivating to be high. Because students have developed the mental capacity for abstract learning, we often turn our backs on the active learning experiences that we know are most effective. Do our schools and universities gradually kill

students' natural curiosity and love for learning as we *give* them information hour after hour and day after day? Do our schools discourage rather than encourage thoughtful inquiry by students?

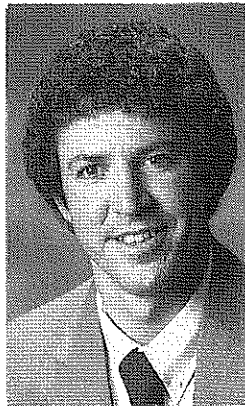
In an oversimplified yet useful analysis, student motivation can be dissected into three aspects of teaching and learning: students' perceptions of themselves (self-concept), their perceptions of the teacher, and their perceptions of the subject matter. This suggests that *how* we teach and how we treat our students are the keys to solving the student motivation mystery. In a recent USDE study (1992) the following conclusions were drawn:

1. Most students believe their ability and effort account for their achievement. Students believe that being seen as smart versus hard-working is better, because being excessively ambitious or of limited ability is embarrassing.
2. Even some of the brightest students believe they must strike a balance between high and low achievement, again due to peer pressure.
3. Many low-achieving students deny the importance of learning and often refuse to attempt learning activities. This saves face, because if they don't try, failure can only be interpreted as a lack of effort. Thus, their ability cannot be questioned, and their reputation and self-confidence are preserved.

Grades, detentions, marks on the board - these are not the elements that motivate most students. Active learning is the way to reawaken our students' curiosity and desire to learn. Genuine (versus pretended) inquiry learning must be the centerpiece of the agriculture curriculum. A creative teacher can design literally hundreds of ways to engage students in learning, both mentally and physically. To be clear, this does not include worksheets that require students to transfer answers from a book to a piece of paper. Also excluded are the "cook-book" activities where students simply follow detailed directions in performing a task. Effective teaching and active learning are more than "keeping students busy." In my opinion, the top-of-the-line inquiry learning technique is experimentation - real experimentation where students raise their own questions, design their

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## How Do I Turn Your Crank To Get You Going?



BY STACY A. GARTIN  
Dr. Gartin is associate professor and chair of the agricultural education program at West Virginia University, Morgantown.

### MOTIVATION.

- \* A stimulus to action
- \* Drive
- \* Incentives
- \* Suggests striving toward an outcome
- \* A predisposition to behave in a positive manner to achieve specific needs.

"What really motivates my students?" Every teacher who asks this question knows the difficulty of answering it. Motivating others is vital to establishing and maintaining effective relationships. It is essential in the teaching/learning process.

A thorough review of the literature revealed hundreds of articles published on motivation. Synthesizing these articles and adding some of the author's own views, the following fundamental principles of motivation tended to emerge.

**Recognize Accomplishment.** People need to feel valued, no matter how modest their position. Often individual accomplishment tends to get overlooked in large classes, programs, or organizations, with the "cream of the crop" receiving the most accolades.

**Provide People With Choice.** Students need to make decisions. Choice promotes personal commitment to accomplishing the task or goal.

**Provide Support.** Achievement-oriented students are willing to ask for assistance when necessary. Asking for help should never be a weakness, but rather a sign of strength. Asking for support helps to avoid frustration and isolation.

**Responsibility And Accountability.** Few students will reject accountability for tasks within their areas of responsibility

**Relationship Between Tasks And Goals.** The routine of performing the same tasks everyday promotes boredom. Students need to know how the tasks contribute to their individual development and the success of the program.

**Goal Setting.** Individual goal setting results in a commitment to goal accomplishment. Stu-

dents should be encouraged to set short, intermediate, and long range personal goals.

**Extrinsic And Intrinsic Rewards.** Extrinsic rewards are seldom enough to motivate students for the rest of life. Students must learn to identify with their inner feeling of knowing they performed the task well. Excessive amounts of extrinsic rewards may reduce the motivational effect of an individual's intrinsic satisfaction.

**Individualized Motivation.** Recognize that different students will require different types motivation in order to get them to perform to their best ability.

**Feedback.** Immediate, relevant, and constructive feedback is important in improving student performance. If negative feedback is given, it should be accompanied with concrete and helpful information.

**Confidence In Students.** Teachers need to be constantly aware of the self-fulfilling prophecy. Research indicates that students who are expected to achieve will do so more often than others.

**Opportunities To Succeed.** Every effort should be made to allow each student to take on an active role with successful projects/functions. "Nothing succeeds like success." Give credit where credit is due.

**Trust And Open Communications.** Teachers need to create a climate of trust and open communication both in and out of the classroom. Teachers need to eliminate threat, as it is one of the greatest obstacles to individual motivation.

**Walk Your Talk.** Teachers must practice what they preach. If they are not motivated, how can they expect their students to be motivated? You are a role model. So, model what you want your students to be like.

**A, B, C's of Motivation.** Agriculture students, in a non-scientific survey, were asked to identify people, places, or things that motivated them. The following is a partial listing. It may provide some food for thought: Active learning, Ag class, Being accepted, Biotechnology, Competition, Compliments, Comput-

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## How Do You Say "I Don't Know" And Not Feel Guilty?

BY CHRISTINE DICKSON  
Ms. Dickson is an agriculture teacher at North High School, Bakersfield, CA.

As teachers, one of our fatal flaws is approaching every question--and every classroom exercise--with our own answers. Millions of dollars in research grants are awarded each year to scientists who don't have answers to their questions. Agriculture would not be at its current level of productivity and economic efficiency if our predecessors had only invested in questions that already had answers.

Kids want to learn. Students crave discovery. But the results of discovery, and this is especially true in science, are much more satisfying if the outcome--the discovery--is largely of a **student's own making**. Educational researchers now tell us to throw out 30% of our informational lesson plans and instead spend that time focusing on the 70% of the material that we have saved.

It is not easy to buy into this concept. I dreaded the thought that silence would greet whole portions of my instructional sessions if I didn't have each and every second of the time and material planned ahead of time. I wasn't going to give up my old "tried and true" (and comfortable) methods very easily.

Ultimately, I was motivated to give up my traditional teaching approach by a high school administration that said, "Sorry, you have no more budget for travelling. And, by the way, the school farm is going to be replaced by a softball field." I was also motivated to change because my students, either directly or indirectly, told me they had no time, place, or capital to raise an animal as their SAE program. Besides, they were making two or three times more money working at the local feed store in the same number of hours required for their livestock project and learning a great deal more about agriculture.

Schools teaching traditional agriculture face similar challenges. Teachers complain that they're encountering a different breed of student. No longer do we have students who have explored the engine of the family car with their father. No longer do we have students who have a backyard for a livestock SAE program. Students are either home alone after school watching TV or have their own 20 hours-a-week job to pay for their car and car insurance. Our students no longer have time just to pon-

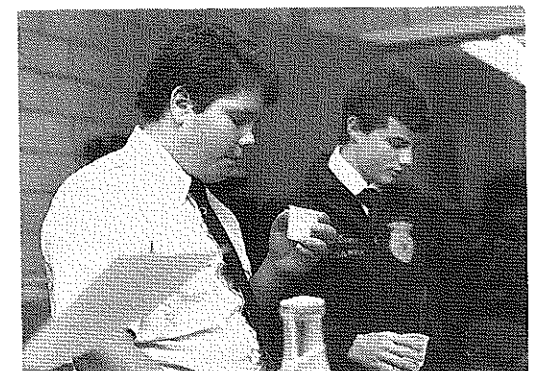
der a question or tinker with a machine, and once they get to school they receive thousands of answers to questions *they* really never ask. Using agriscience as a motivational tool, we can get these students to actually learn and develop a plan in which they can still be part of the agricultural industry.

You do not have to know all the answers. If the word "science" conjures up frightening images of your old biology class of thousands of vocabulary words and lots of food coloring - fear no more. Nowadays even the science teachers in high school are having to rewrite

***Our students no longer have time just to ponder a question or tinker with a machine, and once they get to school they receive thousands of answers to questions they really never ask.***

their curriculum to enhance it with hands-on, applied laboratories. As agriculture teachers, we are way ahead of them. We have been teaching hands-on applied laboratories for years.

Our basic change is from the "macro" (big livestock and big acres of crops) labs to "micro" labs: DNA recombination and the production of microbes for the solid waste problem). We owe it to our students to change. Most productive careers in agriculture now are in the agriscience arena. When we remember that only 2% of the jobs in agriculture are in production, we must ask ourselves what we, as teachers, are doing for the other 98% of the industry that needs our students. →



Discovery is an important motivator in the learning process. (Courtesy of Stacy Gartin)

I have had more fun watching my students get excited as they develop their own research assignment than I have had watching them win a first prize with a market lamb at the county fair. I also know that the scientific methods they are utilizing will land them a job far more quickly than will a blue ribbon at the fair.

One tool used in our classroom in teaching the scientific method is the Brassica *rapa* or Wisconsin Fast Plant (developed by Dr. Paul Williams, University of Wisconsin). This marvelous little plant germinates, grows, flowers, and produces seed in 28 days. From the minute the first seed is planted, questions from the students arise – questions like, why does the fertilizer have to be this kind? Why do these plants have to grow in 24 hour light? Why do we have to use a bee to cross-pollinate? My pat answer to every question is “I don’t know, try it another way tell us the outcome.” We had 25 different variations – experiments if you will – going on at the same time in a space of 16 square feet in the classroom. The variations (experiments) became competitive among the students. Who in the class was writing the most complete data? Whose plant was growing the fastest? Which experiment was producing the most seed?

There was no time for me to worry about silence in my presentations. I no longer gave the presentations, the students did. The students became the experts, and I was doing all I could to soak up all this new knowledge.

Some of the learning was very basic. One student planted his crop three times, but nothing ever germinated. I finally said, “Okay, gather your materials one more time, and I will personally hand you the seeds and watch you plant them.” As I handed the seeds to him, he sheepishly said, “These don’t look like the ones I have been planting.” He and the rest of the class enjoyed the fact that he learned the difference between the fertilizer granule (which does not look like a seed!) and the seed itself.

These students were so proud of their results that 12 of them decided to enter the Agriscience Fair at our State Finals. These are students who have never had the time to be on a judging team or even think about delivering a prepared speech.

I now am in the habit of simply saying, “I don’t know, could you figure this out and tell us your conclusion?” It caught me by surprise when I found myself asking a livestock class to show me what solids in milk looked like. This was a statement in a typical lecture about milk, milk payments, non-fat solids and water percentage. What normally took 30 seconds to say took two days and a heck-of-a-lot more learning. Students first had to design their own experiment to separate the solids from the water. Then we gathered all the materials we

needed for each of the various trials designed by students and began the fun task of experimenting. The classroom smelled like burned milk for days, but it got the other classes asking why they couldn’t do that experiment. The livestock students will think of solids every time they pour a glass of milk!

Agriscience labs are fun and fulfilling. I can hear you saying to yourself right now, “They may be fun and fulfilling, but time consuming and expensive.” That is true—they are time consuming and expensive. Science labs are just a matter of priorities. Are we doing as much as we can for the greatest number of students? Do we really need microscopes for 100% of our students? Do we really need to spend three nights a week and every other weekend on our judging teams (all 20 students) or spend this time on preparing for a lab and developing work experience SAE programs for 100% of our students?

Please don’t hesitate to step into the next century and not know the answers! ■

## How Do I Turn Your . . .

(continued from page 4)

ers, Decision making, Designing projects, Extrinsic rewards, Experiments, Family, Friends, FFA, Games, Getting a smile, Helping someone, Horticulture, Intrinsic motivation, Interest approaches, Justice, Kindness, Laughing, Leading the group, Making money, Making projects, New officers, New experiences, Opportunities, Ownership, Praise, Passing a test, Recognition, Responsibility, SAEs, Success, Teachers, Thinking creatively, Understanding, Variety, Victories, Working in the laboratory, When my teacher smiles at me, Yes, you may . . . , Zoology, Zeal.

**Don’t Forget To Say Thank You.** Very few individuals ever become successful by themselves. You know what a great feeling it is to know that you have made a difference in someone’s life. However, can you recall the last time you sent a “thank you” letter/card or called one of those individuals that motivated you along life’s way? When was the last time you thanked your agriculture teacher, your state supervisor, a college professor, a colleague, a past student, or even your parents? Make time in your already busy schedule to thank them for the difference they made in your life. ■

# The Basics of Motivation



BY RUBY RANKIN

Ms. Rankin is an extension agent in Kimber County, Mississippi, P.O. Box 339, DeKalb.

**M**otivate. To Motivate. As an extension agent whose primary responsibility is youth programming, I often wonder what we “really” mean when we say the word motivate. What do we mean when we say that he/she is a “motivational” speaker? What is the definition of the word motivate? Webster defined motivation as “to provide with, or affect as, a motive or motives; incite or impel.” Can one person motivate another to do something, or can they only provide the atmosphere for the desired action to take place? What is it that motivates a person to make one decision over another?

## What is Motivation?

There are several different schools of thought concerning motivation. It is not uncommon for psychologists to think of motivation as the process of (a) arousing or initiating behavior, (b) sustaining an activity in process, and (c) channeling activity into a given course. Therefore, the study of motivation would then become the study of all factors which arouse, sustain, and direct behavior. However, moral philosophy has long been concerned with the question of what sorts of things can motivate people to do what they do, and more especially, whether such things as a sense of duty or a desire for the well-being of others can be motivating.

## Styles of Motivation

A friend who has been an educator for some 30-plus years recently asked me to conduct a program on building self-esteem. She said, “I don’t know what’s wrong with my students, they’re just not motivated. We need to do something to motivate them.” I sympathized with her and replied, “Can we motivate students, or can we only provide an atmosphere for learning?” This was a question that she thought about for some time before replying, “they must be motivated intrinsically, if they are to be more receptive to the atmosphere provided.”

As educators, we can provide the kind of learning environment that is stimulating. We often become frustrated when it seems as if the students we are trying to help, encourage, and motivate are totally unmotivated. Each individual has some level of motivation; however, the way in which students are motivated may be totally different.

There are three major styles of motivation: negative, permissive and positive. When applying the negative method, a student is often deprived of something or threatened. For example, if an assignment is late, the student gets no free time for three days. Negative motivation often makes the receiver feel guilt, low self-esteem, insecurity, dependency, irresponsibility, and lack of control.

Permissive motivation allows complete freedom with no restrictions. Permissive motivation may sound ideal to some, but it has its drawbacks. Permissive motivation (a) allows people to test their own ideas and try out new behaviors, (b) reinforces habit patterns, (c) does not encourage self-discipline, (d) encourages students to look at the present and not the future, and (e) provides no feedback on performance.

The third kind of motivation is positive. The positive style allows for approval to be given for behaviors that you would like to have repeated. For example, I might say, “I like the way that you prepared your book report. I know that you must have put a lot of time into it.” The positive motivational style (a) creates positive self-image, (b), creates a desire to repeat behaviors, (c) creates a sense of commitment through involvement, and (d) makes the educator a manipulator and controller.

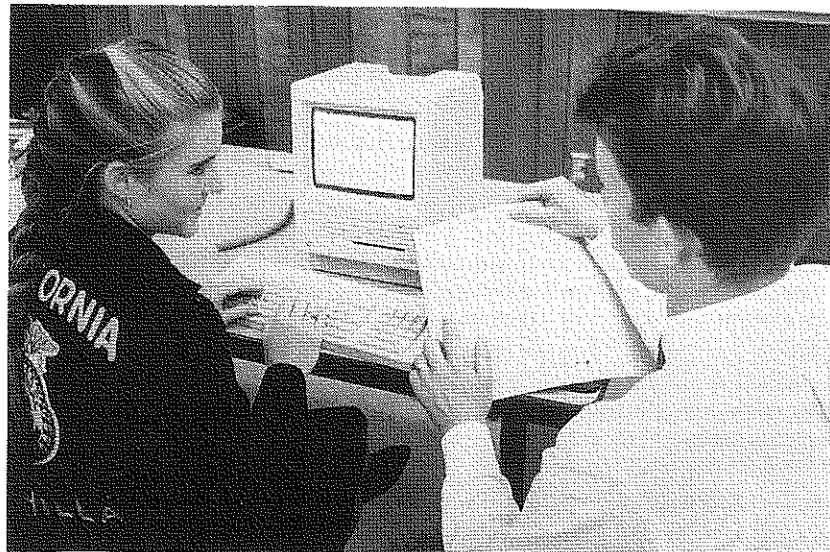
## What Can We Recommend?

So, what motivational method is recommended? The answer to this question depends upon who is motivating and who is being motivated. You must understand the techniques and their effects on young people and which method you are most comfortable using. Evaluate each child’s needs and the specific situation. Keep in mind that the ultimate goal of any motivational technique is to develop behavior →



A sense of belonging serves as a motivator to people. (Courtesy of Stacy Gartin.)

iors in others which will help them toward positive self-development. Apply the technique best suited to the individual and the requirements of the specific situation.



Feedback is important for reinforcing positive changes in behavior. (Courtesy of Stacy Gartin)

According to Herzberg, true motivators are:

- achievement - a feeling of personal accomplishment.
- recognition - being recognized for a job well done.
- participation - being personally involved.
- growth - the opportunity for a challenge, to learn something new.

If we are to create a motivational environment-if we are to motivated-then there must be someone who wants to be motivated. Something must be wanted; there must be a way of getting what is wanted; and people must believe their efforts, if successful, will be rewarded. Children of all ages must have these needs if they are to be motivated.

### Six Keys to Motivating Students

When we say that we wish we could motivate a student to do something, what we are really saying is that we wish that he or she would do better. There are six keys to motivation:

1. Ask for performance. Describe how things are currently being done and how we want it to be. Then ask the students to do it that way.
2. Use lots of positive, personalized reinforcement. Don't take acceptable work or grades for granted. Thank them for it. Praise them every time they improve. Remember, while everyone likes to be recognized, what motivates one may not motivate another. Find out what works with each of your students, and use it.

3. Build relationships. This doesn't mean being buddy-buddy with your students. But it does mean treating your students like real, live, human beings. Let them know that you care. They will respond best when your actions show that you respect their individuality.
4. Understand your students' point of view. Make a habit of listening to your students-this may be a hard task at times. You may be the only one who takes time to listen to them.
5. Model what you want. Approach your work with vigor and enthusiasm. Always follow through with planned activities.
6. Refuse to accept poor performance. Tell students what you expect of them and accept nothing less. Be careful not to set expectations too high or too low. As the old saying goes, "It is better to aim for excellence and hit good than to aim for good and hit average."

### Promote Learning

Young people often become bored at a very fast pace. Therefore, we must make learning fun, exciting, and stimulating. Get youth involved. Let them take part in the decision-making process. Let them help decide what will be done and when. You might just learn something new and exciting.

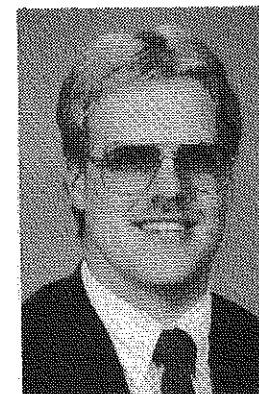
The 4-H motto of "Learn by Doing" and the first line of the FFA motto "Learning to do" are two themes that we can all live by. Students usually retain more information when they hear it, see it, and do it. Youth like being involved; they thrive on "learn by doing" experience. We must promote positive behavior. Positive behavioral promotion cannot be done by comparing one student to another. There is some good in the worst of us. Find what is good and expound upon it. The most crucial technique a positive motivator can use is reinforcement. Reinforcement includes encouragement, recognition of accomplishment, and reward for a job well done. For example, if a student who is usually extremely talkative and disruptive sits quietly and listens for 15 minutes, recognize that behavior, encourage its repetition, and when possible, reward that behavior in some small way. Through encouragement young people can be reinforced in their commitment. The reward is a way of saying, "You did a good job." Keep in mind that the reward is only as good as the value the recipient puts on it.

### Summary

There is no one recipe for motivating young people, but I find that the following ingredients usually work well.

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## The Challenge to Lead Motivates Nontraditional Students



BY JAN D'HAEM AND DAVE KRUEGER

Ms. D'Haem (top) is a graduate assistant in agricultural and extension education at Michigan State University. Mr. Krueger (bottom) is executive director of the Michigan FFA Foundation.

**O**ne person's excitement cannot build a program. There is nothing like the support of the kids.

(Bodstedder, 24 Hr. Challenge participant.)

As teachers, we believe that what we teach is crucial to developing our students into productive citizens. But teaching does not mean that learning has taken place. Campbell (1972) defined learning as "the process of acquiring new knowledge, skills, techniques, or values that enable the learner to do new things." Students need to be ready and willing to accept new knowledge. Tanner and Lindgren (1971) suggested that learning, the acceptance of new knowledge, is evidenced by a change in behavior. Motivational tools can be used to direct students through these behavioral changes. Gagne (1970) defined the motivation to achieve as being tremendously important to successful learning. Motivation requires students to act upon a need or desire. The effective teacher can provide students with these needs or desires. Motivation can be in the form of challenges, positive reinforcement, or sparking a latent student interest or potential. Too often our teaching resembles Webster's (1984) definition of learning- "the acquisition of knowledge, skill, or information." This may not be enough for some students. Therefore, motivation can play a very important role for many learners.

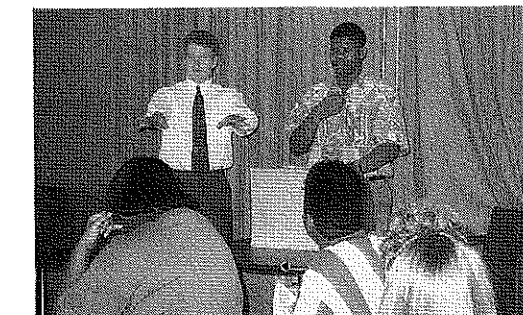
In Michigan, motivation was used as a tool to provide an opportunity for the development of leadership skills for nontraditional agriscience students. The 24 Hour Challenge is a series of five regional workshops designed for nontraditional Michigan agriscience students and their teachers. For the purposes of the project nontraditional students were defined as students studying areas of agriculture other than the traditional production areas (i.e., floriculture, biotechnology, landscaping, forestry and natural resource management). Most non-traditional students were in grades 11-13 and attended agriscience programs in urban and suburban areas, many from programs at area career centers.

Through a grant funded by the W.K. Kellogg Foundation and coordinated by Michigan State University and the Michigan FFA, students had the opportunity to attend a 24-hour leadership

development camp. Students participated in mini-sessions on teamwork, brainstorming, organizational skills, goal setting, self-esteem, and other topics - including fun. Yes, fun was a mini-session in itself that put students at ease. Students played games, sang songs, and learned to relate to and become comfortable with other students, sometimes from culturally diverse backgrounds. Opportunities for having fun and getting acquainted were available in an opening ice-breaker session, as well as at an evening casino night and dance.

The series of five camps covered the major urban areas in southern Michigan, making the Challenge easily accessible by nontraditional students. The student sessions were conducted by the Michigan FFA state officers, who are college students attending either Michigan State University or the University of Michigan, along with guest speakers, National FFA officers, and industry professionals. The high school participants were motivated by their college student facilitators, as evidenced by the high level of participation from the opening session to the close of the camp. The Challenge participants were impressed by their new role models, and many were inspired to set life goals because of this experience. One challenge participant described the effect of the 24 Hour Challenge this way: "This 24 Hr Challenge is a great program. I really think that it will change all the students that go through it, just as it has changed me. Keep up the good work!! I'll never forget this. Thanks a lot."

While the high school students worked on leadership skills, their teachers were actively involved in sessions on financial record keeping, community service projects, grant writing, classroom management, youth organizations, →



Participants had several opportunities to refine their presentation and group leadership skills.



Teachers participated in special sessions on grant writing, community service projects, the FFA, and other topics

and the changing and diversifying FFA. The facilitating of teacher sessions was managed by university faculty, business/industry professionals, agriscience teachers from Michigan and Chicago, administrators, National FFA officers and staff, and successful graduates of agriscience programs.

The emphasis of *The 24 Hr Challenge* was to expand the capability of the individual and allow students to excel and to have fun. Over 150 students and 34 agriscience teachers attended Challenge camps in 1992-1993. The program concluded on the second day of each camp with an awards banquet and a public speaking competition. The top five students were selected from the mini-sessions on speaking and listening skills at each camp. They were given the opportunity to write and practice a one minute speech on "What Leadership Means to Me." Listening in the audience were new acquaintances from other schools, teachers, facilitators, and classmates.

*I sat and listened intently to the students as they spoke. While listening, I found that just as one of my students had predicted, I was both surprised at the depth of their speeches and overwhelmingly proud of them as well. I found tears beginning to form in my eyes, a lump in my throat, and a sense of unexplainable, somewhat parental pride beginning to sweep through me. I listened as they spoke of leaders and leadership, personal goals, and ideas, and challenged those who were listening to become motivated to "make the difference." I listened as they spoke to a room full of people, half of whom they had not known 24 hours prior. Hearing these young people speak, I know they had met "The 24 Hour Challenge." (Bartholomew, 1992).*

A thorough evaluation of each Challenge has been conducted. Participating students and instructors had the opportunity to rate each session and the overall conference. The last of the five Challenges was held in March 1993. All

of the participants agreed that the leadership camp was fun and well worth their time. A sample of participants' comments about the conference follows.

"I thought every part of this conference was useful."

"I know it helped me a lot! It made a difference in the way I look at life.

"The college students took their time to try to get us to believe in ourselves. The conference was great."

An overwhelming majority of students and teachers who attended the *24 Hour Challenge* workshops rated the conference as excellent.



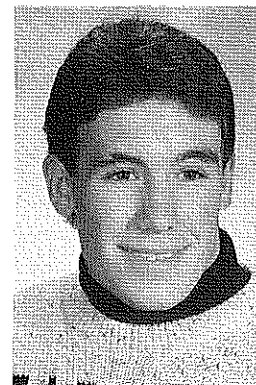
Agriscience students participating in the *24 Hour Challenge* learned a lot about themselves and working with others - and they had fun!

Goal #2 of the National Strategic plan for Agricultural Education states: "To serve all people and groups equally and without discrimination." The purpose of this goal was to reach, attract, and develop the human potential of all people. The *24 Hour Challenge* was designed to motivate nontraditional students to develop needs not previously being met by agricultural education. The *24 Hour Challenge* has helped to develop leadership skills in over 150 nontraditional agriscience students and over 30 agriscience teachers. Five new FFA Chapters have been chartered in Michigan, four of which are from Detroit. Through the *24 Hour Challenge*, agriscience programs in Michigan are working to serve all people. ■

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## Don't Just Tell Me, Teach Me!!



BY SAMUEL G. CUSTER AND WESLEY LEUGERS

Mr. Custer (top) is an agriculture teacher and Mr. Leugers (bottom) is a student at Versailles High School, Versailles, OH.

It seems somewhat hypocritical to author an article on motivating students to learn during the first week of May. Students are thinking about track meets and baseball games, cornfields that need planted, landscaping that must be completed, or other things that overrule a teenager's mind as the temperature reaches 80 degrees in the corn belt. On the other hand, teachers are counting down the days, some even the hours, planning summer vacations, and wondering how they will get it all done.

But, you know, this article should come out about the time school starts, which is the time teachers and students need to be at the highest level of motivation. So, if I were thinking futuristically to the months of August and September, I believe I can put this article together.

About a month ago, we were covering a unit on plant science with students "presenting information" they had compiled during supervised study. A student was putting facts on the board and one of the students from the back of the room shouted, "Don't just tell us, teach us!!" Thus my title.

I have chosen to address this topic from two perspectives-that of a student and that of a teacher. Co-authoring this article with me, is senior Wes Leugers, a fourth year agriculture student at Versailles.

### A Student's Perspective

"Okay class, tomorrow we'll have a test over the objectives and terms from the chapter we've just gone over."

"Ah, but Mr. Stevens, what if we don't understand all the stuff? I mean, we went through the chapter pretty fast."

"Well now, let's just hope you understand come test time tomorrow."

Does this sound familiar? Teachers giving their students a test over something they don't fully understand, the kids complaining about it, and the teachers more or less saying they have no sympathy for them. Depending on how advanced you are in age, this may be an unhappy occurrence from your past, or it may be a current problem. As for me, I am currently a junior in high school, so I've heard my share of this with plenty more to come in the next five years. But let me ask you one question, "Is this good teaching?" I think "NOT"!! Cascading students with numerous bits of information in hope they will comprehend it quickly is

absurd. The students should not just learn, but UNDERSTAND what it is they are learning. To do this, teachers must make themselves more interactive with the students. After all, as the saying goes, "A mind is a terrible thing to waste."

Growing up in a small, predominantly rural southwestern Ohio town, I've been exposed to an outstanding school system staffed by an equally impressive faculty. It consists of knowledgeable teachers and supervisors who constantly focus on the student's understand-

*Does this sound familiar? Teachers giving their students a test over something they don't fully understand, the kids complaining about it, and the teachers more or less saying they have no sympathy for them.*

ing of information. Our teachers take an active interest in students' out-of-class activities. Our teachers regard us not just as students, but as individuals with value, and this respect is evident in the classroom. Our instructors become animated and excited about what they're teaching, and that excitement rubs off onto us. Once subjects become more interesting to study, it's easier to learn and really understand.

I think teachers should not just tell students about facts and information; they should get involved and really TEACH. When teachers get involved with their subject and their students, they feel a greater sense of achievement knowing that the students are actually enjoying learning. I think I speak for all students when I say that when you enjoy learning, the knowledge you attain is much more lasting. As I learned in psychology class, the brain never loses any information it takes in. Therefore, make that information count and really TEACH ME!!

### A Teacher's Perspective

I am a firm believer that to be successful in teaching, I must teach, not just present material. Anyone can reproduce information from a book and give it to a student. Webster's definition of teach is to instruct by precept, example, or experience; to seek to make known or accepted.

I have chosen three of my beliefs to share

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### Don't Just Tell . . .

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with you in this article concerning motivating students to learn: first, a belief that good teachers must exhibit enthusiasm for their students

***I think teachers should not just tell students about facts and information; they should get involved and really TEACH.***

and also the subject area; second, the problem solving approach to teaching as a method of instruction; and finally, the importance of serving as a good role model.

**Enthusiasm.** Have you every noticed that your favorite subjects or topics also become your students' favorites? Conversely, the subjects that you dread or are bored with soon become the subjects that your students complain about the most.

I have also found that the same is true for the students who sit in your classroom. The self-fulfilling prophecy theory is played out in agriculture classrooms across this nation. It is all too easy to pick a few student out in each class and treat them as one of your own. But, if we truly want to be an effective teacher and to motivate students to learn, then we must love them all, even the student who sits in the chair in the back, left corner of your room. Love agricultural education and love your students and you are well on your way to motivating students and developing a successful program.

**Teaching Method.** All topics in the agriculture program at Versailles High School are all taught using the problem solving approach to teaching. Students are given the opportunity to take an active part in planning and developing what is to be taught in **their** program. Students are happy to take part in the learning when they feel ownership and responsibility. Following are some of the unique instructional units that we have put together.

A grain marketing simulation is used in conjunction with the grain marketing unit. This simulation allows students to market grain, using up-to-the-minute grain quotations from

***But, if we truly want to be an effective teacher and to motivate students to learn, then we must love them all, even the student who sits in the chair in the back, left corner of your room.***

the data transmission network found in the classroom. Students are first given a set amount of money, a predetermined amount of grain, and a six-week period of time in which they can "play" the markets through the spot market, options, hedging, or futures. The students take a more active part in learning marketing through this approach.

Each year the senior class builds a "little red barn." But rather than using a set of purchased

plans, students design their own barns, using a complete set of scale drawings. They are then each given the opportunity to sell their design to the rest of the class. The plans that are selected by the class are then drawn in further detail and a bill of materials is developed by the students. The seniors then build the barn using their drawings. The barn is raffled off at the annual parent-member banquet.

Livestock production is a very important part of agriculture in the Versailles community. Therefore, a major emphasis is put on livestock production in our curriculum. Livestock reproduction seems to draw more interest from the students than anything else taught. During this unit students examine female and male reproductive organs from various slaughtered animals, rather than from slides and books. Students learn to artificially inseminate cattle, take an active role in embryo transfer in cattle, and learn to genetically mate animals.

**Role Model.** You, whether you like it or not, will be a role model for many of your students. Contrary to the popular belief of many of our professional athletes who are choosing to denounce their positions as role models for today's youth, we will always be a role model, either good, bad, or indifferent.

Think about your first years of teaching. Students began to clone themselves to you. They started getting their hair cut like yours, they switched from Jordan and Guess to Ropers and Wranglers. Those are just the easily seen habits. I can confidently say that today's youth are looking for a role model, and it is part of our job to be a good one.

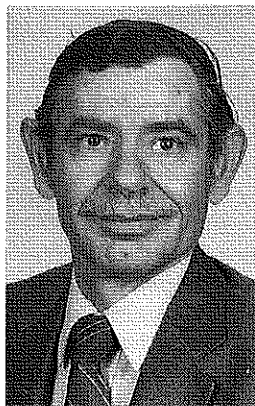
Think about the last time you attempted to get a group of students to compete in a public speaking contest or to run for a state FFA office. Then think about the times that you turned down the opportunity to serve. Or, how about the time your region asked you to complete an NVATA Outstanding Teacher Award application, you said no way, then turned around and attempted to force a proficiency application on one of your students. Let's face it, we are role models, like it or not.

To play football the way the game is designed to be played today, you need more than just a football. You need goal posts, helmets and pads, jerseys, coaches, and Gatorade. The same is true for successful teaching. You need involvement, love for the subject and for students, and a sense of ownership by students. You need to be willing to play the game all the way into overtime.

**DON'T JUST TELL ME, TEACH ME!!!**



# The "I" In Motivation



BY WILLIAM T. WOODY  
Mr. Woody is an agriculture teacher at Lorena High School, Lorena, TX.

To carry the best motivations of the past into the progress of our students is to live in the fullness of more than one generation.

Motivation is that which influences students' choices and incites students to action. For teachers to motivate students they must become artists of motivation. Teachers must endeavor to give expression in their work. To motivate students, teachers must first be motivated. "Some teachers see things as they are and say why. We that must motivate students to dream see things that never were and say, why not." The "I" in motivation is you. Teachers must first believe in what they are doing. Young people today are very wise, and they know when teachers are motivated and when they are just teaching. One important key to motivating students is a positive attitude. A positive attitude can make an average person great, turn failure into success, transfer hate into love, make individuals give their best, and allow teachers to continue to grow and excel from learning experiences.

I have always motivated students in agricultural science and FFA by being positive and enthusiastic about what I was doing. The motivation of students is very difficult when you first begin teaching because you do not have years of success to relate to your students. Young teachers have some advantages over more experienced teachers. They are young. All students would like to be 25 years old and successful. Young teachers should use the positive things in their lives to motivate their students. Young teachers are admired a great deal more by their students than they ever know. Tactfully use your camaraderie of youth to motivate your students to be like you.

Each year you will find more tools to motivate students. Success motivates students. Success of the past becomes a natural motivation for younger students. The hardest state contest my chapter ever won was the first one. After that my students knew it was possible, and with this knowledge they began to motivate themselves.

Eighteen state champions and 30 years later, I do not have much trouble motivating my FFA members to work hard in FFA contests. FFA has been a big part of our agricultural science program, and I use our success in FFA to motivate students in their agricultural science classes. I tell all of my students that a great FFA

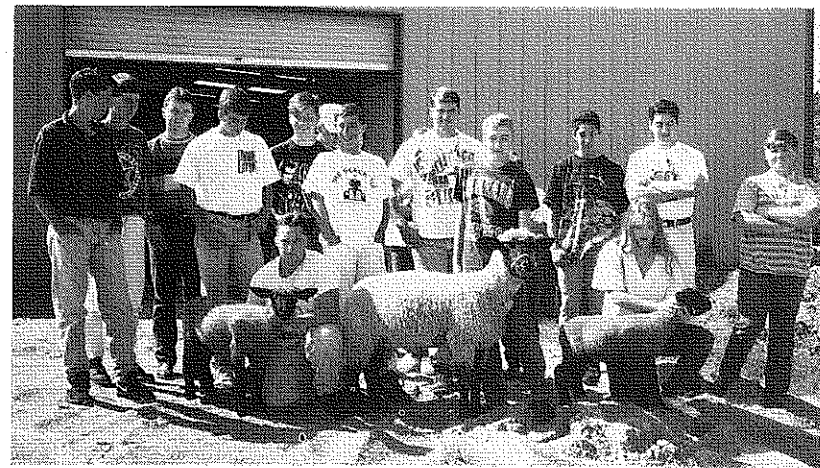
member must first be a great student. The students know that they must achieve success in agricultural science to become a success in FFA activities. I believe teachers should utilize every precious moment of class time to promote the learning of agriculture. We need to motivate our students each day by believing that what we teach them is very important in their lives. If students are properly motivated in our agricultural classes, they will also be motivated in FFA activities. Success in FFA must start with success in the classroom.

At Lorena High School, Dennis Mann, my teaching partner, and I teach such classes as Personal Skills Development, Wildlife and Recreational Management, Introduction to World Agriculture, Equine Science, Home Maintenance, and Food Technology. In addition, we teach two honors classes in animal and plant science. We have a 20 acre agricultural science complex with a 50' by 100' metal building. This complex is truly an agricultural science laboratory that gives all of our 370 students a hands-on approach to the agricultural science taught in our department. The complex is not just barn for show animals. It is used to educate students using the hands-on approach to learning. This facility serves as a motivational tool for students in grades K through 12.

A hands-on approach and our FFA experiences help to motivate our students in many of our agriculture classes. In our Personal Skills Development classes we learn all forms of verbal and non-verbal communications. Students writes speeches, learn to talk in private and public, and speak extemporaneously and with prepared speeches. They master parliamentary procedure and learn how to work together for a common cause. Success in these learned practices motivates students in FFA contests. The →



Winning FFA contests motivates students to excel in their Ag Science classes. To excel is contagious in FFA, as well as the classroom.



This ewe was bred in this facility. The ewe had her lambs here, and the lambs will be fed out here. This enables students to follow a breeding sheep enterprise from start to finish.

FFA motivates the class, and the class motivates the FFA.

Our agricultural science complex has been a great motivational tool in our Wildlife and Recreational Management class. This small piece of land has many wildlife opportunities for our students. There is a small creek with a beaver dam. The dam contains bass and perch. In addition to the beaver, there are deer, dove, quail, plover, raccoon, opossum, and duck that can be observed by our students. I find being a Texan Hunter Safety instructor to be of great assistance. Our state requires all hunters to pass a hunter safety course before they can hunt. I am fortunate to have expertise in the safe and practical use of firearms. Many students that have no desire to ever own a firearm tell me they realize the importance of everyone knowing how to safely handle firearms. Our agricultural science complex allows our students to be a little closer to nature and motivates them to respect wildlife. We have plans to develop a shooting range and nature trail. This nature trail will allow younger students in the Lorena School District to be motivated to appreciate wildlife management.

Mr. Mann is certified in artificial insemination and is an expert in all phases of animal reproduction. Students are more motivated to learn when they can see a practice done rather than to just be told about it. Our agricultural science complex and Mr. Mann's expertise have motivated our Honors Animal Science students to excel in this course of study.

In my Food Technology class, FFA contests stimulate interest in a tremendous course of study. We have won nine state championships in the Milk Quality and Dairy Foods contest. This contest has motivated students to strive for excellence in food technology. We have had several students pursue a career in Food Technology. We have had several students earn master's degrees in food technology and one has a doctorate in this field. These young people tell me they were motivated by their

participation in the Dairy Foods contest.

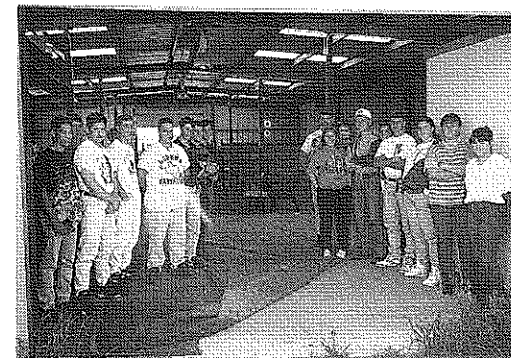
Success in our classes and success in the FFA breeds success, and success motivates students to excel in life.

We must all be motivated by something or someone. I believe in self-motivation. I drive myself to excel in all that I undertake. With this type of philosophy there is sometimes heartache. We must realize that sometimes nothing works and that we need someone to motivate us when things go wrong.

There will be times in our lives that no kind of motivation will work. These times will be when we need to both receive and give help. Students that for four years planned for excellence in the FFA and for their future may tell you they are tired of everything. So they walk away. You will feel that all the work and motivation you have tried was in vain. This is when even the strongest must seek and accept motivation from others. This is when we must all remember that failure is about the only thing that can be achieved without effort, that carelessness and lack of ambition are fatal, and that tolerance is a great virtue. If we fail when we try to motivate students, at least we fail while trying. We may fail some of the time. We will succeed many times. Those who strive to motivate students to excel in their classes and the FFA will know the feeling of high achievement.

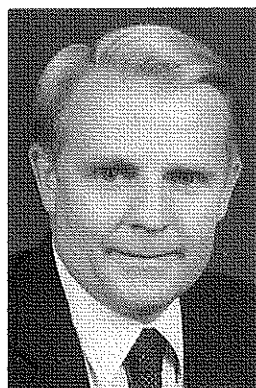
Only in the human being do we find an almost unlimited supply of hidden power, because there is power of mind in addition physical power. It is our job as teachers to motivate our students to use this hidden power. How do we motivate this hidden power? I believe this can be best done by setting an example for our students that makes them want to follow. Make things you do real and fun, and let all your students know you care. Give your students extra time, and let them know you are always there for them. I believe the best thing I've ever told a student is, "I know you can do it." This statement has motivated

(continued on page 23)



Breeding sheep and heifers are housed in this 50' by 100' agricultural science complex. This complex is used as a teaching facility for animal science classes.

# Student Self Discipline Scale



BY RALPH D. COFFMAN JR.  
Mr. Coffman is an agriculture teacher at Fort Frye High School, Beverly, OH.

During my first few years of teaching, I developed four areas of concern in relation to classroom discipline, negative attitudes, and the lack of self-motivation exhibited by my students. My concerns were:

1. The possibility of corporal punishment being eliminated as a means of discipline;
2. How to determine what discipline to use in somewhat marginal cases (Example: rock on chair, taking another student's property in game-like fashion, not putting books or tools away before leaving class, etc.);
3. The increasing number of negative comments (common but destructive to self-esteem) students were making to each other; and
4. The apathetic attitude of too many students.

As I began to evaluate and determine the cause of these problems, I concluded that the majority of the problems were initially the result of students not thinking before speaking or acting. I also found that it often carried over into the quality of their class work.

I had the desire and enthusiasm to deal with these problems. I just needed another avenue to meet these concerns. Therefore, I developed our Fort Frye Student Self Discipline (Free Enterprise) Scale to establish some tangible incentives that would appeal to more students.

In this scale I needed a systematic way (in addition to their academic grade) to reward those students exhibiting the behavior that I desired and a way to discipline the students not exhibiting the desired behavior in my classroom. Some information about our agriculture program may be helpful.

**Program Mission Statement:** We will provide a positive learning environment by rewarding positive (desired) behavior and by disciplining negative (undesired) behavior in a systematic way by utilizing a student self-discipline (Free Enterprise) scale.

**Program Philosophy:** The purpose of education is to provide the best possible learning environment for students so that they will learn more from the classroom or laboratory instruction. In the Fort Frye Agriculture Department the instructor is responsible for providing such an environment. This environment should be positive, disciplined, and structured to encour-

age personal growth in all students, regardless of their academic ability, so that they can ultimately function in a more positive manner in society.

**Program Objective:** Our number one objective is to improve each student's self-esteem (how they feel about themselves). To reach this objective students must first improve their self-discipline, which will lead to improved self-esteem.

At this point you have a better understanding of the foundation for our agriculture department, and we can proceed with the steps I followed to develop our scale.

**First** - A definite need to develop a system to deal with my four concerns did exist, and the number one goal for the scale was to motivate my students to think before they speak or act.

**Second** - I had to develop a scale outline of plus (+) points, minus (-) points, possible rewards that would motivate students, and possible discipline measures (See diagram).

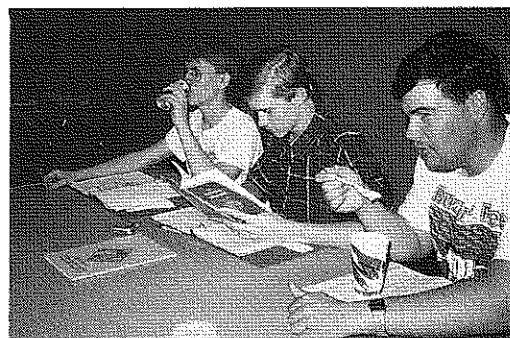
**Third** - After much thought I found the answer. It was our FFA refreshment budget that could provide some of our rewards.

**Fourth** - I needed to develop a method to record and monitor the students' gains and losses in points. This sheet is kept in my gradebook on my desk and adjusted daily as needed.

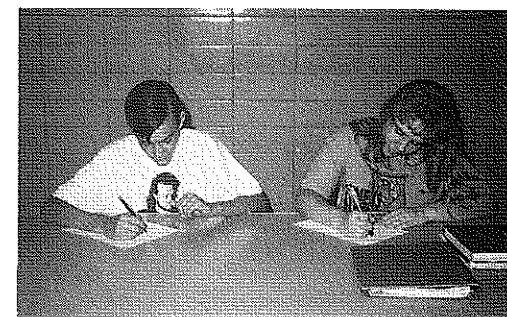
**Fifth** - Next came the presentation (selling) of the idea to my classes. First, I presented the rewards available and how to get points. Next, we discussed that for each opportunity to gain points in a free enterprise system they also needed an opportunity to stub their toe (lose points), based upon their daily self-discipline.

### Developing Your Own Scale:

1. Do you have concerns about your classroom? Do you have a need for more self-



Qualifying students enjoy pop and a milkshake in class.



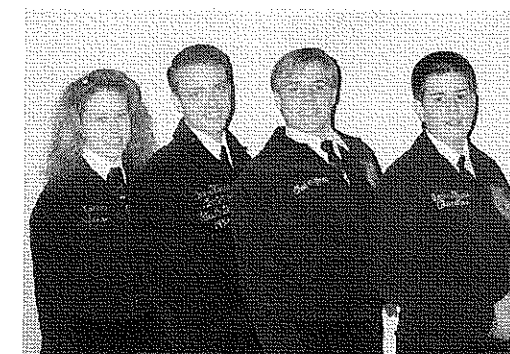
Students receive ten points on the scale for an "A" grade on a test.

discipline, less hassle with marginal discipline, or improved motivation? If the answer is yes, first determine the number one objective of your scale, then list the specific concerns that you have about your class environment.

2. Now develop a scale outline of rewards, discipline, and their point levels. Next make a list of plus (+) points, and minus (-) points. Each student should keep a copy of the scale outline in their notebook and be responsible for its contents.
3. Develop your class (student) recording sheet.
4. If you desire, you may involve your classes in helping formulate all or part of the scale (be creative).
5. If you don't have a refreshment budget

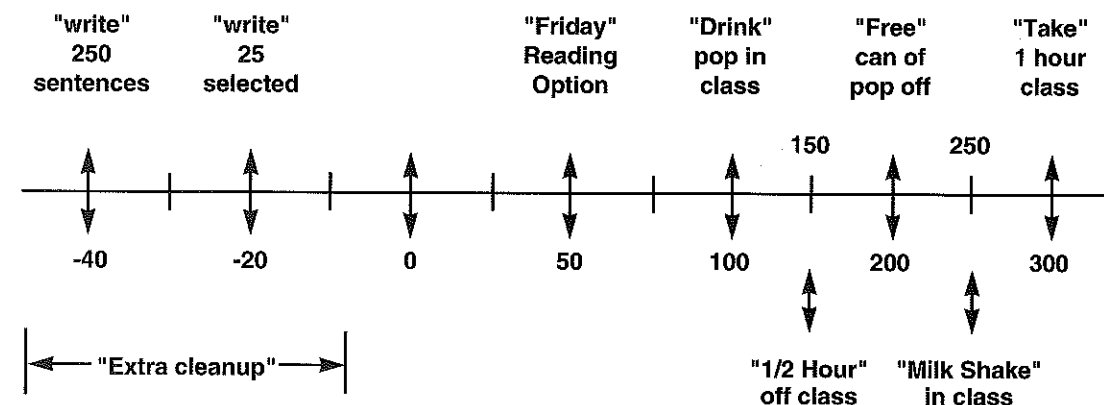
available, create your own method to fund refreshment rewards (be creative).  
6. Decide if you want what the student did the previous grade period to have some effect on where he or she starts the next grade period.

**Conclusion:** It is a fact that when students feel better about themselves (better self-esteem), they will learn more and be more enjoyable to be around. I have found that the key to self-esteem improvement is an improvement in the student's self-discipline, usually motivated by someone or something in a student's life. This scale lets me be the someone and the scale be the something that is consistent every day in students' lives. I can't imagine teaching without the benefit of this asset in my classroom.



Fort Frye FFA Public Speaking Team Students receive points on the scale for their participation in FFA activities.

### Fort Frye Agriculture Department 1992-1993 Self Discipline (Free Enterprise) Scale Outline



#### Plus Points (+):

1. Reading per 50 pages
2. Selected assignments in on time
3. Good Attitude
4. A's on a Quiz or Test
5. FFA Involvement.
6. Extra Cleanup
7. Attendance per week.
8. FFA Purchase.
9. Fair Exhibits
10. Help other students or guests.
11. Sincerely Courteous.
12. County Agr. meeting attendance
13. Answering question in class (random).
14. Recruitment.

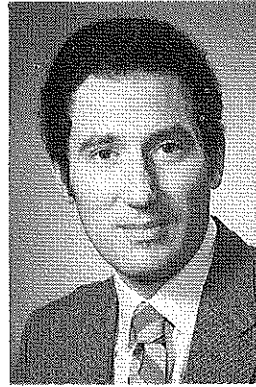
#### Minus Point (-):

1. Talk too much (not listening).
2. Late fees or dues.
3. Fail a quiz or test
4. Late to class (no pass).
5. Rock on your chair/feet on chair, etc.
6. Poor cleanup (Leave tool, book, etc., out).
7. Negative (attitude) comments.
8. Disturb Reading.
9. Sleeping without permission.
10. Abuse other's property.
11. Abuse of scale or privilege.
12. Trying to run the scale.
13. Writing on chairs or desks, etc.
14. Disruptive behavior.

The points are in 5 point increments. If the undesired behavior is severe, the points off are determined by the instructor. Plus (+) points can be from 5 points to as many as 30 for a major FFA Activity (Example, a week at Ohio FFA Camp).

# International Agriculture

## Perspective Busters: The Global Aspects of Agriculture



By ROBERT A. MARTIN  
Dr. Martin is an associate professor of agricultural education at Iowa State University, Ames.

I was amused the other day when a young boy I know said "I know everything there is to know, but sometimes I have to be reminded." In this boy's world the boundaries were clear and he was acknowledging the fact that occasionally it was necessary to remind him how to act within these boundaries. Of course, as one grows older boundaries are often tested and expanded because our world view expands with experience. Or, at least, it should.

Agricultural education is in the process of expanding its boundaries. We are being "reminded" that our ideas related to THE BEST curriculum in agriculture are yet to be discovered. We now know, however, that a curriculum in agriculture *without* some global perspective added to it is a curriculum out-of-date, out-of-touch, and headed for out-of-existence.

The new International Agriculture curriculum materials available through the National Council for Agricultural Education include a variety of hands-on perspective busters. These activities can add a global flavor to any agricultural education program. One of these activities is outlined here. It was written by Bill Belzer, a new teacher of agriculture and a person who has experienced agricultural education in Japan and the Ukraine. Perhaps you know of other activities either developed by you or your colleagues. We should continue to share these student activities with each other as we attempt to broaden and add depth to the agricultural education curriculum.

### Agricultural Youth Organizations Around the World

#### Purpose

The main purpose of this activity is to help students recognize agricultural youth organizations around the world similar to the FFA. The ultimate goal is for the student to further develop interest in another country's agricultural systems and consider taking part in youth exchange programs to those cultural neighbors.

#### Plan of Action

#### Student Performance Objectives:

1. Identify the symbols/emblems of six different agricultural youth organizations around the world.
2. Compare and contrast the National FFA

Organization's emblem to emblems created by the FFA's sister organizations.

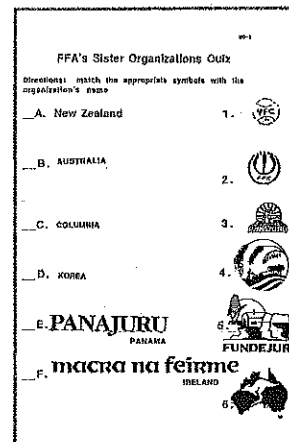
#### Procedures for Instruction:

1. Review the different symbols that make up the FFA emblem and what those items mean to the National FFA Organization (as found in the *Official FFA Manual* or *FFA Handbook*). Also, have the students discuss the importance of the National FFA Organization's emblem.
2. Compare and contrast the FFA's emblem to the National FFJ's (Future Farmers of Japan) emblem. Discuss the similarities and differences of the emblems.
3. Have the class divide up into teams of two or three and have each team select a country from the list provided. The teams will then create an emblem for an agricultural youth organization from the country they selected.
4. When all students have completed their drawings, one person from each group will present their emblems to the class. An opaque projector may aid these presentations.
5. After all of the presentations are completed, give each student a copy of the FFA's sister organization quiz. When each student has completed the quiz, show the key and discuss each emblem.

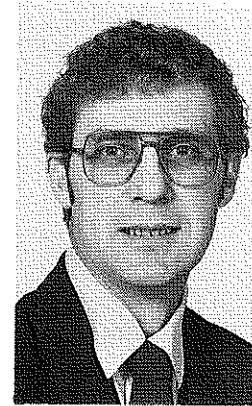


#### Additional Activities:

1. Give each student a WEA (Work Experience *(continued on page 23)*)



# Reshaping the Learning Environment



By VAN SHELHAMER  
Dr. Shelhamer is associate professor of agricultural and technology education at Montana State University, Bozeman.

Agricultural education is a dynamic, changing profession, driven by the changing needs of the local community, the agricultural industry, and state and national curriculum trends. The National Association of Supervisors of Agricultural Education noted in a 1987 position paper that laboratory experiences must be modernized to reflect the new image for agricultural education, and that these activities must be effectively marketed to local communities. In *Understanding Agriculture: New Direction for Education*, the National Research Council also recommended that ongoing efforts be made to upgrade the scientific and technical content of agriculture courses. Change is necessary, as agricultural educators strive to keep curriculum content current with technological innovations. When considering change, agriculture teachers may find that laboratory facilities, equipment, and tools are limiting curriculum change.

Agricultural education acts much like a fluid as it takes on the shape of the agricultural industry. The container (school facilities) should change its shape when required. As Winston Churchill noted, "We shape our buildings, then they shape us." In many local schools the container and its content have not changed to accommodate the changing curriculum. The curriculum must influence the shape of the laboratory. The laboratory can teach little, but it can say much to its occupants and to its community. Agricultural education cannot meet current educational needs unless laboratory facilities are redesigned.

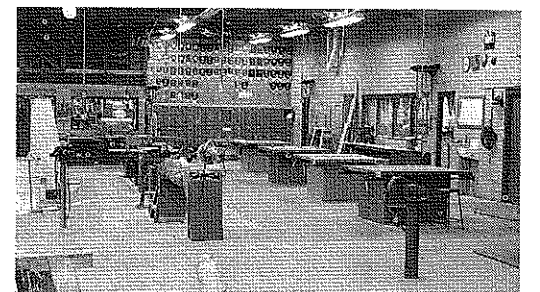
What can be done to accommodate changing curricula when teachers are stuck with four walls and a couple of doors? The first step is to involve students and the advisory council in reshaping the internal workings of the laboratory. The advisory council must be involved in developing a curriculum that will meet current and future educational needs of the students. They should help in deciding what educational needs of the students. They should help in deciding what educational activities should be updated or eliminated. During the process, barriers to change in the laboratory should be identified.

Teachers who involve students in planning and arranging laboratory equipment and tools find students have more pride in their workmanship, take better care of equipment, and use laboratory time more efficiently. Thus, when considering rearranging the internal

workings of a laboratory, involve students. Utilize the present versus ideal teaching approach to identify changes that need to occur to meet educational needs. Utilize students and computer-aided drafting programs to design new arrangements. Have students do time and motion studies to identify the most efficient arrangements. Conduct a series of lessons on environmental studies to identify laboratory activities that may not be compatible with other activities. For example, if the curriculum calls for tissue culturing while extensive wood-working is conducted, contamination of the tissue cultures will likely occur. Another situation to be avoided might be repair to engines during the peak welding period. If teaching aquaculture in water tanks, fumes from welding activities may affect water condition.

When redesigning the laboratory layout, keep flexibility in mind. Whenever possible, avoid making permanent installations. With curriculum content rapidly changing, teachers must be able to rearrange the facilities in a short period. Many laboratory activities of current and future curricula will require a cleaner environment. Therefore, methods of washing walls and floors will need to be considered. Storage of chemicals, gasoline, oils, and greases could possibly create an unsafe environment, due to incompatibility of vapors. A plan for disposing or recycling substances, such as antifreeze, that once were poured down the floor drain now must be developed.

Teachers must help develop a school and community attitude that the school laboratory is an educational facility, just like a classroom. Such an attitude causes the teacher to view the facilities in a different mindset. School personnel should view laboratory facilities as a classroom and treat them as such. My high school principal at the start of every school year would remind the faculty that the agricultural



Clean, organized laboratories contribute to a winning attitude at Cascade, Montana High School.

mechanics laboratory was a classroom and was available only for educational use. →

Another attitudinal shift that should occur is that tools belong to the program, not the teacher or the school. When students are taught that the tools are for their education, and that damage or theft is affecting their education, the care of tools and equipment improves. Locked tool cabinets protect school investment but send a message that students are not trusted. Assigning a student to serve as tool foreman to make sure all tools are returned, and assigning a laboratory foreman for cleanup purposes places responsibility on students for care and maintenance of tools.

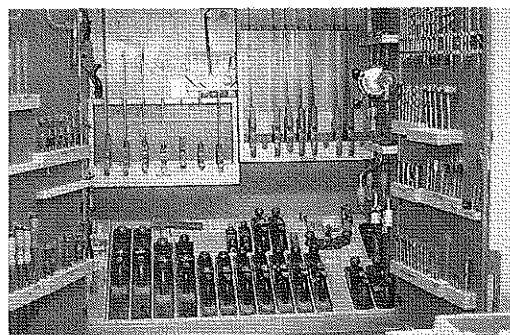
While employed as a service manager for a General Motors dealership, I soon realized that time was money. The service department was in the business of selling time and work performance. If the quality of work was superior but required twice the time flat-rate charges allowed for, my operation was losing money. Teachers need to reinforce the efficient use of time. To illustrate the point, let's examine what typically happens in a mechanics laboratory where a central tool room is used. For the purpose of illustration, the local machinery dealer labor rate of \$28.00 per hour or 47 cents per minute is used. Past observations reveal that it takes students an average of five minutes to begin to work. If students' work stations are 25 feet from the central tool room and they make 10 trips for tools, they will spend 2.5 minutes gathering and returning tools. When cleaning up at the end of the period, seven minutes is generally spent returning tools, putting things away and sweeping the floor. Thus, in one hour the average student has spent 14.5 minutes in non-productive activity, for a loss of \$6.81. In addition, the non-productivity of a student managing the central tool room must be accounted for at a rate of \$28.00. If the class contained 15 students, the loss of income would be \$130.15 per hour per class. Multiply this figure times three laboratory periods a day times five days a week, and the potential loss of income amounts to \$1952.25 per week!

What happens to the scenario if tools are placed in portable storage devices so that all tools are immediately available at the work station? A time savings of 2.5 minutes would occur and the tool room supervisor would be available for productive work. A net savings of \$45.62 per hour or a savings of \$684.37 per week.

Preparing to work and clean up after work are major consumers of time. If, through proper instruction and motivation, a student would begin to work in three minutes and require only five minutes to clean up, a time savings of five minutes or \$2.35 per student would occur. Over a one-week period in three laboratory classes this would amount to a savings of \$528.75.

If your school laboratory was in the business of selling time, you could reduce your losses by eliminating the central tool room and encouraging better work habits. Instead of losing \$1952.25 per week, you would lose \$739.13 per week, a gain of \$1213.12 in income.

When arranging tools in a decentralized manner, consider flexibility. The laboratory



Proper arrangement and storage of tools contribute to a positive learning environment.

should be arranged so all woodworking activities are located as far away from the metals and power mechanics area as possible. Tool cabinets, preferably moveable, should be developed for each specialized area. If floor space is limited, then specialized tool cabinets should be located above work benches. Portable cabinets allow tools and equipment to be moved where they are needed, thereby increasing the productivity of the students.

The environment that we place students in affects their physiological functioning, which affects their capacity to learn. Cleanliness, appearance, arrangement, and extent to which facilities are functional affect students' ability to achieve at a higher level. Agriculture teachers, working cooperatively with advisory councils and students, must encourage the proper mindset and arrange laboratories in a manner that enhances learning. ■

## Coming in September . . .

**Theme: What Teaching Is Really Like**

- articles by teachers

**plus feature columns**

- agriscience

- research on teaching

**plus other articles on teaching techniques and student activities**

## The "I" In Motivation Cont.

(continued from page 17)

many students to excel.

Remember, if you give of yourself to the fullest, what you give you will not lose, and what you gain cannot be taken away. So you will know that your efforts to motivate students will not have been in vain.

The students we teach today are bright and talented, but many times they are not motivated to excel. Your excitement will be contagious and will motivate your students their fullest. The best we can do to motivate our students is the least we should do. You, as teachers of agriculture, have within your hidden power the ability to inspire great things from your students.

You have all seen these young freshmen students. They are good looking kids. They are bright and very talented. Their parents and teachers have tried to motivate them, but nothing has worked. You look at these young people and say "I" can. Then you know that you truly are the "I" in motivation. ■

## When Students Stop . . .

(continued from page 3)

own investigations, and draw their own conclusions. We should use this tremendously effective teaching technique much more in our teaching.

Occasionally my girls do come home and tell me that school that day was boring. It's tough to be on the top of our game every day. Maybe all teachers should be required to sit through a full day of classes several times a year just like our students do. This would be an eye-opening reminder of what we should try to do every day in our classrooms and labs. We might agree that school is often boring and learning is usually no fun. Then we can try even harder to provide a menu for our students that challenges their curiosity, pushes their ability and effort, and encourages/expects them to start asking "why" once again. Active learning techniques are the key to reawakening our students' curiosity and rekindling their love for learning. ■

### Reference

\_\_\_\_\_. (1992). *Hard Work and High Expectations: Motivating Students to Learn*. Washington, D.C.: United States Department of Education.

## The Basics of Motivation . . .

(continued from page 8)

1. Accept each person as worthwhile and special.
2. Earn and deserve to keep their confidence.
3. Make them feel important.
4. Listen for feelings and the meanings behind their words.
5. Give them responsibilities that provide success.
6. Plan for their success.
  - a. Help them increase self-esteem
  - b. You set goals.
  - c. Help them to set goals.
  - d. Teach them how to make decisions.
  - e. Involve them in planning and decision making when possible. ■

## International Agriculture . . .

(continued from page 20)

Abroad) application and have them complete it for any country they are interested in experiencing. Review WEA program costs, requirements, dates, and fund-raising techniques when the students have completed the application.

2. Have each student or groups of students plan a WEA trip to a location in which they are interested. Some areas they would need to plan are as follows: clothes to pack, gifts for host families, immunizations, how to obtain passports, fund-raising ideas, and so on.
3. If possible, bring a past WEA participant or another individual who has travelled overseas into the classroom to explain their experiences abroad.

### Evaluation Activities and/or Questions:

1. Assign point values for completing WEA applications.
2. Assign point values for completing WEA travel plans.

### Conclusion

The use of student activities seems appropriate when adding a global perspective to the curriculum. The unit or course approach seems very time consuming, but some teachers may have the opportunity to use these approaches. Teachers can use a variety of activities, such as those suggested here and those in the Council's materials, to add that extra change of pace. Try doing something to internationalize the curriculum and provide some "perspective busters" of your own. ■

## **Commercial Catfish Farming**

by Jasper S. Lee,  
Interstate Publishers,  
Inc., 1991

REVIEWED BY:  
DAVID S. BURTON

*Mr. Burton is an agriculture  
teacher at Bainbridge High  
School, Bainbridge, Georgia*

As agriculture instructors, we are witnessing many new innovations that can be utilized to diversify operations. In the South one of these methods is catfish production. As we expand our market for this commodity, more and more producers will emerge. However, there will be a need for education for the producers in this field, and these individuals could certainly benefit from a handy reference they can have at their fingertips as problems arise. Dr. Jasper Lee, a pioneer in aquacultural education at Mississippi State University, has provided just such a book in *Commercial Catfish Farming*. Dr. Lee's text has covered the area of catfish production from "Genesis to Revelations" and could be regarded as the primary source of information for the student, as well as the producer.

*Commercial Catfish Farming* begins with the basics by introducing the student to the catfish industry, its history, where the industry is now, and where it is headed. From this point, the text goes through a detailed approach of beginning a catfish farm, developing facilities, managing water, controlling catfish diseases, and other problems. The book then discusses the various routes one can take as a catfish

producer to fill the niches in a local situation. One feels that one could read and refer to this area of the text, delve into the catfish industry, and be successful by following the recommendations found in this portion of the text. The marketing scenarios are explored later in the book, showing the student or producer factors to consider if they plan to profit in the catfish enterprise.

The appendix includes charts on determining fish weights from lengths, volume equivalents, sources for further information and educational assistance, and even recipes for preparing catfish in a number of ways. After reading this text, I feel that *Commercial Catfish Farming* is mandatory reading for anyone interested in this enterprise and an important addition to the library of anyone who will be charged with educating individuals on this area of production. The paperback form of publication makes the text economical. Frankly, I was hard pressed to find any area which could be improved upon in this text. If you plan to in any way associate with this emerging agricultural enterprise, you are strongly encouraged to obtain a copy of *Commercial Catfish Farming*.