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The Resource for Agriculture Educators



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Cover Story: Increasing Educator Effectiveness

By [Jeri Mattics Omernik](#)



As the world's knowledge base expands at exponential rates, the role teachers play in our society is more important than ever. To be effective, today's teachers must continuously update and upgrade, not only their knowledge of technical content, but also their teaching skills and techniques.



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The good news is that recent advances in understanding how we learn are providing helpful insight into the techniques teachers can implement to more effectively engage learners, thus increasing their learning potential.



Kris Elliott works with his students outside of the classroom.

We have witnessed an explosion of information from the fields of cognitive science, neuroscience and educational research over the past three decades that, when applied to education, can have a powerful impact on our effectiveness as educators.



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However, to reap the benefits of this information, teachers must take purposeful steps to improve their skills and techniques. Educators must reach out and seek coaching and other forms of feedback that highlight what they're doing well and where improvements can be made, which presents an interesting dichotomy.

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Teachers are used to being in the "authority" position and often find it difficult, not to mention intimidating and uncomfortable, to intentionally put themselves in the "learner" role and proactively seek critical input. Bridging

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this very human barrier is often the key to continuous improvement.

[Kris Elliott](#), who teaches agriculture in Hanford, Calif., says, "Seeking feedback on my teaching skills wasn't easy. However, swallowing my pride and asking for input has been very beneficial for me. That's how we as teachers can hone our skills."

Think about it this way: The world's best athletes don't just get out of bed and have championships handed to them. They rely on coaches to help them in their training to build both outer *and* inner strength. Even Tiger Woods has a coach, and he purposefully invests significant time and effort in practice and training.

What teacher out there feels he or she is as proficient at teaching as Tiger is at golf? Can we, as educators, take a page out of Tiger's playbook and apply it to our profession? By purposefully seeking out coaching and consciously investing time and effort in improving our teaching skills, the answer is a definitive, "Yes, we can!"



This edition of *Making a Difference* focuses on teacher effectiveness and provides proven tips and techniques from teachers in the field to help you improve your "game."

* * * *
* *

Let's take Tiger's advice and identify areas in need of strengthening. Do your students usually understand the instructions you give, or do you constantly find yourself answering questions about the instructions you just delivered? If this sounds familiar, click here to learn more about [Delivering Instructions Effectively](#).

What about how you ask your students questions? Do you consciously think about [Phrasing Questions Appropriately](#)? Here are some additional ideas that can help

"I refuse to let anyone outwork me. That's the reason I log so much time on the practice range. Besides, hard work is the only way to maintain a competitive edge, and I enjoy the process. The key, though, is to practice with a purpose.

"My philosophy has always been to identify the weakest part of my game and focus on turning it into a strength. That approach will work for you, too. Make an honest assessment of your game, and determine where you're losing most of your strokes. Find a professional to help you identify your flaw and provide the correct instruction to fix it. Then tailor your practice sessions so most of your time is spent on improving that part of your game. That's the fastest way to get results." Tiger Woods, Source: [Be honest: Where does your game need help?](#)

you move your teaching skills along the continuum from
["Good to Great."](#)

Ready to tackle a whole new way of teaching? Inquiry-based teaching techniques can take you and your students to a whole new level of learning. Find out more by reading [Learning by Doing.](#)

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Delivering Instructions Effectively

By [Jeri Mattics Omernik](#)

Picture this: Class has started, you've finished the housekeeping details and launched into the day's lesson. You've told the students that today they'll be working in the greenhouse transplanting their horticulture projects.

You finish your instructions, then move to the greenhouse to continue the lesson, where you spend the next five minutes repeating the same instructions you just gave back in the classroom. Sound familiar? Why won't they listen? Is it something you're doing wrong, or is it just "kids these days?"

[Kendra Linnebur](#)

is in her sixth year of teaching agriculture at Fredonia High School in Fredonia, Kan., and says that when she first started teaching, she struggled with classroom management. One of her frustrations was that it seemed the students didn't listen to her instructions.



Kendra Linnebur's students enjoy working in a hands-on environment.

To improve her teaching skills, Linnebur applied for and was accepted to attend FFA's Delta Conference. During this conference, Linnebur gained insight into delivering instructions more effectively.

Key Components

According to Linnebur, here are the primary elements teachers need to include when delivering effective instructions:

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- Mind before body: Tell students what their mind is going to do before you tell them what their body is going to do; e.g., say, “We’re going to learn about transplanting in the greenhouse,” instead of saying, “We’re going to the greenhouse to learn about transplanting.”
- Keep it short and sweet: Too many words can confuse students; use as few words as possible to get your point across.
- Include a cue – or action – word, like “create.”
- Establish a time limit: Give students a shorter time than you think the activity should take; you can always extend the time available if students are working diligently.

“I must admit that when I first learned about this technique, I was skeptical,” Linnebur says. “However, I decided to try it in my classroom, and when I started using this technique, I discovered that it really worked – that my students listened more and understand my instructions better. For me, the bottom line is that implementing this technique engages my students by acknowledging how their brains work and how they learn.”

Linnebur continues, “It takes practice to deliver effective instructions consistently. The teacher has to make a conscious, intentional effort. If you do that, I think you’ll experience the same result I have.”

A simple change in the way we deliver instructions can increase student comprehension and, in turn, save us time and greatly reduce the stress of teaching.

Listen to Kendra discuss delivering instructions effectively:



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Phrasing Questions Appropriately

By [Jeri Mattics Omernik](#)

Building on existing knowledge about how the brain works, teachers can phrase questions in ways that help better engage students.

First, make an effort to ask open-ended questions instead of closed questions. A closed question is one that can be answered either “yes” or “no.” For example, “Do you have any questions?”



Kendra Linnebur's students involved in a “hands on” experience exploring a soils lab.

If you simply rephrase that question and say, “What questions do you have?” that sends a completely different message to your students’ brains. It implies that they *should* have questions and establishes an environment where they feel encouraged to ask their questions. Open-ended questions allow the teacher to probe for more information and encourage students to think about the task in which they are about to engage, which stimulates questions.

Listen to Kendra Linnebur, who teaches agriculture in Fredonia, Kan., discuss phrasing questions appropriately:



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Good to Great: The Teaching Perspective

By [Jeri Mattics Omernik](#)

We've all had experiences with great teachers who have knocked it out of the park and, well, others that were not-so-great. Take a minute to think about what sets those experiences apart. What did the good teachers do that the not-so-good ones didn't, and vice versa?



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Student Perspective

One thing good teachers tend to do is take into consideration the student's perspective. They think about how students perceive things and how they, as teachers, can best position information so that it will interest their students.



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Paul Larson shows his students the ins and outs of hydroponics.

It all starts with considering why you became a teacher in the first place. What is your purpose? What is your goal? If your goal is to teach all of your students as much as you can, then it is important to make every

minute of classroom time count.

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Consider, "If I was a student, what would I be expecting to learn? Where would my mind be?" The teacher needs to think about the answers to these questions, then craft an interest approach that will address where the students are, mentally, when they walk in the classroom door. You want to get them interested in the topic and escort them through the learning activity so that they reach the end point of learning the day's lesson by the end of the allotted time period. Thinking about your lessons from that perspective, what questions would you have if you were a student? If you

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knew that answer, how might you change how you start your classes?

Student Ownership

Another technique good teachers use is shifting the responsibility for learning from the teacher to the student. [Paul Larson](#), who teaches agriculture in Freedom, Wis., says, “When you make the students captains of their own ships of learning, you can eliminate much of the resistance you might typically receive, particularly from more challenging students.”

Instead of students hearing, “I want you to do this,” the teacher flips the responsibility by saying things like, “You’ll want to discover X so that you can do Y.” Larson continues, “I set the stage for the day’s lesson, make sure the necessary resources are available and that the students’ questions are answered, then I get out of the way. When students are motivated to learn because the information is meaningful to them, they take ownership and tend to dig deeper, peel off more layers and better understand the information. It’s more enjoyable for them because they are in charge, and it’s more enjoyable for me because now instead of lecturing to a large group, I can be more of a facilitator floating between a number of small groups or individuals.”

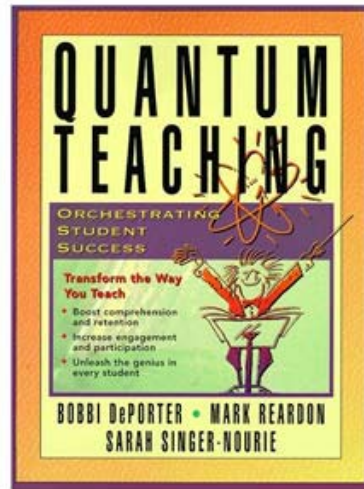
Changing Your Ways

Experienced teachers know that changing teaching techniques isn’t easy and that it takes a little bit of time for students to adjust to these new approaches. Larson says, “It takes a while for students to adapt to new techniques when they are first introduced in the classroom, but don’t give up just because everything doesn’t go smoothly at first. Once the students get used to the techniques, they respond well, and you’ll find your classroom runs more smoothly.”

[Hugh Mooney](#), a veteran teacher from Galt, Calif., who recently accepted the challenge of becoming a regional supervisor, underscores Larson’s message. “Adopting these techniques is more of a challenge for experienced teachers than it is for new teachers because we’ve been doing things differently for a long time. However, these little changes are powerful and can make a big difference in the classroom. I encourage teachers to risk boldly, and enjoy the students’ response.”

Resource

Interested in learning more teaching tips? The book [Quantum Teaching: Orchestrating Student Success](#), by Bobbi DePorter, Mark Reardon and Sarah Singer-Nourie, provides a wealth of information and practical tips that bridge the gap between educational research and practical application in the classroom.



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Learning by Doing: Inquiry-Based Learning in the Agriculture Classroom

By Jeri Mattics Omernik

“Tell me and I forget, show me and I remember, involve me and I understand.”

One of the things that sets apart career and technical education, in general, and agricultural education, specifically, from other segments of education is the way teachers work to engage students through hands-on application. Simply put, students learn by doing and gain understanding through involvement.

Many agriculture teachers were trained in the problem-solving approach to learning. Today’s hot educational technique – inquiry-based learning – is a close cousin to the problem-solving method and can yield significant results in the agriculture classroom.

Why?

With the world’s exponentially expanding knowledge base, educators must understand that they need to teach students more than just existing data. Memorizing facts and information is not the most important skill in today’s world. Yes, there are basic skills in reading, writing, science and math that are fundamental; however, beyond those basics, memorizing data isn’t all that helpful, with the Internet making most information readily available.

What students need is to develop an understanding of how to get and make sense of the mass of data available. In short, teachers need to nurture inquiring attitudes that will enable their students to



Mrs. Kempen, a teacher and FFA Advisor at James Madison High School in San Antonio, Texas, discusses the parts of a plant.

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continue the quest for knowledge long after they leave the classroom.

How?

So what does inquiry-based learning look like? Imagine observing a classroom where the teacher sets the lesson's context, then the students pose questions, design experiments, collect data and analyze the data to determine answers. Sound too good to be true?

Donna Parker, a science teacher at Dublin Coffman High School in Dublin, Ohio, has been working with the National FFA Agriscience Ambassadors for the past several years on inquiry-based techniques. She says it takes time and effort to become comfortable implementing these teaching techniques but that the effort pays great dividends.

"I always knew *how* I wanted to teach, but I never felt satisfied with the cookbook approach I learned in college," Parker says. "Several years ago, I was fortunate to attend a workshop where guided inquiry was modeled through active learning. An alarm sounded in my head. I knew this was how *I* wanted to teach."

Parker continues, "Inquiry-based learning requires a different approach to classroom management than many of us are taught in our college methods courses, so we have to get out of our comfort zones to try these techniques."

So how does one take inquiry-based learning for a test-drive in the classroom? Anyone who has mastered this technique will tell you that you need to see it in action to understand its power. [Click here](#) for an example of teachers engaged in inquiry-based learning in the professional development workshops held at the national FFA convention.

Nurturing Curiosity

Young people are naturally curious, but many of today's teaching methods don't build on that natural curiosity. If teachers relied solely on "chalk and talk" or "read the book, answer the questions" teaching methods, they may stifle their students' curiosity. Educators need to implement a variety of teaching methods – exploring, lecturing, labs, activities, big groups, small groups, individual work, etc. Using a balanced approach will ensure that a variety of learning styles are addressed and will encourage students to use that natural curiosity.

Teachers who attempt to engage their students through inquiry-based approaches need to be aware that they will often have to overcome the barriers placed by the "listen and regurgitate" habits students have developed. Even our best students may resist at first because they don't have the comfort of knowing "what's going to be on the test."

So what is inquiry?

The term "inquiry" is defined as "a seeking for truth, information or knowledge; seeking information by

questioning.” Humans carry on the process of inquiry from the time we are born until we die. This is true even though we might not – in fact, we usually don’t - reflect upon the process.

One of the best questions to use in an inquiry-based lesson is the simple word, “WHY.” These three letters take the learner from a passive storage bank, holding information solely for the purpose of accessing at a later time for use on a test, to an analyzer of data. The mere step of taking that question from the end of the information delivery to the start of the process engages students even more. Instead of presenting the information and then asking why, ask why *before* you present the information. This is a simple step you can use with your existing lessons and labs, easily converting what you already have into excellent guided inquiry activities where students are prompted to explain why and defend their decisions based on evidence they acquire.

When students formulate questions and then attempt to answer those questions based upon their current knowledge, they have ownership of the information. As they are presented with more information, either through experimentation or through discussion, they are actively applying that information to the questions and answers they formulated at the start. Everyone wants to prove themselves right. The interest generated by this process not only increases their understanding, but it also greatly increases the connections created in the brain to that knowledge. It is these connections that enable the students to recall knowledge and apply it at a later time. This increase in learner engagement and the increased understanding and retention of the knowledge is what makes inquiry-based learning so valuable.

To learn more about inquiry-based learning, take a look at the resources below or, better yet, become engaged in the process by applying for the Agriscience Teacher Ambassador program. Applications are online now at the [Educators Workroom page](#). Look for the Ambassador application.

Resources

- [Click here for a good explanation of inquiry-based learning](#), along with sample facilitation plans and videos of the techniques in action.
- [Click here](#) for an inquiry-based lesson or “facilitation” plan on the topic of Pneumatic Technology (Alternative Energy)
- Visit the [Exploratorium](#) for additional information and ideas.

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A question to ponder: Why do teachers ask questions?



By Mike Womochil
Local Program Success Specialist
National FFA Organization

Why do we ask questions? Is it because we don't know the information we are requesting, or is questioning used in our classrooms to

accomplish other things, such as assessing student knowledge, stimulating classroom discussion, helping students clarify their ideas and thought processes or leading them to consider new ideas and make use of ideas already learned? Regardless of the underlying purpose of the question, we can all agree that the art of asking questions is a wonderful tool to turn a student from a passive observer in the classroom into an active learner.



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What kind of questions do you ask?

Are they closed-answer questions that require a simple regurgitation of facts or, even worse, a "yes" or "no?" Or, are they open-ended, eliciting an extended and well thought-out response?

If you were to categorize your questions on [Bloom's Taxonomy](#), would they be found in a heap at the bottom, or would they be scattered throughout the levels of knowledge?

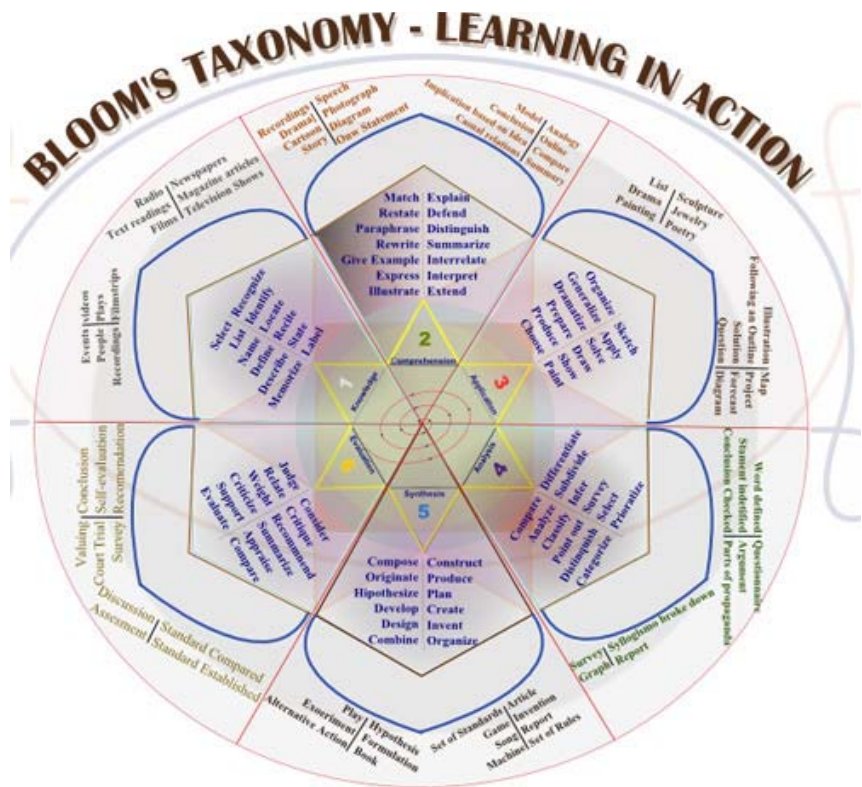


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Do your questions have only one or two answers (convergent), or are there multiple correct and even unknown answers that can be given (divergent)?

Is there an educational value to the question? Does answering the question allow the student to learn even more beyond providing the answer?

How do you get students to answer questions?

Do you call the student's name before you pose the question? What do the other students in the class do as soon as you call someone else's name? Do they continue to listen to the question and formulate the answer themselves? Sure, a few will, but do all? Would it be more effective to pose the question, allow all students time to formulate an answer, and then call a name?

Are you targeting your questions to student abilities? If we pose the hard questions to the smart kids and only toss softballs at the ones we think aren't as intelligent, what message are we sending the class? That doesn't mean we ask our C students to "define the universe; give three examples," but can't we, at times, pose challenging questions to the average students and help them develop their answers? Will you ever build muscle if you don't add weights to the bar?

How long do you wait for an answer before re-wording the question, providing assistance to the student or passing the question to another student? How long is long enough? If research shows a 20-30 second silent wait period for

responses usually provides adequate time for students to think, why do most teachers allow only two to three seconds of time before they redirect the question? Would allowing more time to think provide a higher-level answer? If answering speed is so important, what are we attempting to do? Train Jeopardy players?

How do you respond to student answers? What do you do when a student just doesn't know the answer? Do you dump him or her and run to the next student who has the right answer? Is the answer the most important thing in the process? Would it be better to ask the next student to help the first student answer the question? What if the student gives an incorrect answer? Is it okay to say, "No, you're wrong," and ask someone else? Would it be best to work with the student to formulate a better answer?

If engaged learners are what we are striving for, can the embarrassment caused by giving a wrong answer, or being "zinged" by the teacher for a poor answer, cause a student to disengage for the rest of the class period? How would you feel if you were that student? Along those same lines, is it important to praise a good answer? Isn't there time in the class period to stop and say, "That was a magnificent answer; thank you for providing it?" Again, how would that make you feel if you were that student?

What if an answer is incomplete or lacks depth? How do you gain more information without leaving the first student as classroom road kill? Can you help students enhance their answers by asking the "Could you clarify that further?" "I don't understand what you mean by..." "Why do you think that..." "What do you mean by..." Don't these techniques tell the student that you value their answer and help them work to provide more? After all, is the answer the only reason for asking the question in the first place?

When you get a partial answer, could you follow up with, "That's a good start; anyone want to add to that with more information?" Wouldn't this reinforce the effort made by the first student and keep them engaged in the discussion, while, at the same time, pulling the rest of the class into the discussion to add more?

What would happen if you asked other students to comment on a student response? Would this continue the thought process and student engagement longer than commenting yourself?

Is there more information being provided by students beyond just the verbal response? Are there messages in body language? Are there students in the room who want to answer but lack the confidence to raise their hands? Are there signals being sent about who is engaged in the learning environment and who is not? How could a well-placed question to a student who is not engaged impact the situation?

Is it possible to teach an entire lesson just by asking questions? Didn't you just read an entire article that only asked questions? (Yes, you did – all 56 of them!)

What do you think about that?

Source: Inspiration and some content for this article provided by the [Centre for Learning and Teaching](#) at Dalhouse University, Halifax, Nova Scotia, Canada.

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Perspectives

Why Inquiry-Based Instruction?

*By Christine Dickson, Agriscience Teacher
North High School
Bakersfield, Calif.*



In today's classroom, the word "why" isn't used much. With the advent of state-mandated, multiple-choice exams, there seems to be little time for "why." Who, then, is being left behind by this omission? In my opinion, we all are.

An inquiry-based approach to teaching slows things down. Never mind that studies show better comprehension of concepts is attained. Never mind that we are quickly becoming a society where "yes" or "no" will suffice as an answer to any question. Never mind that inquisitiveness and creativity, which made our country the most ingenious and productive of all modern civilizations, is eroding away. It's our API (school report cards) scores that pay the bills in our public education system.

But all is not lost! To those of you who still look upon the agriculture teaching profession as a profession that values hands-on classroom instruction, supervised agriculture experiences, and leadership development through FFA activities as the mantra – I applaud you; spread the word! For those of you who may have lost your way or feel a job security threat, please read on.

The phrase "inquiry-based instruction" is merely the "educationese" term for asking questions of students that:

- 1) evaluate their comprehension and, more importantly,
- 2) allow the students to use their senses, emotions and actions when developing an answer to your questions.

It takes more preparation on the instructors' part to ask the "how-, why-, where- and when-type" questions. It takes more instructor preparation because the teacher must be willing to accept and peruse answers that are not written on the side of the pages in the teacher's copy of the classroom text book. It takes longer because the instructor must listen very carefully to the student's answer (an answer that may not be familiar to the instructor) and direct or redirect the discussion back to the theme of the day's lesson, yet still



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allowing that student to feel as if their answer was of value on some level.

Remarkable Results

Inquiry-based instruction takes longer because, in many cases, there ends up being more questions than answers; and, herein lies the most remarkable result of this kind of instruction: Being left with more questions than answers lets the student know there is a place for him or her in the world. It lets the student become part of the answer and that taking the responsibility to learn more about the question will result in an answer that 1) may make a difference in the world, or 2) may make a difference in his or her life.

I teach four different preps (routine for single-person agriculture departments across the nation). My classes range from earth science and biological science to economics (three of my four preps satisfy college preparatory requirements). I am constantly under pressure to have my agriculture students perform at or above the level of regular college prep core classes because our classes are considered by core administrators at the state level to be classes with little or no rigor in the curriculum. Many of us offer these alternative credit classes to stay alive in California. Many of us are learning how to hang on to our inquiry-based instruction and still cover all the material mandated by the state. And many of us are winning!

I think we are winning because we have found that students who are routinely asked inquiring questions instead of “true/false” or “multiple-choice” questions are able to internalize the concepts of the subject matter and, therefore, can retain the information longer (or at least until April - our magic testing month in California). But we are also learning that we have students who know *why* they are coming to class. We have students who are becoming aware that education can be fun, engaging and worthwhile. We have happy children – and no one feels left behind.

That’s why!

Christine Dickson is a 29-year veteran agriculture teacher in California and serves as a National Agriscience Teacher Ambassador. Dickson’s students are consistently recognized on the national level for their outstanding achievements, including national proficiency award finalists and winners in Environmental Science, Equine Science, Diversified Livestock Placement, Beef Placement and Emerging Technology. She has also had five national Agriscience Student of the Year finalists and five national agri-entrepreneurs. She has supervised 103 state degree and 37 American FFA Degree recipients. It seems Chris missed the day in college when the professor warned the young, soon-to-be agriculture teachers about “burn out.” Dickson can’t find time for this particular affliction and indicates she would resign the day she thought she couldn’t be progressive.

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Question for the Profession

What is teaching?

By [Mike Womochil](#)

Local Program Success Specialist

National FFA Organization

The question I pose to the profession today is this: "If student learning is dependent upon the quality of the 'classroom experience the teacher provides,' then where do you learn and develop these skills?"



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It says on your résumé that you are a "teacher of agriculture," but what exactly does that mean? What is teaching? What does it entail? Is it primarily based on an understanding of the technical content? Is it knowing how to structure learning objectives, build a lesson on those objectives, deliver the lesson, then assess the students' learning? If this is a good representation of teaching, then which of these is the most important step?

Think back to your college days and your best teachers. Why did you choose them? Now, think of the worst teacher. What is the difference? Is it because your best teachers had the clearest objectives and lesson structures, or did the worst teacher give the most poorly designed tests? While these are critical to effective teaching, I doubt if either of them were evident to you as you were selecting your best teachers. I strongly suspect it had to do with that teacher's presentation or delivery and his or her ability to completely engage you in the learning process. Am I right?

Now, think about all the inservices and professional development workshops you have sat through over your teaching career. Remember the ones focused on how to structure objectives, authentic assessment, six-trait writing, reading strategies, learning styles and modalities and test-taking skills? Have you ever had a professional development workshop on classroom presentation style or how to engage students in the learning process? Keep thinking; I'm sure you'll remember one. Surely, you've attended a workshop on asking effective questions, engaging learners, giving effective directions or creating the learning environment for the student. No? Having trouble recalling these training sessions? Well, after logging 27 years in the classroom, I had the same problem!

Do we continue to treat effective presentation as a "talent from birth?" Do we accept the fact that some teachers "have it" and some don't, or do we take it upon ourselves to

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identify and provide quality professional development opportunities so that teachers can truly become masters of the classroom?

I have the questions, now you have to provide the answers! As a new feature of *Making a Difference*, we will ask a question of the profession, much like the above, in each issue. Your opportunity to answer that question is provided by the [NAAE Communities of Practice](#). Have your comments and answers ready. [Click here to share your thoughts with your colleagues](#). We want to know what you think!

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Making a Difference

The Resource for Agriculture Educators

November 2007

Teacher Resources



Important Cargill
Community Scholarship
information for
your students.

[CLICK HERE](#)

Time to Show the Rest of the Science Education World What We Do!

Agriscience is well known in our profession, but does the rest of science education even know we exist? Take this opportunity for your students to showcase their understanding of science and its impact on society. Let your students combine their passion for agriculture and science and enter the DuPont Challenge Science Essay contest. More than \$25,000 in award money is available, as well as trips to Walt Disney World and the Kennedy Space Center. Teachers of winning students are included in the awards and travel opportunities. See the ad in this issue of *Making a Difference* or go to www.thechallenge.dupont.com.



2008 DuPont Challenge
Science Essay Competition

Opportunities for student &
teacher awards

[CLICK HERE](#)

Looking for a Way to Connect Food Production with Other Countries?

The [Growing Connection](#) (TGC) is a grassroots project developed by the [Food and Agriculture Organization of the United Nations](#) (FAO) and the [American Horticultural Society](#), supported by a progressive coalition of private and public sector partners.



Click here for
information on the
2008
Risk Management
Essay Contest!

The Growing Connection links people and cultures in a revolutionary campaign that introduces low-cost, water-efficient and sustainable food-growing innovations hand-in-hand with wireless IT connectivity. It provides a sound educational foundation and offers hundreds of families, both in America and abroad, a concrete opportunity to earn income and climb out of desperation. Perhaps most important, The Growing Connection engages people – a network of committed individuals – in an elegant solution to one of man's fundamental challenges.

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email address

How does it work? School gardening programs and community gardens in the U.S., Ghana, Mexico and Nicaragua grow vegetables in an [EarthBox](#) system. Students grow food, conduct horticultural experiments and share their lessons and experiences with each other using IT connectivity. Through modern IT installations, The Growing Connection participants in U.S., Ghana, Mexico and Nicaragua are directly linked. And, more importantly, they are connected to sources of vital information and advice on growing food. Those who were once the most isolated can now grow, learn and choose their own opportunities.

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Professional Development from the Comfort of your Office Chair

Did your schedule fill to the brim at convention last month, and you missed the teacher workshops? Or, were you planning on making a specific session, and the crisis of the day kept you from getting there? Or, did you spend convention week at home teaching in your classroom? Regardless of the reason, you can still attend the teacher professional development workshops that were presented in the interactive classroom at convention. Go to the [Educator's Workroom](#) and look for the convention workshops and highlights section. Or, simply select from the workshop list below. Each session is captured on flash video and features the discussion, slides and activities of that individual workshop. For real life effect, we even included a little Career Show background noise. Sit back, relax and enjoy the workshop without the worries of where your students are, what event is happening or any other challenge of convention.

- [Recruiting Tomorrow's Teachers](#)
Sponsored by Landmark Nurseries
- [Agriscience: Taking It To The Next Level](#)
Sponsored by DuPont
- [Food Safety Investigation](#)
Sponsored by Landmark Nurseries
- [Test Your Well presented by the Ground Water Foundation](#)
Sponsored by Farmers National Company
- [Organic Farming: From the Soil to the Standards](#)
Sponsored by Horizon Organic
- [Ensure the Success of School-Based Career and Technical Education](#)
Sponsored by US Department of Education
- [We've Built It. They Still Won't Come!](#)
Sponsored by Elanco Animal Health

Biofuels in the News

The October 2007 issue of *National Geographic* has an interesting [article on biofuels](#) and the ecological impact they have. The article provides good information on how new technology will impact the biofuel industry. This issue also features articles on the [carbon cycle](#) and [global warming and infectious animals and zoonotic diseases](#). Check out the [October](#) issue, then take a look at other past issues for agriculture-related articles to use in the classroom.

Electrophoresis on a Dime

Can't afford the equipment to teach electrophoresis to your students? That doesn't have to mean that you skip the lesson! [Click here](#) to see online interactive electrophoresis. Other interactive labs found at this University of Utah site include DNA extraction and DNA microarray. More video, podcasts, interactive and animation clips, along with virtual labs, can be found at the [BioInteractive](#) site provided by the Howard Hughes Medical Institute.

Interactive Beef Carcass

Trying to tie all those pictures of meat cuts into a whole carcass? Want to show the relationship of the skeleton to

the cut of meat, or just wanting to illustrate how the beef carcass is structured? Then be sure and check out this amazing site from University of Nebraska – Lincoln. [Bovine Mycology](#) is a thorough collection of pictures, diagrams and other technology providing an excellent view of how a carcass is fabricated into primal and retail cuts. It also includes more than 20 video clips of sub-primal fabrication. This is one you don't want to miss.

Vet Science Curriculum Assistance

Take a look at the [veterinary assistance training policy](#) provided by the National Association of Veterinary Technicians in America. This document is shared with others in the area of agricultural education in order to standardize the level of instruction/education for students across the country studying to be an assistant to either a veterinarian or veterinary technician. (We do ask those using the policy to reference NAVTA as the source of the information.) The information provided can be used to develop a course curriculum, in addition to developing a work agreement for a student's SAE with a veterinary hospital or practice. Good detail, direct from the industry.

“Are You Smarter Than Your Ag Teacher?”

Many of you were able to visit the NAAE booth during national FFA convention in October. We had a great turnout for the game, **“Are You Smarter Than Your Ag Teacher?”** We supplied teachers who participated in the game with a classroom version of the game, so they could take them home to use in their classrooms. This game template is much like the Jeopardy game template where you have to insert your own questions, but everything should be hyperlinked so that you can easily operate the game. It can also be called, **“Are You Smarter Than Your Ag Class?”** so it can be used it as an instructional tool in your class. Attached is a copy of the game template and a short manual that will allow you to understand the basis behind the game and give you some pointers on how to use it in your class. You will need to have basic PowerPoint skills in order to customize each game.

[Are You Smarter Than Your Ag Teacher Instructions](#) (pdf)
[Are You Smarter Than Your Ag Teacher Powerpoint](#) (zip)

Thanks!

Editor's note: Kudos to NAAE on their informative booth at the National FFA Agricultural Career Show last month. The initiative taken by the organization to promote agricultural education as a career set a great example for all of us as we struggle to fill the agriculture classrooms across the nation.

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Making a Difference

The Resource for Agriculture Educators



November 2007

FFA Buzz

Whether You Attended Convention or Not...

Visit the official convention website at <http://convention.ffa.org> for tons of new features! Teacher workshops, photos, videos and more!

And don't forget – you can purchase photos. Find great pictures from the sessions, CDEs, Days of Service and general candid shots. They make great gifts and are perfect for scrapbooking your convention experience. Exclusive video and audio clips include highlights from the general sessions, the official theme song video and the national officer election. Check out the blogs and take part in the convention survey.

Teachers, don't miss out! For the first time ever, teacher workshops from convention are posted online with video and audio. And you'll want to sign up for the podcasts because we'll be posting more videos and audio throughout the year. Watch for new *FFA Today!* episodes and convention rebroadcasts on RFD-TV starting in 2008.

Looking for Holiday Gift Ideas?

You've come to the right place! Let FFA Unlimited be your one-stop shopping for all your holiday surprises for family and friends. Check out [FFA Marketplace](#) for great gift ideas.

And, if you have trouble making up your mind, buy an FFA gift certificate, available in denominations of \$10, \$20, \$50 and \$100. Gift certificates purchased in the 2007-2008 school year must be used by July 31, 2008. Gift certificates are not redeemable for cash and may only be used for official FFA merchandise. Visit www.ffamarketplace.org today!

Reminder to All FFA Advisors

2008 National FFA Week (February 16-23, 2008) will be here sooner than you think. Save the last-minute rush and get your orders in before the end of the year!

<http://www.ffaunlimited.org/gold-supplies-ffa-week.html>

Scholarships Available!

In 2008 the National FFA Organization's scholarship program will award approximately \$2 million to eligible FFA members and other agriculture students enrolling in post-secondary education.



Important Cargill
Community Scholarship
information for
your students.

[CLICK HERE](#)



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2008
Risk Management
Essay Contest!

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Last year approximately one out of every four students who applied for the program received a scholarship. In 2008, more than 10,000 students are expected to apply for approximately 1,800 available scholarships, ranging in value from \$1,000 to full tuition at Johnson and Wales University.

More details about these and other National FFA Organization scholarship opportunities, including guidebook listing eligibility criteria, an online application and a list of participating Ford dealers, will be available at www.ffa.org after Dec. 1, 2007.

Contact scholarships@ffa.org for more information. Applications must be submitted and signature pages postmarked by February 15, 2008!

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