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EXPERIENTIAL LEARNING

Creating Experiential Learning

By Jamie Cano

*The mediocre teacher tells,
The good teacher explains,
The superior teacher demonstrates,
The great teacher inspires!*

As a field of practice, experiential learning is vast. If we look at the range, we see everything from farming to conflict resolution; from assessment to youth; from practical skill training to theoretical models; and from personal growth to workplace training and development. All are labeled experiential learning – all are present as being part of the experiential learning family.

So what is experiential learning? Experiential learning can be described as learning that arises out of reflection from an experience, leading to purposive action in order to test out the “hypothesis” that arise out of this reflection. This action, in turn, leads to further experience and reflection, so that experiential learning can be seen as continuous cycle or spiral.

Several authors have pointed out that experiential learning dates back beyond recorded history and remains pervasive in current society, whether formalized by educational institutions or occurring informally in day-to-day life. In this sense, experiential learning is not an alternative approach, but the most traditional and fundamental method of human learning.

In the early 1980s, Mezirow, Freire, and others stressed that the heart of all learning lied in the way we processed an experience, in particular,

our critical reflection of the experience. They spoke of learning as a cycle that begins with experience, continues with reflection, and later leads to action, which itself becomes a concrete experience for reflection. For example, a teacher might have an encounter with an angry student who failed a test. This is the experience. Reflection of this experience would involve trying to explain it to oneself; comparing it to previous experiences to determine what is the same, and what is unique, analyzing it according to personal or institutional standards, and formulating a course of action connected to the experiences of others, such as talking to other teachers who have also faced angry students. Talking to other teachers, the action, will then lead to further reflection.

David Kolb developed the most established model of experiential learning. In Kolb’s model, the process begins with an experience (“concrete experience”), followed by reflection (“reflection observation”). The reflection is then assimilated into a theory (“abstract conceptualization”), and finally, these new (or reformulated) hypotheses are tested in new situations (“active experimentation”). The model is a recurring cycle within which the learner tests new concepts and modifies them as a result of the reflection and conceptualization.

Experiential learning can therefore be defined in terms of a learning model which begins with the experience, followed by the reflection, discussion, analysis, and evaluation of the experience. The assumption is that we seldom learn from experience unless we assess the experience, assigning our own meaning in terms of our own goals, aims, ambitions, and expecta-

tions. From these processes comes the insights, the discoveries, and understanding. The pieces fall into place, and the experience takes on added meaning in relation to other experiences. All this is then conceptualized, synthesized, and integrated into the learner’s system of constructs which are imposed on the world.

Summary

In experiential learning, the student becomes more actively involved in the learning process than in traditional, didactic education. For example, going to a zoo and learning through observation and interaction with the zoo environment is experiential, and in contrast to reading and talking about animals in the classroom. The main difference here, from a pedagogical point of view, is that the educator who takes his/her students to the zoo, rather than stay in the classroom, probably values direct experience more highly than abstract knowledge.



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Lighting Their Fires Through Experiential Learning

By Gary E. Briers

Irish poet and playwright William Butler Yeats, who won the Nobel prize for literature in 1923, said, “Education is not the filling of a pail but the lighting of a fire.” This famous quote appeared in nearly 25,000 URLs when I searched for the quote using Google™ (September 10, 2005). The context in which that quote appeared on many of those URLs contained some reference to “experiential learning,” broadly defined. In fact, experiential learning is a widely-used term in many contexts and educational endeavors: Challenge courses, ropes courses, environmental education, service learning programs, wilderness and adventure programs, therapeutic and adaptive programs, life learning or self-directed learning, constructivism, progressive education, unschooling, and many other terms are used often in conjunction with “experiential education.” There are professional associations, societies, and consortia formed specifically to advance the use of experiential learning methods in educating ourselves; among these are the Association for Experiential Education (AEE), the National Society for Experiential Education (NSEE), and the International Consortium for Experiential Learning (ICEL). Similarly, there are journals devoted to the subject; an example is the *Journal of Experiential Education*. My point is simply that “experiential learning” and “experiential education” are NOT unique to agricultural education. However, the momentum and popularity of experiential education methods in our society at large give credence, legitimacy, and even hope for a continuing reliance on the use of experiential

learning in agricultural education.

At the same time, however, I believe that we as agricultural educators must work hard to ensure that experiential education that employs problem-based learning in a local community-based context does not succumb to high stakes testing and standards-based curricula of the moment. We must remember (or learn) that learning happens independent of time (or time-on-task—if the task is defined independent of the learner), the presence of a teacher, or location. Too, real learning is always learner driven. Wendy Priesnitz, the editor of *Life Learning Magazine*, wrote that “life learning ... involves living and learning—in and from the real world. It is about exploring, questioning, experimenting, making messes, taking risks without fear of ridicule, making mistakes, and trying again. Life learning does not involve memorized theory so much as it requires applying knowledge. And that often means moving around, talking, experimenting, thinking, jumping up and down...” ([http://](http://www.lifelearningmagazine.com/understanding.html)

www.lifelearningmagazine.com/understanding.html).

Does this describe your classroom when your students are really engaged in problem solving, creative thinking, and inquiry-based and contextual learning? Yes, we know the basic tenets of experiential learning and teaching. Often, though, we may need to be reminded of them as we face increasing numbers of students in classes, students with fewer experiences in “agriculture” as we know it, and more demands on our time and talents from administrators and counselors and special education coordinators and parents and . . .

What are some of the basic tenets and features that make experiential learning successful? Let’s look at some that I believe are necessary as one sets out to embrace experiential education:

Every child can learn, but not all children learn alike. We as agricultural educators have long known that dif-

The context must be viewed as real-world and important by the learner - not just the teacher.

ferent students learn differently. So, we realize that different approaches to teaching/learning are often required so that each and every student in a class learns. We deal with this reality on an individual case basis; for example, a student might not “get” a concept when we read from a book, but he or she understands it quickly when a picture or diagram is drawn. Other students may need to hear an idea expressed in words and then discuss it with classmates. Still another group may need to engage physically in an activity to understand a concept. This phenomenon of multiple modes of learning, or, as Howard Gardner described it, multiple intelligences, explains a wide array of skills that all of us use to function in life—and even succeed in the world around us. This theory of multiple intelligences (a collection of seven distinct “kinds”) influences our practice of agricultural education greatly. If we focus too much on linguistic and logical/mathematical intelligences (which many teachers do), then many of our students fail. So, we should incorporate or allow or encourage visual/spatial activities, musical activities, bodily/kinesthetic activities, and interpersonal and intrapersonal activities in our teaching methods and learning opportunities.

Children (and adults, for that matter!) learn best by doing. You may have heard it like this: “Tell me and I forget. Show me and I remember. Let me do and I understand.” John Dewey urged that children be allowed to construct things, create meaning about facts, and actively inquire about problems. Young people learn to drive a car safely (we hope!) by doing just that. They do not learn to drive simply by memorizing rules of the road. Rather, they must get behind the wheel and practice. Similarly, we learn to extract DNA, design a floral centerpiece, restrain a pet, read a micrometer, and,

yes, weld pipe by doing them.

But learning by doing should not be done in a vacuum. Learning must be placed in the context of a real-world goal to motivate students. Students may wonder how what they are doing or learning could possibly be of use to them. If learning by doing is done in a real-world context, students see for themselves how knowledge is applied to accomplish tasks and achieve meaningful goals. But there’s one huge and often overlooked caveat. The context must be viewed as real-world and important by the learner - not just the teacher. I believe that too often, we do a pretty good job in agricultural education of using “real world problems”—as defined by teachers or curriculum writers or instructional designers. Ultimately, the problem must be set in a context that is defined by the learner as meaningful and realistic and motivating to him or her.

Good teachers—those who are successful in facilitating learning by their students—use multiple resources. It’s a kind of “whatever it takes” mentality. These teachers use magazines and newspapers and other print resources, pictures and models and diagrams, role-playing and story-telling and dramatization, DVDs and VCRs and the World Wide Web; but, more importantly, they use plants and animals and soil and scalpels and floral wire and tape and . . . as many other real, actual objects as they can. Why? Again, those “real things” allow students to use multiple intelligences as they manipulate them and smell them and see them and operate them. They might measure them, weigh them, discuss them with fellow students, write about them, draw pictures of them, take them apart and put them back together, or (if appropriate!) taste them!

Experiential learning/teaching is more than an educational method like

lecture or discussion or supervised study. Experiential education is a way of organizing learning opportunities and of providing experiences. It’s a method of curriculum development and “delivery” so that instruction becomes student-centered rather than teacher-centered. So, how does all of this relate to Yeats’ quote about education? He was correct: “Education is not the filling of a pail.” Students are not pails. The teacher’s job is not to fill pails—or students—with facts. Rather, it’s “the lighting of a fire.” The “fire” symbolizes lifelong learning. Just remember that it is ultimately the learner who must provide the fuel. But the teacher (the education part) can be the spark or kindling that starts the process. And, the teacher/facilitator of learning can stoke the fire from time to time. Mmm, the fire may even need to be contained at times. The fuel for the fire is renewable as well—and, the teacher has a role to play in regenerating fuel for the fire. Yes, “education . . . is lighting the fire.” As teachers of agricultural education, we can manage, direct, facilitate student learning best through experiential education. That is, we can spark, kindle, contain, and regenerate that fire.



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Student Learning as a Result of Experiential Education

By Diana Mowen &
Amy Harder

It has long been accepted that student learning is inherently related to the type of instruction students receive. Therefore, an important item for consideration by any teacher is how his/her teaching style affects the learner. Some instructional methods are particularly focused on the learner (i.e. learner-centered approaches), while others focus more on the teacher. In agricultural education, the experiential learning model is a natural fit for teachers looking to incorporate a learner-centered approach into the classroom.

History of Experiential Learning

The first concepts of experiential learning were developed in the early 20th century by the renowned educational philosopher John Dewey. Since that time, Dewey's ideas have been molded and refined. In 1984, David Kolb proposed the Experiential Learning Model for adult education, a four step cycle. The four steps are:

1. Concrete experience,
2. Observations and reflection,
3. Formation of abstract concepts and generalization, and
4. Testing implications of new concepts in new situations.

Kolb suggests that learning is a cyclical process, which is not complete without the learner participating in all four steps. Kolb's model was adopted/

adapted by the National 4-H program as a framework for youth development programming. The 4-H adaptation breaks Kolb's four-step cycle into five, placing greater emphasis on the separate actions of sharing and processing (see Figure 1). Neglecting the process of reflection as a major activity has been a criticism of Kolb's original model (Smith, 2005). As agricultural education is closely aligned with the youth development mission of 4-H, suggestions for incorporating experiential learning into the classroom are offered.

Why Use Experiential Learning?

At the mention of experiential learning, some of the first things that come to mind are the difficulties associated with incorporating it into the classroom. Often the experiential learning approach results in a less orderly classroom. This can cause discomfort for teachers who may be used to maintaining a more structured class-

room environment. Too, the preparation time for experiential experiences is greater than for traditional lecture/discussion lessons; similarly, the processing time for students is longer. This results in more time being spent on less material. Teachers also must engage more patience with students' explorations and take a facilitator role rather than a teacher role.

While these aspects of experiential learning may take some effort to get used to, the benefits are extraordinary. Allowing students to explore new experiences engages multiple senses which can help increase retention. Multiple teaching methods are integrated and the focus of lessons becomes child-centered rather than subject matter centered. Students will build confidence and competence during their explorations and become engaged with the subject matter through activities that are both fun and educational. Keeping students engaged and inter-

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Theme: Developing Students for Careers

What careers should agricultural education be focused upon? How does a teacher of agriculture, at any level, prepare students for the selected careers? What steps are incurred in developing students for their chosen careers? How does the teacher involve the community and connect to the community in the preparation of students for various agricultural careers?

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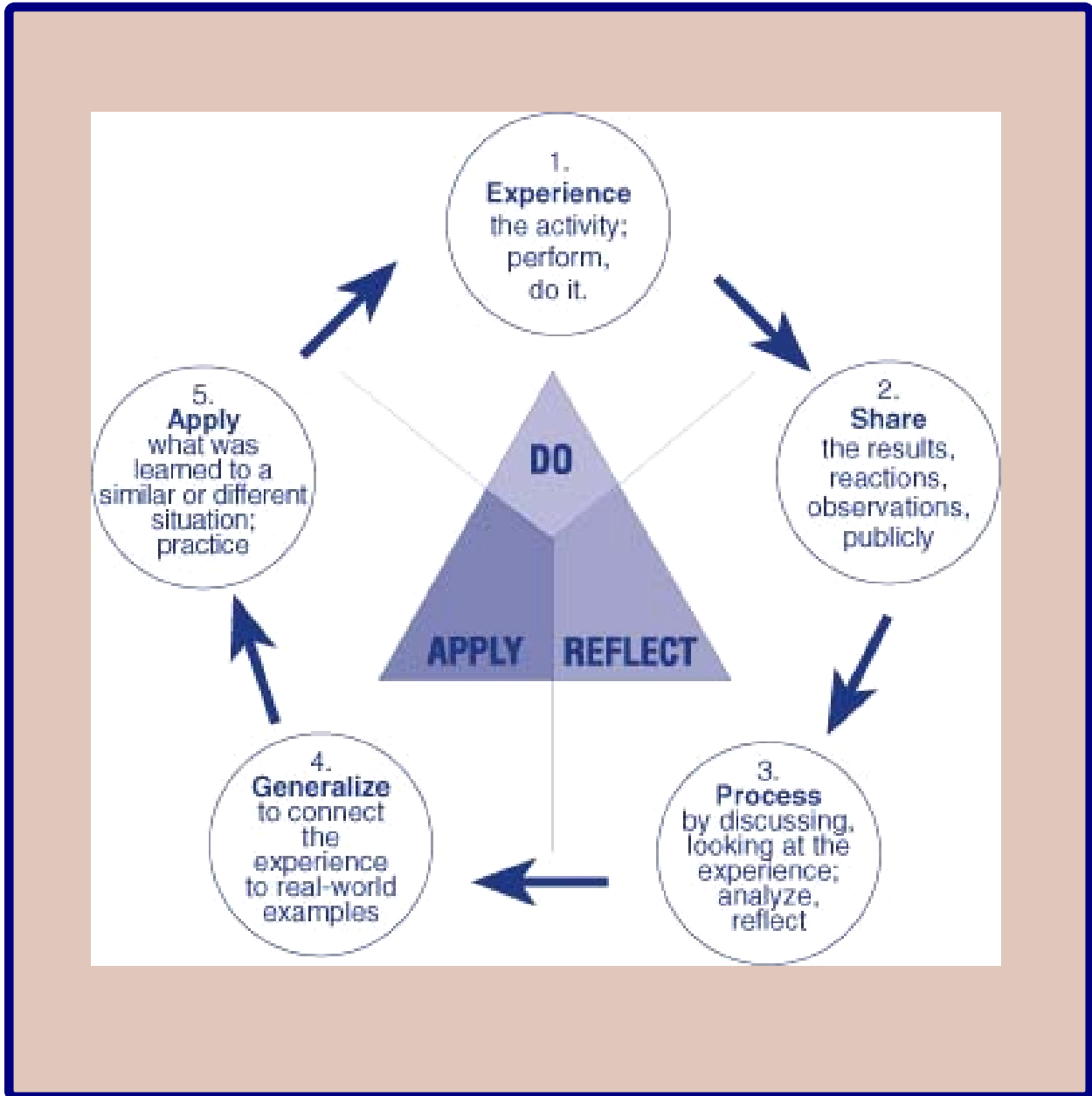


Figure 1: 4-H adaptation of Kolb Model (Maxa, Baker, Cahill, Choski, & Dennis, 2005)

The benefits of experiential learning are attractive

ested will also decrease discipline problems once routines have been established for engaging in the concrete experiences.

Applying the Experiential Learning Model to Agricultural Education

The benefits of experiential learning are attractive, and there are many ways that teachers can incorporate them into established agricultural education programs. When incorporating experiential learning opportunities into the scope and sequence of an agricultural education course, it is important to keep in mind that just allowing students to experience something does not qualify. The experience must be followed up with sharing, processing, generalization, and application. The experiential learning model can be applied to existing units of instruction with a little modification. Many units begin with basic vocabulary and introductory principles and end with some sort of culminating activity prior to an exam. Utilizing the experiential learning model means allowing the students to participate in the culminating activity first, and

then covering items such as vocabulary and principles through a facilitated process of sharing, processing, and generalization. At that time, students may apply the principles by demonstrating them in new situations.

There are many different types of experiences that can serve as the catalyst for this model. Teachers may design a lab experiment or demonstration for the students. A structured shop activity may serve as a concrete experience. The idea is for students to be involved in something that sparks a question in them and leads to an interest in finding the answer.

Following the experience, students need an opportunity to reflect on the event. However, it is important for the students to first share their impressions publicly. An open discussion in the classroom will allow students to share their points of view and better internalize what they experienced as well as picking up on things they may have missed through the observations of their classmates. After discussing, students should be guided into the processing/reflection phase. Students may complete a journal or prepare a report about their observations. Activities should be introduced to help students analyze the experience. This is the appropriate point for teachers to present classroom material that involves the concepts involved in the experience.

After breaking down the experience and analyzing its parts, students can then begin to put those parts back together in ways that demonstrate application to other experiences. Finally, students may work individually or in groups to complete application projects relating to the material covered. Student presentations are a great way to allow students to demonstrate their applications of knowledge stemming from the concrete experience and observe those of their classmates.

While implementing experiential learning activities into the classroom takes effort and patience, once routines and expectations have been established, students will benefit from increased motivation, knowledge, retention, and developed life skills. If every class taught included even one unit utilizing the experiential learning model, teachers would see positive changes in student engagement. The effort of planning an experience and facilitating the students' progress through the five steps will result in beneficial classroom experience for both students and teachers. Try it. You'll like it!

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Agricultural Education Laboratories and Experiential Learning

By John C. Ewing

Shinn (1987) stated, “As the teacher, you are responsible for planning, organizing, and managing this important aspect of the total program. The quality of your laboratory teaching will bear directly on the effectiveness of the program” (p.16). For teachers to be effective they must first recognize that students learn in different ways and then the teacher must use this information to better facilitate student learning. Three principles of learning that Ornstein (1992) advocated were learning by doing, as one learns to do what one does, and teachers should provide opportunities for meaningful and appropriate practice.

Newcomb, McCracken, and Warmbrod (1993) believed similar principles, in which learners will learn what they practice, and supervised practice is more effective when it occurs in a functional environmental setting. Laboratories are no exception to these statements. Laboratories need to be organized, clean, and safe to be most productive (Shinn, 1987). Laboratories are changing in agricultural education, but for teachers to be effective in this educational setting they must continue to be aware of the concerns related to safety, liability, and effective teacher attributes and teaching methods (Silletto, 1992).

Evolution of Laboratories

Laboratories are very diverse in Agricultural Education, as well as other educational areas and industry. Various laboratories agricultural educators may be required to teach in include

areas such as horticulture, agricultural mechanics, aquaculture, floriculture, hydroponics, computer aided drafting, genetic engineering, and more diverse areas of technology than ever before (Silletto, 1992). For a teacher to be effective in any of these settings they must understand the information that is to be taught. Subject mastery is a crucial part of being an effective teacher (Johnson, 2001). Teachers that want to be effective in laboratories should attend professional development training to increase their subject mastery (Moskwa, 1984). Bruening (1992) also encouraged further education of teachers when he stated that “If teachers want to effectively teach laboratory experiments related to food science, or if they want to be able to conduct water quality tests or to use electrophoresis (for genetic coding and mapping) as a teaching tool in biotechnology, they will need more education.” (p.4)

Agricultural Education has used the “shop” for activities that allowed the student to experience hands-on learning. Laboratories evolved with technology, but these laboratories still allow students to learn through experimentation and practice (Silletto, 1992). When students learn in an Agricultural Education classroom, they are different from students in other areas of the school in one major way. Agricultural Education students have the opportunity to expand upon their understanding by moving to the laboratory and practicing the skills just taught in theory within the classroom (Bruening, 1992). This concept ties directly back to what Ornstein (1992) and Newcomb, McCracken, and Warmbrod (1993) discussed about the principle of learning by practicing. For a teacher to be

effective in these various settings they must be able to manage the laboratory (Shinn, 1987).

Teacher Attributes and Methods

Bruening, Hoover, and Radhakrishna (as cited in Dyer & Andreasen, 1999) believed the greatest concern of the agricultural education instructor in a laboratory setting was safety of the student. Teacher educators need to be aware of the changes in agricultural technology (aquaculture, horticulture, natural resources, and small animals) to better prepare their teacher candidates to be effective teachers (Schlautman & Silletto, 1992). Effective laboratory teachers are effective because they: engage students in laboratory activities, demonstrate a positive attitude towards teaching, encourage integration of practical experiences with learning material, are a good role model, provide adequate opportunities for students to practice their skills, and provide stimulation and challenge.

Laboratories are used to teach the fundamentals, and/or general aspects of the discipline at hand. Mastering skills and techniques used in a specific discipline are two important outcomes of teachers effectively using laboratories. Teachers must be effective in managing their laboratory (supervising students, teaching, maintaining equipment) to ensure student safety and to keep from being found negligent, should an accident occur. Laboratory teachers have a variety of responsibilities, which include keeping students safe and on-task. Johnson (1992) described a situation that could help facilitate learning while utilizing the laboratory equipment more effectively.

Effective teachers, in a laboratory setting, vary their instructional methods. Teachers that effectively combine methods, such as hands-on activity time and computer work, can decrease boredom for themselves and, more importantly, the students. The Rosenshine and Furst variable of variability as using variety in teaching devices, instructional materials, types of tests, and level of discourse. Teaching in a laboratory allows students to use the kinesthetic domain of learning. Learning is enhanced through student manipulation of equipment or materials (Brewer, 1997). Demonstrations can be effectively used to help visual learners and also other students involved in vocational or industrial trades courses (Brewer, 1997).

Another teaching method that can be used in laboratory settings is the experiment. Experiments allow for hands-on activity, which adds to retention of material. Lecture and experimental observation are two methods that are good to use in conjunction with one another to allow for increased student involvement (Brewer, 1997). When a teacher can use experiments in the agricultural education laboratory, students can discover information for themselves or simply have classroom instruction reinforced (Bruening, 1992).

The laboratory is an ideal place for group-work and interaction, where students can build on their social and communication skills (Brewer, 1997). Bruening (1992) stated, "Progressive, science-based agricultural education laboratories will be dynamic arenas where exciting demonstrations, thought-provoking experiments, and student-centered activities will occur" (p.23). Shinn (1987) believed that when comparing the preparation time of a laboratory lesson versus a classroom lesson, it takes the same amount or a little more work to effectively prepare for a laboratory session. However, the

effective laboratory teacher can enhance student learning with a little extra effort.

Summary

Elements of an effective laboratory teacher include; subject mastery, course outline and organization, passion, rapport, listening ability, student challenges, relevance, self-improvement, enjoyment, and commitment. Teachers that know and have a passion for the subject matter they teach understand there is always more to learn.

By knowing there is more to learn and striving to find as much information as possible on a particular topic, the interests of both the teacher and the student remain at a high level. A teacher that has considered organization of the course allows the material to be presented in a clear fashion. When a teacher builds good rapport with his or her students and listens to their needs, class is often conducted more easily.

Laboratories provide teachers the opportunity to use teaching methods, which engage the students in an active manner. Effective teachers challenge and show the students the relevance of the work they are completing. An effective teacher is continually striving to improve their teaching. Teachers must enjoy their work and be committed to the profession if they hope to be effective in their career.

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The Discipline Derby

By Quint Molina, Monica Youngker, & Kattlyn Wolf

Discipline—Savior or Curse?

We have all been there, that moment when your stomach jumps up into your throat, you wish for some sort of a time and space warp to take you away to a place where there are no students. Yes, that moment in time when you must first discipline a student. Do it wrong, and the implications may haunt you; be too severe and students will pull away. Discipline is either a savior or a curse. *How then, do we prepare teachers to address and succeed at the challenging task of effective discipline?*

This year the Agricultural Education community in the state of Arizona welcomes 15 new teachers into the profession. As each of these 15 new teachers takes his or her place at the head of their classes their number one concern is not the rigor of the content they will be presenting or the quality of the lesson plans that they will take into their classes, these issues do not carry with them the element of surprise. Instead the epicenter of their concern and nervousness is dealing with classroom management and discipline. Each new teacher has invested time wondering, “Will I be prepared for the discipline issues that may present themselves within the next 55 minutes?” and, “Will I be able to handle the situation in a manner that will be satisfactory to me at the end of the work-day?”

The issue of classroom management and discipline has long been an

area of intense focus for new teachers and veterans alike, producing numerous studies and articles all with the intention of alleviating some of the questions and concerns teachers deal with on a daily basis.

Historical Evidence

Over the years, articles in the *Agricultural Education Magazine* have highlighted discipline. A 1955 article noted, “Nearly everyone will agree that very little teaching and learning will result unless there is discipline in the classroom” (Krebs, 1955). In 1979, a Gallup Poll reported that discipline was identified as the number one concern of Americans regarding the public school system (Schumann, 1979). 1981 saw an editorial in the *Agricultural Education Magazine* address student management and its role in a positive and engaging educational experience. The author stated, “The best solution to discipline problems is prevention” (Lee, 1981).

Discipline issues are a reoccurring theme in educational research. In a 1994 study, three beginning agricultural teachers shared their experiences of entering the teaching profession. The consistent theme and most challenging obstacle that they faced was creating and maintaining student discipline. This assessment was supported by administrators, and the accounts of the teachers themselves (Talbert, Camp, Heath-Camp, 1994).

Ongoing Issues

We all know that discipline is a problem for beginning teachers, and is a serious concern for student teachers. In 1981 James Knight, stated “It

is important to recognize that perhaps the single most productive strategy in preventing and/or improving discipline in the schools is good preparation, planning and teaching of lessons.” While good lesson plans are essential, they alone cannot solve discipline problems. In order to do this, teachers must develop and implement a discipline plan. Harry Wong, in his book *The First Days of School*, notes discipline plans should have three parts: rules, consequences, and rewards. For student teachers and beginning teachers it is hard to develop class rules that are logical and appropriate. As a young teacher you do not have a frame of reference from which to write your discipline plan. *How, as a teacher educator, do you effectively coach/teach student teachers so they can create and maintain positive classroom management utilizing discipline plans that work?* In 1999 Jack Elliot and Billye Foster introduced the “Discipline Derby” to the teacher preparation program at the University of Arizona. Since then all the faculty and graduate teaching assistants have worked to continually renovate and improve the concept.

What Is It and How Does It Work?

The “Discipline Derby” consists of thirty real-world classroom situations where disciplinary action is warranted. Each class session student teachers are given a scenario taken from real classrooms and real teachers. The student teachers are charged to read and then write a personal response to these situations in less than three minutes. Once the student teachers have recorded their responses, various individuals are called upon to share their ideas. The class then begins a discussion on the various possibilities of solving the is-

The “Discipline Derby” consists of thirty real-world classroom situations where disciplinary action is warranted.

sue. The process allows student teachers the chance to glean ideas from each other, as well as, the faculty members leading the discussion. These real-world situations and resolutions give the student teachers insight into classroom problems. Dialogues are opened about student management issues that typically go unaddressed elsewhere in teacher preparation programs. After open discussion, the actual solution to the scenario is shared. Students record the solution and plausible alternatives in their notes on the scenario sheet.

The End Product

The real power of the “Discipline Derby” lies in the fact that each of the scenarios has a solution provided by the teachers who actually experienced it. The collection of these scenarios gives the student teachers an arsenal that they can later use in their classrooms and refer to when problems arise. The ultimate goal of “Discipline Derby,” is to give student teachers reference points needed to create effective discipline plans.

As student teachers and new teachers prepare for the classroom, discipline will always be viewed as an obstacle. One step in overcoming the obstacle is removing the element of surprise that occurs when minor and major discipline problems arise. Through “Discipline Derby” teacher educators are able to present student teachers with situations and then help them to calmly solve the problems. Talking about a fear helps to reduce its power and talking about discipline issues gets rid of the anxiety that student teachers face. *So with this in mind, what would you do if ...*

You have a group of very talented students in a shop class. They love to build things and do not need constant supervision. Because these students are very capable you start spending more and more of your time on maintenance issues in the shop (fixing welders, building storage rack, etc). For the most part the students require little guidance on their projects, so you let them work. One day you hear a BOOM from across the shop. You find

a group of students giggling around the oxy-acetylene unit. One of them has filled a pipe with acetylene and lit it. No one is hurt and nothing is damaged, but the students band together and refuse to tell who was responsible. What do you do?

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Experiential Learning: Killing Several Birds with One Stone

By Benjamin G. Swan

As a newly admitted undergraduate student some 13 years ago, my father gave me some advice. The advice was never taken seriously and my grades probably suffered because of my decision not to listen. The advice was this, if you really want to know a topic, teach it to someone else. For whatever reason, I never tried it until I moved into my agricultural education courses during my Masters experience.

As I was given the opportunity to teach my peers and teacher educator, my perspective changed. I was forced to think through every aspect of the lesson and how the information could be repackaged mentally so that it was easier for me and my students to recall. I ended up teaching it in this newly packaged form and discovered that I learned the information more thoroughly than I had anticipated.

A decade later, I came across the following uncited list in a high school psychology classroom that really struck me. This list further illustrates the importance of the teaching experience in the learning process. Who knows if the posted list of “what we retain (remember)” is truly accurate and researched, but in general it makes sense.

What we retain (remember)...

10% of what we read

20% of what we hear

30% of what we see

50% of what we see and hear

70% of what is discovered with others

80% of what we personally experience

90% of what we teach to someone else

As teachers, we are in charge of providing students experiences that will change them in some positive way. I share this list with about every class I have taught since finding it. In bringing this list to your attention, I believe you should share it with your students, especially right before you assign them into groups to develop lessons and teach the class. In addition to teaching, being in a group as alluded to in the list, working with others discerning new solutions is also powerful in the learning process.

As I present the list and assignment to my classes, the sales pitch is simple, “I want you to know this content so well.” “I want you to restructure it so it makes sense to you, teach it that way to us.” Prior to teaching, providing some guidance on how an effective teacher behaves (Rosenshine & Furst, 1971) and constructs a lesson plan (Hunter Model, etc.) are great ideas. Have them give it a shot and provide some constructive feedback. At the conclusion of their teaching efforts, students gain confidence and are seen by their peers as a “source” of knowledge.

The Rosenshine and Furst variables (1971) are specific teacher behaviors that effect student learning. They include clarity (clear & concise), variability (method of teaching changes, not monotonous), enthusiasm

Hunter Model of Effective Instruction

- (1) Objectives stated (what are we doing today?)
- (2) Anticipatory set (hook),
- (3) Teaching (modeling),
- (4) Checking for understanding (are they getting it?)
- (5) Guided practice
- (6) Closure,
- (7) Independent practice (homework/S.A.E.)

(energy level), task-oriented and/or businesslike behaviors (stick to the plan and stay focused), and student opportunity to learn criterion material (show me you've learned). The familiar Hunter Model of effective instruction includes (1) objectives stated (what are we doing today?), (2) anticipatory set (hook), (3) teaching (modeling), (4) checking for understanding (are they getting it?), (5) guided practice, (6) closure, and (7) independent practice (homework/S.A.E.). Share this information with your students so they know what to focus on when teaching by utilizing these guidelines. The task will become less intimidating when put in simple language.

The actual length of the time each student teaches is up to you. My suggestion is to start between 2-3 minutes per student. Build up the time to around 7-10 minutes as you progress through your term, perhaps even longer. You want the experience to be positive and something to build on. Organizing the student lesson topics so they are sequential is also a great idea. Having the students teach the entire term is not a good idea. Consider less than half of your term being taught by your students. Maybe this is unrealistic with your situation, but consider trying the shorter lessons with your students and ask them about their experience.

After considering these suggestions, what are the possibilities in your program? What experiences can you provide your students that will allow them to teach the content in your classroom? Are you prepared to turn over the reigns for a little while?

Some secondary programs already incorporate teaching units into their curriculum. As I visited student teachers last year, the cooperating teachers shared with me that all of their upperclassmen create and deliver lessons to their peers, focusing on being

effective teachers. I also took note of Butler Tech's Career Tech teacher preparation program in Hamilton, Ohio. They have interested upperclassmen on track, preparing to enter college, focusing on becoming professional teachers.

As a positive result of having our students teach, I see several benefits that address some key issues facing agricultural education, education, and our communities. With efforts like Ag in the Classroom, students are exposed to teaching agriculture basics to elementary school students. By focusing on teacher effectiveness and having a positive experience, these students could be prime candidates to recruit into the teaching profession. Having students with strong agriculture literacy coming out of our agriculture programs and becoming professional teachers would contribute to solving the current and projected worsening teacher shortage and create a hospitable environment for agriculture to be infused.

In my estimation, most high school students across the board are quite negative about the prospect of being a professional teacher. How can we change that perception? Perhaps putting students in the teacher's shoes would excite some of them, while stretching all of them and improving their experience.

Beyond the school setting, many opportunities abound in our communities and neighborhoods to contribute by making a positive change. These opportunities are found in athletics, churches, clubs, neighborhoods, and even our own households. Our students that become tomorrow's adults can contribute at the local level as effective change agents, because they will have a heart to make a difference and the tools to be effective.

As I conclude, dad had it right,

though it took other experiences and many years to figure out what he was trying to get through my head. I needed a structured opportunity to learn the simple truth that I found out in graduate school. I am quite thankful for the list I found in that high school psychology class that provided a framework to share with college undergraduates because it was simple, straightforward, and powerful. After giving those college freshmen the opportunity to experience teaching, many of them were thankful and really enjoyed it. I trust that those students will learn more than I did as they progress through their education.

The choice is now yours. Will you provide your students the opportunity and tools to teach their peers? Wherever you find yourself teaching, students can retain their information and learn more if they can teach it to their peers.

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Help Your Students to Ask the Right Questions

By Deborah R. Brown

It can be heart-breaking. At the very least, you feel frustrated and helpless. You want to help and you hear the plea, but rules are rules . . . Where was the guidance for this student one-two years ago? I'm talking about college, post-high school education, especially for Ag Ed students.

When students approach high school graduation, there are so many questions and (sometimes) not enough answers: What do I do now? What do I want to do (for the rest of my life)? Where will I continue my education? Should I leave home for the big city university or start my college career close by? Do I want a baccalaureate degree or will an associate degree be enough?

Many of our students are opting for course-work at two-year colleges after high school. There are a number of reasons for this: Tuition is usually lower; sometimes they can live at home, therefore saving room and board costs; the student body population is smaller, classes are smaller – something appealing to someone from a small-town atmosphere; our two-year colleges are doing a good job of recruiting. However, when I received the phone call from “Chris,” a student at one of these two-year colleges looking into coming into the university system, the information I had for him wasn't what he had hoped to hear.

This young man had started a degree path in agricultural mechanics at “NorthWest College.” In the year he'd been there, he had decided that

he didn't really want to “twist a wrench” for the rest of his life, but that he wanted to work toward a baccalaureate degree that would open the doorway to management for him. Chris wanted to complete his associates degree and then attend the University (for two more years) to complete his Bachelor of Science degree.

I requested a copy of the courses in his program at NorthWest College and took these to people within the departments of our university agricultural college to see what might transfer in. To his dismay (and mine!), nothing in his major at NorthWest College would!! Oh, sure, some of his English and math classes counted toward our general education curriculum, but the

agricultural mechanics courses were not eligible for credit toward the University's ag mechanics major. As the coordinator in the department wrote, “This is what I came up with - and it isn't too promising. Again, EXACTLY the reason we tell students NOT to go to tech schools unless they are positive they never want to go to college. . . There you have it. Sad, but true.”

Are Universities elitist? Some would say yes. However, one needs to remember that there is a difference between a university education and a community/technical college education. The University is dedicated to educating the “whole person;” technical and community colleges are developed as a way to prepare a workforce for

Many of our students are opting for course-work at two-year colleges after high school. There are a number of reasons for this: tuition is usually lower; they can live at home; student body population is generally smaller; and two-year colleges are doing a good job of recruiting.

America and to prepare people for work. Similarly-named courses can have very different intents, different foci.

To students who have decided that they want to attend Universities after they've already begun at a two-year institution and are disappointed at their "wasted" time and money spent at the local college, I'd like to say "Ya shoulda known," but who would have told them? This is where you – their Ag Ed teacher – can help.

Talk to your students and help them understand the system: Not all colleges are created equal. There are some hard questions they need to ask up-front as they're being recruited, especially by two-year schools.

The first question they need to

ask is, "Will my credits from your institution transfer to XYZ University?" Chances are, the answer will be "Yes." Therefore, the second question is much more important: "How will they count?" You see, most credits will transfer in some way – usually as electives. As you and I both know, one doesn't really need 60 semester hours of electives!

Your students need to find out if there is an articulation agreement between the two-year school and the university of interest. They should get a copy of it. This agreement should show them what courses "count" – and *how*, if/when they do transfer into that university system.

An articulation agreement can take years to develop between institu-

tions. While a two-year college is much more flexible and able to respond in a short period of time, a university isn't set up that way. The best analogy I've heard is comparing a speed boat to an aircraft carrier: The speed boat can reverse direction (almost) in the blink of an eye; it takes a major portion of ocean – and a great deal of time – for the carrier to change course even by a few degrees. Likewise, the university isn't able to make a decision "overnight" that an Associate Degree from ABC Community College meets the educational requirements for its students. Having an articulation agreement in place up front is a benefit to students attending the community college. Even if students don't think (when making their original decisions) that they will want to pursue a Bachelor's Degree, this is an additional piece of information that should be used to help them make a decision between colleges.

What happened to Chris? I can't really say. I do know that he was terribly disappointed that his courses at NorthWest College wouldn't really count toward a major in that field at the University. In the meantime, my position at the time I was working with Chris was eliminated and I turned his file over to another advisor; she's not heard from him.

In closing, I'd like to remind you that you can have a great influence on your students' lives. Help them to ask the right questions as they prepare to enter the next phase of their lives. Two questions can save them a lot of time, money, and disappointment as they're exploring their post-high school education options: "Will the credits count?" and "How?"

Deborah R. Brown is a Graduate Student in Agricultural Education at The Ohio State University



Learning for Life Through Inquiry

By Michael S. Retallick and
W. Wade Miller

I hear and I forget.

I see and I remember.

I do and I understand.

Ancient Chinese Proverb

The agricultural education profession has long prided itself on using problem-based learning (PBL) as a pedagogical approach. The *Methods of Teaching Agriculture* text by Newcomb, McCracken, Warmbrod, and Whittington (2004) dedicates a whole chapter to problem-solving. In that chapter, the authors draw a comparison between the steps in the learning process and the steps in problem solving. They go on to explain that the problem-solving approach fits well within the learning processes making it an ideal teaching method within the context of agriculture.

Recently, Parr and Edwards (2004) draw comparisons between the inquiry-based learning (IBL) concepts utilized within science education and PBL used within agricultural education. Parr and Edwards conclude that there is substantial pedagogical agreement between the concepts of IBL and PBL. In fact, PBL could be considered as IBL when the learner, rather than the teacher, determines and defines the problem to be solved. Because of the similarities and the academic achievement that has been realized using these pedagogical approaches in science education, Parr and Edwards suggest that both IBL and PBL are effective means for student learning.

The PBL, IBL, and even the learning process models are highly congruent (Doolittle & Camp, 2003; Parr & Edwards, 2004). However, IBL is conceptually broader and problem-solving serves as one teaching strategy within the context of IBL (Thirteen Ed Online, 2004). Therefore, rather than using, IBL and PBL interchangeably, perhaps the agricultural education profession should consider developing and promoting IBL as the context for teaching agricultural education and offer PBL as one means of inquiry.

Children are naturally curious. They use their senses to start exploring their world even before they begin to talk. Once they learn to talk, they begin asking some of the most important questions in life because they are trying to understand the world in which they live. As any parent knows, they ask lots of “why” questions related to the purpose of things, how they came about, and what they are made of. As the years go by, curiosity sometimes gives way to matters of fact, but is never entirely extinguished. IBL can rekindle curiosity, increase motivation, and maybe even promote creativity.

IBL takes the natural born tendencies of inquiry and uses that inquiry process within the educational system to construct knowledge and understanding of how to get and make sense of things in today’s complex society (Thirteen Ed Online, 2004). IBL enables the student to construct an understanding of the natural and socially designed worlds and seek appropriate resolutions to questions and issues rather than looking for a single, correct answer. Using IBL, the acquisition of facts is not the ultimate goal; rather, facts are the means to higher

levels of cognition including analysis and synthesis. Thirteen Ed Online (2004) identify four key principles of IBL: 1) the utilization of information processing skills from observation to synthesis should be the focus of learning; 2) the learning process is student-centered; 3) the role of the teacher is one of facilitator and co-learner; and 4) assessment focuses on both what is valued and the student’s conceptual understanding.

The IBL approach focuses on using and learning content as a means to develop information-processing and problem-solving skills. The results include:

- Student construction of knowledge through active involvement
- Increased student motivation, interest, creativity, and engagement
- Learning becomes more fun and less of a drudgery
- Movement from “learning about things” to “doing, understanding, and creating things”
- Learning and retention of the content is improved because facts are relevant
- Students take more responsibility for their own learning
- Students seek collaboration and work cooperatively with others to accomplish learning
- Students become more confident in their abilities as learners

■ Students learn to process information and find answers to their questions

■ Students become life-long learners.

One of the most critical issues in making IBL work is the development of a facilitation plan rather than a traditional lesson plan. Thirteen Ed Online (2004) lists 13 steps for the development of an IBL facilitation plan:

1. Establishment of student-focused learning objectives and expected outcomes
2. Establishment of ground rules for inquiry
3. Identification of the most important conceptual theme related to the lesson

4. Determination of the specific content students need to know by the end of the lesson

5. Identification of available or needed resources or sources

6. Identification of potential road blocks to learning

7. Establishment or identification of the inquiry attributes already possessed by the learner

8. Identification of questions or types of questions to be raised and explored

9. Preparation for ongoing assessment

10. Identification of the appropriate means to effectively monitor progress

11. Identification of the necessary professional preparation needed by the teacher

12. Establishment of long-range, medium-range, and short-range goals

13. Preparation of plans to help advanced students to become facilitators for other students needing additional assistance

Some educators have reservations about IBL. They are concerned that IBL takes too much time and effort making it less efficient than other methods. The teacher knows what the students need to know and has the responsibility to relay this information to students. IBL places too much responsibility on students who are not ready to become independent learners. Educators are concerned that students will



Ag Ed students watching a veterinarian perform a test.

not learn the necessary facts or will have “holes” in their knowledge and understanding. Others argue that there is “core knowledge” and information to be learned before students can use IBL methods. Some teachers who have initiated IBL have met resistance from the parents and community who don’t understand the concept of IBL. These teachers also have to deal with systemic issues associated with our traditional American educational system, a system which has traditionally focused on “what” we need to know rather than “how” we know it. This is a system where we attempt to “pour” facts and knowledge into the heads of students.

In response to those concerns, teachers must be aware that there are times and situations where other pedagogical approaches are more appropriate. However, teachers should not let these concerns keep them from employing IBL techniques to promote student learning. Two reasons to use IBL are offered.

First, students need to learn about learning and how to learn. Today, society wants students who are prepared to learn and adapt throughout life rather than knowing facts and “other” things. Agricultural employers continually state that they desire future employees entering the workforce who understand the broader concepts and have the ability to adapt rather than focusing solely on the development of technical skills. If students know and understand our natural and socially-constructed world conceptually, they will be able to transfer the learned concepts to other situations throughout their life (National Research Council, 2000; Thirteen Ed Online, 2004), thus, becoming life-long learners.

Second, just as important as learning how to learn is learning about how to adapt to an ever changing world.

Employ IBL techniques to promote student learning.

Society is much different today and is changing more rapidly than ever before. Because the amount of information in the world is growing so rampantly, we must be reminded that facts are not truths; they can become obsolete. With the onset of the information age, a different approach to learning is called for. Such an approach should include a focus on learning that consists of “understanding” in an effort to ensure that major concepts can be applied or transferred to other situations. When students have developed a foundation and conceptual framework within an area, they will have a better chance of transferring that knowledge and information to another context or situation (National Research Council, 2000).

In conclusion, we know more about learning today than ever before (National Research Council, 2000). IBL within science education has been documented to have a positive impact on academic achievement. IBL, and the teaching techniques identified within IBL which include PBL, is one method of motivating students, developing life-long learners, and providing the conceptual framework from which learning and long-term understanding can take place. IBL is a creative process that enables students to take more responsibility for what they learn, how they learn it, and to what extent they learn it. They are active players in the learning process. In effect, they are learning how to learn. If your goals

include developing highly motivated, independent, life-long learners, then IBL may be the means by which that goal can be accomplished.

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The Heart of Teaching

By C. Gerald Van Dyke and
Gary E. Moore

Is teaching an art or a science? The scientific camp might point to all the empirical research on teaching effectiveness and conclude that teaching is a science with specific steps to be followed (See the Jan.-Feb. issue of this Magazine). However, the artist camp could argue that students are not like chemicals that react the same under the same conditions. Therefore, a master teacher is like a performing artist who alters what he or she does depending upon the students and circumstances. The artist group would say the teaching performance of a true master teacher cannot be reduced to a set of scientific principles.

The authors don't plan to enter into the debate about whether teaching is an art or science. Both camps can make valid points. No matter which camp one is in, we would suggest that good teaching is really a matter of the heart. To be a truly effective teacher, you have to possess a genuine concern for students. There is an old adage that states, "*students don't care how much I know until they know how much I care.*" In this article we will provide several suggestions on how to show your students that you care.

What You Can Do to Show Students That You Care

Students are impressed to discover that even before the class has started that you are already thinking about them. By sending a greeting by e-mail or regular mail to the whole

class telling them that you are excited about what is going to occur in your class, how you can hardly wait to tell them all the "Wonderful" and exciting things about your subject matter and that you will personally greet them at the door on the first day of class makes a strong statement about your interest and concern for their learning. It also shows that you care about them as individuals as well as a group.

Greeting the student at the door on the first day of class makes a personal contact and helps establish good rapport. Have students make a nametag and make sure they put their nametag in a prominent place on their shirt or coat so their name can be emphasized when their hand is shaken as they come to class. An alternative is to have the students prepare name cards that can be placed on their desks.

Prepare
birthday
notes and
give
them to
students
before
class.

Have the chapter FFA reporter or another FFA office on hand with a digital camera. As students come to class, take a photo of the student. These pictures are later placed on a cardboard seating chart that is placed on the teacher's desk and used to learn names. Using this information to call student by name in class shows that you care about them as persons.

Have students complete an information sheet with personal information on it including the student's birthday. Preparing birthday notes and giving them to student before class provides another contact point for showing students that you know something personal about them and that you want to recognize them individually in a special way.

Responding quickly to e-mail or phone calls can often defuse what might be a simple concern or problem.

Dressing neatly shows respect for students. Returning exam in a timely manner is an indication of your desire to give them feedback as quickly as possible.

Providing some kind of class evaluation on a regular basis gives students an opportunity to provide their impressions of how you are performing either effectively or not effectively. The more specific the information the more helpful it will be and then telling the students what you have gotten from them and how you are changing.

Giving the students a response sheet at the end of the class with three simple questions on it also shows you care. The three questions are:

1. What was clear in class to-

- day?
2. What was fuzzy in class today?
 3. What question(s) do you still have?

Give the students a couple of minutes at the end of class to complete this exercise. Collect these sheets and review them before class the next day. At the start of class the next day, clarify any fuzzy thinking and answer questions the students still have.

Other ways of showing concern: providing students with clear instruction on your expectations (such as coming to class well rested, reading assignment before class, not talking during class, being an active learner).

Breaking up the class time with humor or personal stories can make the learning process more palatable and

can provide opportunities for you as a teacher to be more “real” to the students.

Using visuals, models, examples, etc. all demonstrate to students that you are always trying to help them learn and help them relate to your subject in new ways. Word associations make learning more fun and relevant. There is nothing wrong with getting a little “crazy” with demonstrations and acting out of certain principles of your subject. This can be done in costume, by exaggerated animations, or other outrageous performances.

Telling students that you read teaching journals to get new fresh ideas or that you go to teaching conferences is an indication of your dedication to learning more about teaching and how to better impart information.

Telling students how excited you get each morning when you get up that

Enthusiasm is said to be one of the most important characteristics of a good teacher.

you can hardly wait to get to class to talk about your subject. I even tell students that I often stand at my closet trying to decide what to wear that day to best illustrate whatever I will discuss.

Enthusiasm is said to be one of the most important characteristics of a good teacher. We believe that students can tell that you really care about them if you show enthusiasm for your subject.

Summary

There is a saying by an unknown author, “The best teachers teach from the heart, not from the book..” We need to strive to teach more from the heart.

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FFA students from Amphitheater High School, Tucson, Arizona, leading their sheep.

The Best Resource an Ag Teacher Could Have... Professional Membership

By Justin Heupel

Professional membership is the best resource an Ag teacher could have; it leads to networking which leads to securing the resources that teachers need. We expect our students to be members of a professional organization known as FFA. Shouldn't we set a positive example for our students by paying our professional membership dues and becoming involved?

It's the second day of school at East Overshoe High School. Yesterday you, the Agricultural Education teacher, held an ice breaker for the students to get to know one another, reviewed class expectations and highlighted the course syllabus for the semester or year. Today's plan is to explain to this new class of students just what exactly Agricultural Education is

all about. You decide to use the popular illustration of three interlocking circles as an example – classroom/laboratory, SAE, and FFA.

The three interlocking circles illustration describes the total Agricultural Education program and we've all used it, or a form of it, at one time or another when explaining our programs to students, parents, administrators, or community members. In short we explain the "classroom/laboratory" circle as the class the students are enrolled in – it's what we gave the students the syllabus for on the first day of school.

Next we might explain the "SAE" circle as the opportunity for students to apply knowledge and skills learned in the class/lab to a real world situation. All Agricultural Education students in Montana are required to conduct an approved Supervised Agricultural Experience program as stated in the Ca-

reer and Technical Education Guidelines by the Montana Office of Public Instruction. But what happens when we get to explain the "FFA" circle? Is the FFA an integral or optional component of Agricultural Education in your school?

We all know that FFA is an integral part of Agricultural Education because it awards students in the "class/lab" and "SAE" areas of the total program. However, the fiery debate as to "integral or optional" gains fuel when the details of how the membership dues are paid for students. Are the FFA membership dues paid for all Ag Ed students through the school or FFA chapter? Or are the membership dues paid by those Ag Ed students who want to be involved in FFA?

Regardless of your stance on the issue of FFA membership for Ag Ed students or how the issue is handled in

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your respective school, I believe all Ag teachers are united in the philosophy that FFA has something to offer all students in Agricultural Education. The FFA provides students with the resources to develop their potential for premier leadership, personal growth, and career success through Agricultural Education. We expect that all of our Agricultural Education students will participate in the FFA organization in some way or work to find their niche within the organization.

But what about the Agricultural Education teacher? What resources do you have to develop your potential (and facilitate student development) for premier leadership, personal growth, and career success? Are you paying your dues to be a member of a professional Agricultural Education organization? If not, you are missing out on “The Best Resource an Ag Teacher Could Have.” That resource starts with a membership card to a professional Ag Teacher’s organization.

In Montana, the state Ag Teacher’s organization is the Montana Association of Agricultural Educators (MAAE). The MAAE is unified with the National Association of Agricultural Educators (NAAE) as well as the Association for Career and Technical Educators (ACTE) and Montana ACTE. So how does paying dues and having a membership card in your wallet lead to resources for teaching?

There are many benefits of paying your professional membership dues including but not limited to: advocacy at the federal level for Perkins funds and policy affecting Agricultural Education, professional liability insurance, opportunity for awards and recognition, as well as a voice and a vote in the Agricultural Education profession. But the one greatest resource that you can gain as a professional member is the opportunity to network with other Ag-

ricultural Education professionals. I think of networking as the super-duper biotechnology seed that produces like no other and leads to the resources that you really need in order to survive in Agricultural Education.

Some of the resources that can be gained through professional membership and networking are included but not limited to the following list:

1. Curriculum and ideas for curriculum or where to find curriculum that has already been created.

What resources do you have to develop your potential for premier leadership, personal growth, and career success?

2. How do you get students interested in extemporaneous speaking?

3. What tours are worth taking on the way to Louisville for National FFA Convention?
4. How do you start an advisory council or FFA Alumni Affiliate?
5. Ideas for electing FFA chapter officers or selecting the Star Greenhand.
6. Help with the deep accounting and understanding of State/American FFA Degrees and Proficiency Awards.
7. Ideas for new FFA chapter fundraisers.
8. A cool activity (assessment opportunity) that could be used to teach animal nutrition such as having students design a cereal box with the pertinent information.
9. Who can I call to service equipment in the Ag mechanics lab?
10. What ideas should be considered when designing a new, state of the art animal science facility?

So you want resources for the science of teaching, the mechanics of teaching, the art of teaching, and the assessment of teaching? That’s simple, pay your dues and get involved in the organization by networking with your professional peers. After all, isn’t that what your best Agricultural Education students do through the FFA at the local, district, state, and national level?

Justin Heupel is an Agricultural Education teacher at Flathead High School in Kalispell, MT

Meeting Standards Through Field Trips

By John C. Ewing

With more pressure on educators to demonstrate how their teaching impacts students, current research has shifted to examining standards. These standards include looking at teacher certification and teacher qualifications to see the effects, either positively or negatively, on student achievement. One of the major problems with this type of research is that policymakers may use information incorrectly, thus, “holding-up” the education of the very students they are trying to help. So, as policy and society influence research, concerns remain that policymakers will use research findings against those involved in education. Whether one agrees with the current trend of using standards to measure education, the fact remains that teacher education programs must take steps to meet the standards that have been set forth.

The National Council for Accreditation of Teacher Education (NCATE) accredits the teacher education unit at The Ohio State University. The unit, and therefore the agricultural education program, must meet the standards if there is to be continued accreditation. Standard three of NCATE examines the use of field experiences in a teacher education program. Specifically, the examiners want to know if the program is using field experiences to enhance teacher education candidate’s learning. Another NCATE standard (unit standard number 4) addresses diversity of candidates and the experiences of those candidates while enrolled in the teacher education program. The agricultural education faculty decided to partially meet

both of these standards by using field trips.

Learning is not limited to school (Fisher & Balch-Gonzalez, 2002). The Ohio State University agricultural education teacher education faculty believes this statement, so they took to the road. The instructors and teacher education candidates visited seven different locations during the spring quarter, which provided opportunities for the candidates to explore different aspects of teaching agricultural education. Students were required to complete reflection papers on each of the visits to further their thinking about the visit and what was observed. This reflection allowed the students to examine and expand their insight on becoming a more effective teacher. These field trips also focused on various aspects related to diversity. The candidates were exposed

to diverse student populations, diverse teaching styles and philosophies, diverse communities of learners, and, in general, diverse agricultural education programs.

The importance of examining the diversity issue can be seen in the following statements. Students from some cultural backgrounds, and various ethnic groups, have different dispositions for learning (Galloway, undated). Teachers need to be cognizant of their students’ needs and make the content available to each individual (Ball, 2000). Sapon-Shevin (2003) described diversity as differences in race, age, sex, family background, class, sexual orientation, religion, language, and physical characteristics. NCATE (2002) defined diversity in a similar way; however, there are some slight differences. The definition of diversity as given by

As policy and society influence research, concerns remain that policymakers will use research findings against those involved in education.

NCATE included individuals that were . . . “exceptional students and students from different ethnic, racial, gender, socioeconomic, language, and religious groups”. Candidates need to be exposed to and work with issues as they relate to diversity, because these issues affect teaching and also the learning of P-12 students (NCATE, 2002). During each of the field trip visits candidates were exposed to very different students in terms of beliefs, abilities, and reasons for being involved in agricultural education.

No matter the exact definition, diversity in the classroom should be seen as a positive and not a negative as many now see it (Cochran-Smith, 2003). Teacher preparation programs “. . . must include additional academic knowledge related to diversity and multicultural contexts that can be incorporated into their professional curricula and their clinical teaching experiences” (Garibaldi, 1992, p. 24). Teachers must be able to respond to culturally diverse classrooms and various student-learning styles by adjusting instruction as needed to promote student achievement (Garibaldi, 1992).

The use of field trips allowed the teacher education program to model many different ideas to the candidates. One of these was the importance of using experiences outside of the classroom or laboratory to engage students. Through modeling, the teacher education program has helped the candidates understand the importance of learning that takes place outside of the classroom walls.

The Ohio State agricultural education teacher candidates visited seven different sites to, hopefully, experience agricultural education in ways they never thought of before and interact with individuals very different from themselves. The candidates visited two schools in Ohio, three schools in Penn-



Working with students on a field trip enhances experiential education.

sylvania, the National FFA Center in Indianapolis, and FFA Camp Muskingum during the spring quarter. Each of these locations was chosen for different reasons related to diversity. Some were for diversity of students, while others were chosen for diversity in the overall program, and still other locations were chosen to give candidates the opportunity to learn simply by interacting with one another on a very informal level.

Butler Technology and Career Center in southwestern Ohio was chosen for the unique school structure. The school enabled candidates to see the many program areas offered to students in one location. Through interaction with students, faculty, and administrators at the school, the candidates were able to improve their understanding of the programs offered at a technology center. The other Ohio school, which the candidates visited, was Bowling Green High School in north-

western Ohio. Bowling Green is known throughout the state for, among other things, its strong agricultural mechanics program. An afternoon and evening spent watching, listening, and working with the students and instructor in the laboratories gives the candidates the opportunity to learn how one program in the state became so successful at what they do.

A weeklong trip was taken as part of this course to three Pennsylvania schools. Each of the three schools was chosen for something unique to that particular school. Conrad Weiser was chosen for its well-known agricultural science program. The teachers in this program have a very unique view on agriculture and what it takes to get students excited about learning. W.B. Saul High School of Agricultural Sciences in Philadelphia was chosen for their rich diversity in faculty, programs, and students. The students at this school come from all over the city. Some come

with an interest in animals, some with an interest in crops, and still others with an interest in mechanics and turf. The important part to remember is that these students come with an interest in agriculture and the candidates need to understand how to take this interest and turn it into something great like the teachers at W.B. Saul do on a daily basis. The third school visited on the trip to Pennsylvania was Milton Hershey. The school is unique because students live on campus. It is also unique in that it uses the agricultural education program to work with students, pre-K-12, to learn about topics that interest the students.

The trip to FFA Camp Muskingum was used as an opportunity for the candidates to work together on service learning projects at the camp while learning about the opportunities for FFA members whom attend camp. The two days spent at Camp Muskingum also reinforces that meaningful learning takes place in locations other than the classroom. Visiting the National FFA Center in Indianapolis provides the candidates the opportunity to interact with individuals at the center. Candidates learn what takes place on a day-to-day basis at the headquarters of the FFA. The candidates also learn of potential teaching aides available through the center. The information gained on this trip will help these future teachers for years to come.

The discussions between the teachers and candidates at the schools, camp, and National FFA Center make the time and effort of planning, implementing, and evaluating the trip worthwhile. All of the schools mentioned above are good at what they do and these are the types of schools that should be examined by teacher candidates to enhance their understanding of what agricultural education is and what it can be.

Teacher education programs must give teacher candidates the opportunities to learn the content, skills, and dispositions that can help them become leaders in their profession (Griffin, 1999). Richardson (1996) stated, "Attitudes and beliefs are important concepts in understanding teachers' thought processes, classroom practices, change, and learning to teach" (p. 1). As professionals, teachers need to care for their students and be agents of change, but these aims are not clear-cut and therefore are often questioned (Smylie, Bay, & Tozer, 1999). Once again, the field trips gave the candidates the opportunity to see many different ways of accomplishing the same goal - developing the potential of all students. While meeting standards is becoming more and more important, do not give up! With a little thought and hard work teacher education programs can provide their candidates with diverse opportunities that will benefit students for many years to come.

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The Agricultural Education Magazine - 2006 Themes

The focus of The Magazine is to be a “hands-on,” practical approach journal. Articles should share specific steps one can take to make teaching and learning in and about agriculture more efficient, enjoyable, and effective. The best articles for The Magazine are ones that have a clear point and share practices that can be used in the “real world” of teaching agriculture.

January – February 2006

Motivating Students to Learn

How do you as a teacher make the classroom come alive? This issue of The Magazine will focus on helping teachers motivate learners. Questions such: How do I get students excited about learning?, How does one motivate students using brain based learning models? and, How do teachers keep up their energy in an effort to keep the classroom motivation going?, will be answered.

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Due to Theme Editor: November 15, 2005
Due to Editor: December 1, 2005

March – April 2006

Developing Students for Careers

What careers should agricultural education be focused upon? How does a teacher of agriculture, at any level, prepare students for the selected careers? What steps are incurred in developing students for their chosen careers? How does the teacher involve the community and connect to the

community in the preparation of students for various agricultural careers?

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Due to Theme Editor: January 15, 2006
Due to Editor: February 1, 2006

May – June 2006

Thinking Critically

What does it mean to think critically? What does it mean to involve students in thinking critically? How does the teacher know when optimum critical thinking has occurred? What are some strategies to use to engage students in critical thinking?

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Due to Theme Editor: March 15, 2006
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July - August 2006

Enhancing Diversity

This issue will look at the issue of diversity in a global perspective. Why does agricultural education need to diversify its programs? Is the concept of urbanizing agricultural education programs now at the forefront of the profession? What different ways of knowing related to culture, gender, and place of living? How does one build a sense of belonging in students?

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Due to Theme Editor: May 15, 2006

Due to Editor: June 1, 2006

September - October 2006

Developing Professionals

What does it mean to be a professional? Why should one belong to professional organizations? How does one mentor student teacher and first year teachers? What is the responsibility of first year teachers related to their professional development?

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Due to Theme Editor: July 15, 2006
Due to Editor: August 1, 2006

November – December 2006

Reflections and the Future

This will be a unique issue. The authors for this issue will be by invitation only. The authors will come from amongst the retired agricultural educators across America. The essence is for the retired agricultural educators to reflect on the past, and provide some wisdom for what the current profession should be doing. How should lessons from the past drive our profession today? What ought to be the foundation of agricultural education? What would I do different today if I could do it all over again?

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2006 Themes

