The Agricultural
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MAGAZINE

September–October 1997
volume 70
issue 2

Focus on Student Teaching

- Student Teaching: The Magic Transformation?
- 1998 Issue Themes
- The Decision to Become an Agriculture Teacher
- Student Teaching/Professional Development: A New Twist
- Book Review: Introduction to Landscaping Design

Editor's Comments

Student Teaching: What a Great Experience, When It Works!

By Lou E. Riesenberg

Dr. Riesenberg is professor and head of the department of agricultural and extension education, University of Idaho, Moscow.

The professional semester in agricultural education is designed as the culminating or capstone experience for those who have prepared to become secondary agricultural educators. The professional semester is intended to bridge the gap from the world of academic experience to the world of experience as a professional. Obviously, the professional semester does not stand alone in developing a quality instructor. Becoming an instructor does not happen accidentally or overnight. Among other things, many professional semesters begin with one week of early field experience at the secondary school where the student instructor will teach later in the semester. The early field experience is followed by seven to eight weeks on campus, student teaching for ten to twelve weeks, and finally a wrap-up session on campus.

The purpose of early field experience is to provide a school setting context for the student instructor. Specifically, the student instructor becomes familiar with the students, program, school and community. Additionally, the student instructor becomes familiar with the curricular focus, determines what he/she will be teaching during the student teaching experience, and completes two or three days of actual teaching in a class with which he/she feels comfortable. The early field experience is an integral component of the professional semester in that it gives the student instructors an opportunity to understand and develop some of the context in which they will be studying and working. The early field experience is critical to the concentrated seven weeks of study in the formal classes prior to the student teaching experience. During the early field experience, the student instructors have an opportunity to visit and observe the sites at which they will later be teaching.

It is extremely important that the university supervisor, the cooperating instructor and the student instructor work together as a team. Clear and precise communication between all parties is essential to ensure that the learning experience for the student instructor is maximized. The actual student teaching experience is perhaps the single most important activity of the instructor preparation program. The student instructor will look to the cooperating instructor as a model of exemplary teaching. The final part of the professional semester is spent on campus in a structured and deliberate wrap-up or debriefing session. The debriefing session provides an opportunity for each student instructor to reflect on their experience. To facilitate reflection, questions such as the following are asked of the student instructors. "Now that you have completed ten weeks of classroom experience, what do you believe about: lesson planning and preparation, classroom management and discipline, and student motivation."

The student teaching experience places the student instructor in a situation where he/she cannot avoid the problems and/or tasks presented. In addition, since the student instructors cannot be prepared for each and every situation they may encounter, student teaching will most assuredly require additional new skills or the use of new knowledge. The student teaching component of the professional semester provides the student instructor with significantly greater responsibility than many other learning experiences. While university faculty do everything possible to prevent failure on the part of the student instructor, the possibility for failure does indeed exist, and it is a possible and viable outcome. However, in planning the professional semester, the faculty have spent significant time and effort in matching the student instructor and his/her capabilities with the problems and tasks that may exist at a particular student teaching center, including the style of teaching and personality of the cooperating instructor.

Throughout the student teaching experience support and feedback are constant, both from the cooperating instructor and the university faculty. The procedures for reporting progress during the student teaching experience are designed to require interaction between the student instructor and the cooperating instructor at least once a week for

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Dr. Dennis Scanlon, professor of agricultural and extension education at The Pennsylvania State University, accompanies the 1997 student teaching class on their annual professional tour of Washington D.C. Here the group is photographed in front of the National FFA Center in Alexandria, Va. (Photo courtesy of M. Susie Washington.)

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Theme Editor's Comments

Student Teaching: The Magic Transformation?

By M. Susie Whittington

Dr. Whittington is an assistant professor of agricultural education, The Pennsylvania State University, University Park.

Pre-Student Teaching

I remember it well—the excitement leading up to that wonderful quarter when I wouldn't have to sit in lectures and take notes, when I would have a car of my own for the first time in my whole life, when real students would listen to those lesson plans L.H. Newcomb made me write, and when something magical would happen to transform me into a "teacher" after 17 years of being a student. I couldn't wait!

Day 1, Student Teaching

I remember it well—I learned that during the previous week, a student had started a fire in the 6-month-old laboratory facility causing many dollars worth of damage and a temporary relocation of lab classes. I discovered that my cooperating teacher was in the midst of a law suit against one of his students who had attacked him with a hammer. I found that the students had no idea I was coming, did not know who I was or why I was there—and didn't really care about either. Welcome to student teaching!!

Mid-Student Teaching

I remember it well—but not fondly. In fact, it was student teaching that caused me to question, for the first time ever, if I really had what it took to be a teacher.

Post-Student Teaching

I remember it well—thank goodness for my cooperating teacher who had 20 years of teaching experience, never missed a day of my student teaching, taught from a well-developed curriculum, and told me that having a teaching partner brightened some of those gloomy winter days. Thanks also for a university supervisor who came to observe me regularly, offered immediate, valuable feedback, supported me with confidence-building phone calls, and encouraged development of my "teacher skills."

Both my cooperating teacher and my university supervisor were active and integral components of my highly educational capstone experience; neither could have been absent from the "total student teaching!" I received.

> *"I remember it well–student teaching was when something magical would happen to transform me into a "teacher" after 17 years of being a student."*

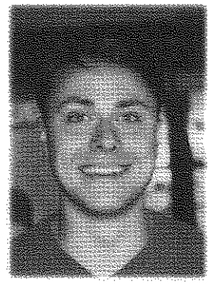
This issue of *The Agricultural Education Magazine* is dedicated to the preservation of quality student teaching experiences that have come to be a tradition in agricultural education. And who better to make the dedication than the recipients of those experiences—our student teachers. Travel through a student teaching experience with James Perey in Arizona, live in the residential "classroom with a blue ceiling and green floor" with Jessica Naugle in Pennsylvania, take some advice from Lynn Weismiller in Indiana who captured the thoughts of her student teaching class and then made recommendations for future student teachers. And finally, don't miss the excitement in the voice of Dan Cherrie as he leads us through his decision to "become an agriculture teacher!"

Preparing Student Teachers

I remember it well—teaching them to plan lessons, encouraging their creativity, introducing them to their cooperating teachers, contending with their anxieties, coping with stress, discovering their strengths, helping them overcome self-doubts, observing as student teachers become (surprisingly to them) emotionally attached to their students—that magic transformation to "teacher"—I remember it well!

Theme Article

The Decision To Become An Agriculture Teacher



By Dan Cherrie

Mr. Cherrie is a student teacher, The Pennsylvania State University, University Park.

It all began last April. I had just finished scheduling classes for the last time in my college career. I was excited about graduating in December and finally getting the opportunity to apply my education working in the agricultural industry. Actually, I was extremely excited at finally seeing the end of the "college tunnel" after four years.

Don't get me wrong. I have loved the college experience and am thankful to have had the opportunity to be graduating from the Agricultural Systems Management (ASM) program at Penn State. But, I was more than ready to get out into the "real" world.

Even through all of the anticipation of graduating in a few short months, something was missing. I guess it goes back to high school when more than one of my teachers constantly told me they thought I would make an excellent teacher. At the time, I thought they were crazy. I didn't think I had the patience or ambition to be a teacher. I wanted something technical and high paying. So I chose to major in ASM with an emphasis in food processing engineering.

Planting the Seed

Wouldn't you know it, after four years in the program, and only six credits from graduation, I was helping a college friend with a linear regression problem when he planted the teaching bug in my ear again. "Did you ever think about being a teacher?" he asked. Since he was pursuing an agricultural education degree, our conversation turned from linear regression to, "It may not take much extra time for you to certify."

Over the next few weeks I went back and forth over the idea. I was so close to being done. But like I said, I knew something was missing. So I decided to talk to an advisor. After an hour with an advisor, I knew teaching was in my future. Just like that, I went from six credits to graduate in December, to 22 credits from graduation the following May.

Cultivating the Idea

At the beginning of the next semester, I must admit, I was a bit apprehensive about my decision. My greatest concern was that my exposure to agriculture was very limited. In high school, I was in the "academic track" and knew nothing about agriculture or the FFA. I had thought that agriculture students were down there learning about cows and plows.

It has been through that earlier talk with my advisor, the last fifteen weeks in the agricultural education program, and the ASM major, that I have formed such a favorable impression about what agricultural education has to offer to young kids. I have found that agricultural education is so far removed from my previous notion that I find myself regretting not taking advantage of my high school's agriculture program (which I now know is one of the finest in Pennsylvania!).

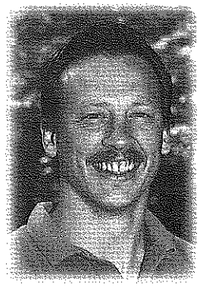
One of my priorities as an agriculture teacher will be to get the word out and inform kids about what agriculture has to offer. From what I have seen of agriculture students this semester, they are some of the most well-rounded, polite and friendly high school students I have ever met.

As a capstone to my final semester in pre-service agricultural education, I attended the national FFA convention. I left there thoroughly impressed at what the FFA does to and for students. I couldn't believe that college students were running the entire conference. I also couldn't believe the energy, excitement and enthusiasm the members demonstrated toward the FFA, their chapters and their teachers. The students took great pride in their accomplishments and they let everyone know it. The officers running the sessions possessed the poise, composure and stage presence of well-trained professional speakers. What amazed me even more was that they were all younger than twenty years old. I left the conference in complete amazement and with nothing but praise for the FFA. If only I had taken the opportunity to be a part of it in high school.

So here I am, only a student teaching experience away from being certified to teach high school agriculture and have nothing but positive impressions about agriculture students and the FFA. I am looking forward to what lies ahead for me in the realm of agricultural education. I made a great decision!

Theme Article

A Residential Student Teaching Experience in Environmental Education



By Fran Bires and Jessica Naugle

Mr. Bires is the director, McKeever Environmental Learning Center, Sandy Lake, PA, and Ms. Naugle is an agricultural education graduate, The Pennsylvania State University, University Park.

How in the world did I acquire such a unique opportunity? The chance to participate in Earthkeeper's, a three-day environmental education experience for 4th-6th graders at McKeever Environmental Learning Center.

I was enrolled in the College of Agricultural Sciences as an agricultural education major at The Pennsylvania State University. I chose an environmental science option in the field of study. Due to my choice, I was excited to student teach. Fortunately, my assigned site was the residential environmental education program at McKeever Center.

Non-Traditional Setting

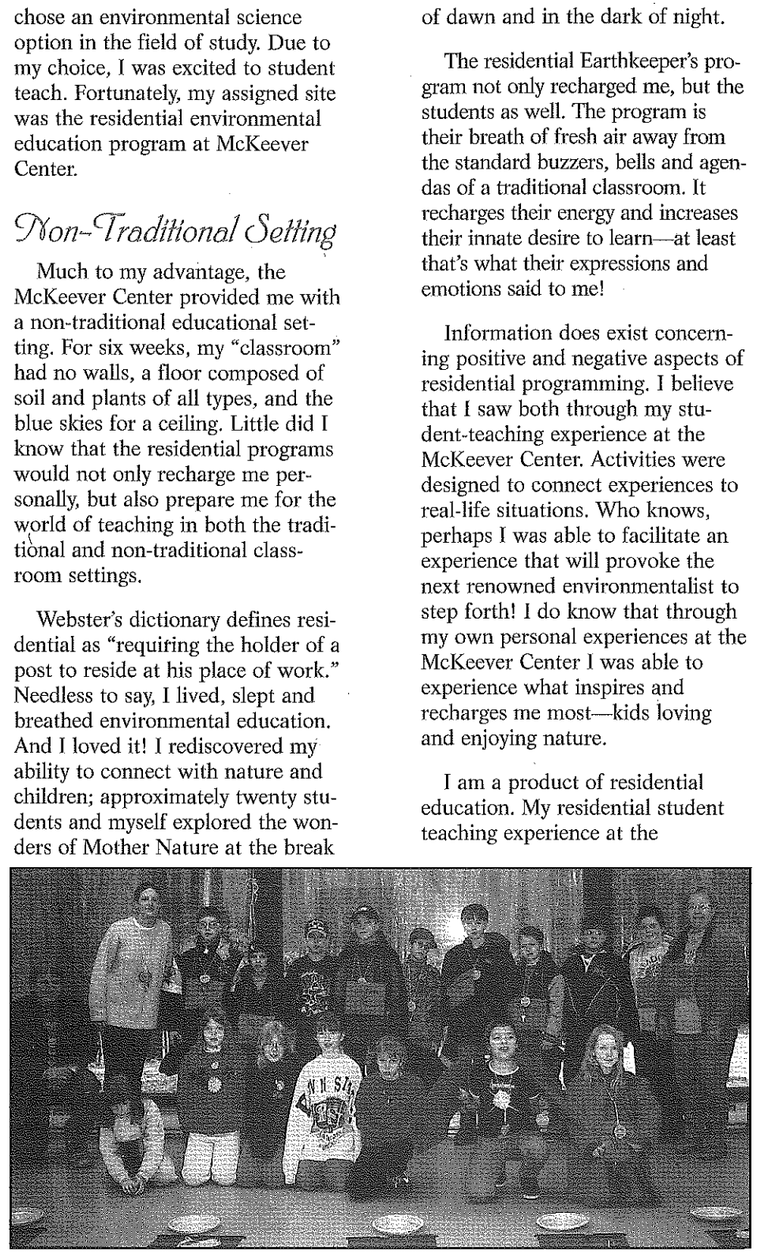
Much to my advantage, the McKeever Center provided me with a non-traditional educational setting. For six weeks, my "classroom" had no walls, a floor composed of soil and plants of all types, and the blue skies for a ceiling. Little did I know that the residential programs would not only recharge me personally, but also prepare me for the world of teaching in both the traditional and non-traditional classroom settings.

Webster's dictionary defines residential as "requiring the holder of a post to reside at his place of work." Needless to say, I lived, slept and breathed environmental education. And I loved it! I rediscovered my ability to connect with nature and children; approximately twenty students and myself explored the wonders of Mother Nature at the break of dawn and in the dark of night.

The residential Earthkeeper's program not only recharged me, but the students as well. The program is their breath of fresh air away from the standard buzzers, bells and agendas of a traditional classroom. It recharges their energy and increases their innate desire to learn—at least that's what their expressions and emotions said to me!

Information does exist concerning positive and negative aspects of residential programming. I believe that I saw both through my student-teaching experience at the McKeever Center. Activities were designed to connect experiences to real-life situations. Who knows, perhaps I was able to facilitate an experience that will provoke the next renowned environmentalist to step forth! I do know that through my own personal experiences at the McKeever Center I was able to experience what inspires and recharges me most—kids loving and enjoying nature.

I am a product of residential education. My residential student teaching experience at the McKeever Center was unique, special and will always be my first positive professional experience.



Ms. Naugle and a group of her students at the McKeever Center. (Photo courtesy of Jessica Naugle.)

"Recharging with Residential Environmental (Earth) Education"

IF YOU ARE: 10-12 years old

AND CAN SPEND: Two-and-one-half days (or more)

AT: Your local outdoor center

IN: Any season

AND IF YOU CAN BRING: Teachers and parents to help

THEN: You can become an Apprentice Earthkeeper

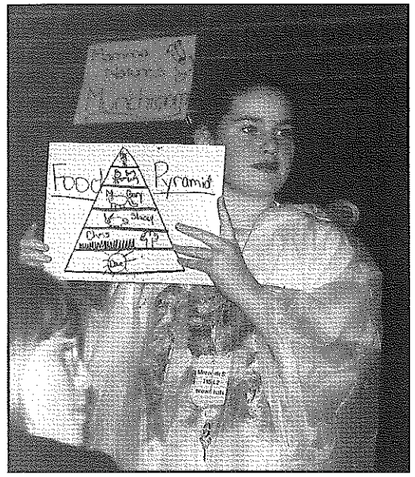
REMEMBER, THOUGH: A full half of the program takes place back at your home and school.

Thanks to my cooperating teacher and many other environmental educators, hundreds of 10-12 year olds were organized to spend three days at the McKeever Environmental Learning Center in the spring of 1997. Luckily, I was one of the nine "trainers" or prospective teachers ready to assist and facilitate these eager students!

Each school year, the McKeever Environmental Learning Center works closely with more than 50 student teachers who are completing a part of their student teaching at the center. These students generally come from Pennsylvania's State System of Higher Education universities as well as The Pennsylvania State University and other colleges from around the country. Student teachers are pursuing degrees in a variety of fields, including elementary education, environmental education, early childhood, agricultural education and related fields of study in biology, science and environmental studies.

Student Teaching

This residential experience coupled with eight weeks of student teaching in a formal classroom setting provides students with a wealth of experience, not only working with elementary students, but being involved with teaching environmental education.



A rainy day at McKeever meant "flex-time" for the student teacher to move to plan B - the food pyramid. (Photo courtesy of Jessica Naugle.)

Each student teacher is supervised by a cooperating teacher (environmental educator) from the McKeever Center as well as a university supervisor from their respective university. The cooperating teacher works very closely with each student teacher, providing feedback and guidance each week. The university supervisor visits the student teacher periodically throughout the eight weeks and also provides feedback on his/her performance.

After being trained in the educational programs that are offered at the McKeever Center, student teachers are given the opportunity to work directly with elementary students from a variety of settings, including rural, suburban and urban environments. In an average eight-week period, student teachers can work with as many as 10-15 school districts.

Throughout their placement, student teachers develop many positive teaching skills, strategies and techniques. A big part of student teaching at the McKeever Center is aimed at "how" to teach using effective communication skills, being able to motivate your learners and incorporating appropriate teacher behaviors into each lesson.

In the end, each student teacher has undergone an intense but extremely rewarding experience. Since most of the educational programs are residential, teaching continues beyond the end of the typical school day. For example, lessons are taught in the dining hall to reinforce the philosophy of the program; skits are performed, clues are given to the next mystery passenger, and students weigh wasted food at their tables and then chart the waste on a graph. The wasted food is then taken out to the compost park where students see firsthand the steps involved in making compost. The compost is used on the raised beds surrounding the dining hall

Tuck Time

After supper, student teachers might be teaching an evening activity that centers on a number of topics. After the school teachers prepare the students for bed time, student teachers alternate reading a story to a group of students. We call this "tuck time" which provides an opportunity for the school students to settle down after a very busy day with the reading of an appropriate book with an environmental message.

During their stay, student teachers will have worked closely with student teachers from other universities, forming a cohesive team where cooperation is a must. Together, this team instructs elementary school students from a wide range of school settings.

Curricula Exposure

Student teachers also gain valuable insight on environmental edu-

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Theme Article

Now That I Am Older and Wiser:

Student Teaching Expectations, Myths and Facts

By James Perey, Jack F. Elliot and Billye B. Foster

Mr. Perey is an agriculture teacher, Antelope, AZ, Dr. Elliot is an associate professor and Dr. Foster is an assistant professor of agricultural education, University of Arizona, Tuscon.

There I was surrounded by unfriendly young people. To the right and left young men and women armed with pencils, paper and razor-sharp minds kept an eye on me. I was alone and spoke very little of their language. Was I going to make it out alive? I did not know, but I was there to accomplish a task, to teach. I reached below very softly and pulled the object out. They were silent, all eyes and ears on me, slowly one by one their weapons turned away from me. Then it began with a question, "Who can tell me what this is and how it relates to today's lesson?" First one hand then another, soon a flurry of questions and responses. I was saved and would live to teach another day.

This is exactly how I felt the first day in the classroom. I thought I knew what to expect and was prepared for anything. How wrong I was. This would be the first of many truths I would learn during my student teaching experience.

Choosing the Right Vessel

I thought I knew exactly where I wanted to student teach. It was a program where I could build or strengthen skills I was lacking. After talking to my father, who taught agricultural education some years ago, and visiting with the faculty at the University of Arizona, I realized it was more important that I go where I could learn how to teach; everything else would follow.

Preparation for the New World

How many hours did we spend in the classroom discussing methods and philosophies? How many late nights developing lesson plans and gathering realia when it seemed we would never be done? It was very difficult seeing how the whole picture would fit together and how everything we were learning would be applied. Knowing what tends to work best for people with a wide range of learning styles, the faculty at the University of Arizona used a proven approach. They would first hook us, either with a story or with realia, then we would talk about objectives, then questions for study, then conclusions. We would bring them together to form lesson plans and eventually, units. We learned both the "how" and the "why" of what we were doing, each being an important component to understanding the whole picture. It was a step-by-step process that was articulated to ensure we not only succeeded, but that we progressed. Another key step in the process was supervised practice. Before we had even disembarked for our cooperating centers, we micro-taught most of our lessons and even taught lessons in the field for existing programs, all of which helped prepare us for the journey ahead.

Supervised Exploration

What a wonderful experience, being paired with John Mulcahy at Peoria High School. With guidance and encouragement I grew from a student teacher to a teacher. Instead of being told how I should do it, John and I would sit down and he would ask me how I intended to teach the lesson. John would then make a few suggestions and we would go from there. Once the lesson had been delivered, we would meet again and he would ask me five important questions.

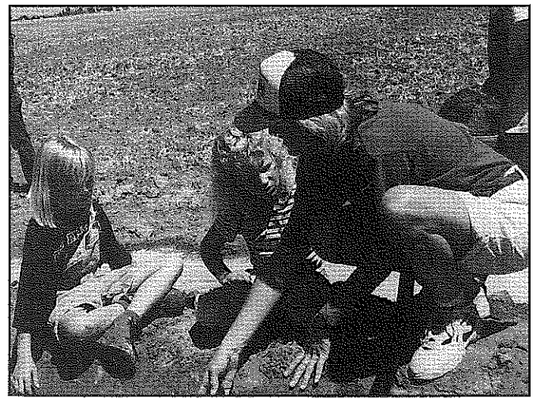
- What went well?
- What could go better?
- What would I do differently next time?
- How much learning took place?
- How do we continue to maintain the interest of the MTV generation?

This process of teaching and then evaluating proved most effective. I not only developed my own style of delivery, but learned to self evaluate, which I believe is a key component if we want to continue to be effective in the classroom. Seven suggestions I found as keys to success:

- Greet students outside of the classroom and ask how they are doing.
- Start off with a 1-2 minute story while role is being taken.
- Present the day's problem and demonstrate that they need what you have to solve the problem.
- Use realia!!!!!!!!!!!!
- Use the probing questioning technique—DON'T JUST GIVE THEM THE ANSWERS!
- Move around the room!
- Tie everything together with a conclusion that sticks!

The Awakening

After having been there for a while some myths were exposed and some real truths came to the surface. Having had an agriculture teacher as a father (and not a father who was an agriculture teacher), I thought I knew just what to expect. To my surprise there were many things that weren't known to me. I was not there just to spew forth my grand knowledge of agriculture, but to play many roles. Students may dress different today and listen to different music, but they still have the same needs as the students who went before them. Who would have thought that I would become educator, foster parent, confidant and counselor to many of them? I REALIZED it's not just about teaching agriculture, it's about teaching students.



Ann Pottinger teaches second graders how to siphon water for irrigation. (Photo courtesy of James Perey.)

Mr. Perey excites second graders about where their food comes from. (Photo courtesy of James Perey.)

Concerns

Of all the many components of teaching, one bothered my classmates and myself the most, this was the issue of classroom management or discipline. How do we modify behavior? I was the type of person who was raised on praise; growing up I was encouraged and rewarded for jobs well done. This was a motivating factor for me and I learned to appreciate and work for those who had a kind word. Having also been in the military, I saw a another type of motivation that may have gotten the job done, but was rooted in fear—the greater motivating factor was praise.

Praise is the ounce of prevention for the pound of discipline. Through praise, loyalty is developed; John Mulcahy helped greatly in this. His students did anything for him, not because they had to, but because they wanted to—it was loyalty. Once established, discipline problems take care of themselves.

Reflections

One thing I learned at the mid-semester seminar was that I was experiencing the same concerns as my classmates. The great thing was that we were able to hear how each of us had dealt with the problems, thus finding new ways of approaching different situations. We also discovered that networking was an important key to a successful and less stressful program. Finally, we realized that once you're there for a couple of weeks, you are able to shift your sleep pattern and revive what was left of your pathetic social life (which usually consisted of watching a rented video at home while grading papers).

My days consisted of these events.

- Arrived at school at 6:00 a.m.
- Made sure all materials for all classes were ready.
- Started classes at 7:20 a.m.
- First hour—landscape management (supervise construction of Peoria's turf facility [golf course])
- Second hour—work with students who could miss second

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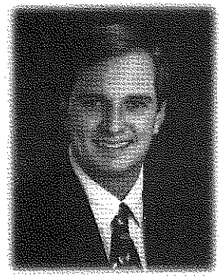
Theme Article

Student Teaching: A Key Link in the Preparation of Future Agriculture Teachers



By James J. Connors and John P. Mundt

Dr. Connors is an assistant professor of agricultural and extension education, University of Idaho, Moscow, and Dr. Mundt is an associate professor of agricultural and extension education, University of Idaho, Boise Center.

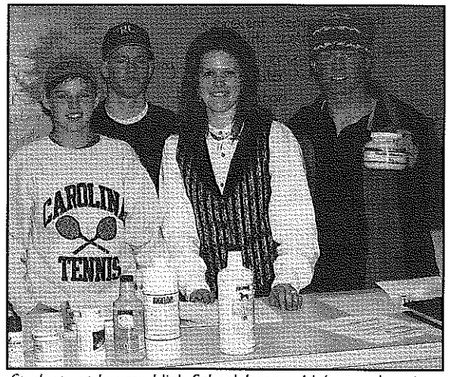
Within the last year, the agricultural education profession has increased its efforts to recruit more students into agricultural education. Each state has experienced a shortage of qualified agricultural education graduates to fill the vacancies left from retirements, relocations and career changes. Teacher education programs in agriculture have been revised and teacher educators are actively recruiting new freshmen, transfer students, double-majors and mid-career professionals seeking new challenges in agricultural education.

As these new students complete their collegiate studies, teacher educators must be constantly concerned with the best way to prepare them for their future careers as agriculture teachers. To rush students through their academic studies without giving them the tools and skills needed to be successful agriculture teachers is unwise. What are the best methods to use to prepare future agriculture teachers? What should be taught in methods courses? How important is the student teaching experience? These are just a few questions that should be addressed by teacher educators and cooperating agriculture teachers to ensure that future teachers are well prepared and ready to assume the responsibilities of a secondary agriculture teacher.

One of the first references to "student teaching" for future agriculture instructors can be found in the Smith-Hughes Act of 1917 (Schmidt, 1924). Section 12 of the Smith-Hughes Act reads in part:

"That in order for any State to receive the benefits of the appropriation in this Act for the training of teachers, supervisors, or directors of agricultural subjects...the State Board of such State shall provide in its plan for training...that such training shall be given in schools or classes under public supervision or control..."

In 1940, an article in *The Agricultural Education Magazine* titled "Learning by Living: A Problem in Teacher Education" (Stewart, 1940), outlined basic problems faced in preparing future teachers. Stewart stated that "teaching must be real. It must be centered in people. The teacher must know the people, the conditions under which people live, the agricultural resources of the area and the economic and social organizations of the community" (Stewart, 1940, pg. 123). This is one aspect of teaching agriculture that cannot be replicated in a university classroom. Future teachers must experience these real-life situations while student teaching.



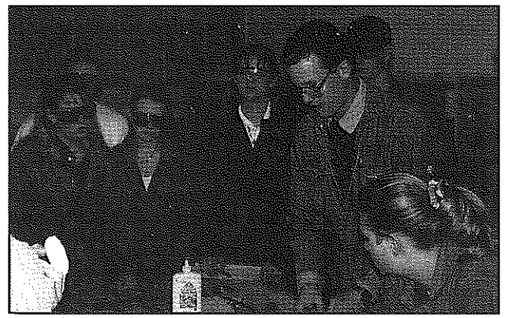
Students at Jerome High School, Jerome, Idaho, are learning equine science under the direction of student teacher Brandi Bott. (Photo courtesy of John P. Mundt.)

Another problem identified by Stewart (1940) was placement of student teachers. Stewart stated that "teacher education must regard placement as basic to objectives, as basic to curriculum and course-making, and as basic to one's philosophy of vocational education. It is a substantial and motivating force in learning. To make teacher education real, the teacher trainer must deal in the realities of employment (pg. 123)."

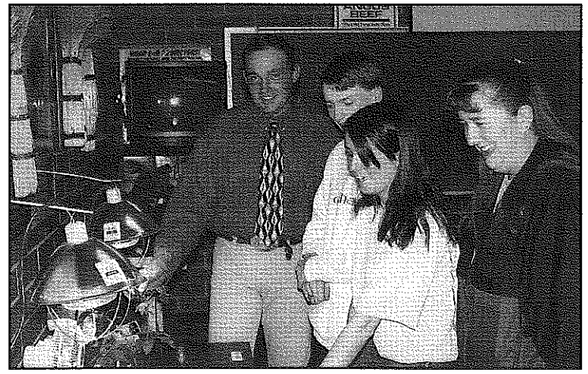
The benefits of student teaching for future agriculture instructors is also espoused by Cook in his *Handbook of Teaching Vocational Agriculture* (Cook, 1947). Cook wrote, "a part of this professional training is done in a directed teaching center under a qualified teacher of vocational agriculture...at least three months of teaching on the job in a well-equipped, directed teaching center under one of the best teachers of vocational agriculture in the state should be provided."

During the spring of 1997, agricultural education majors at the University of Idaho and Washington State University completed a survey to determine their preparation for student teaching. The students then completed the same survey at the completion of their student teaching experience. The study was divided into six sections: program planning, instruction, agricultural mechanics, SAE programs, professional activities, and FFA. The student teachers indicated their ability to plan a program to achieve individual educational goals and their ability to organize advisory councils improved as a result of student teaching.

While student teachers indicated that their experience improved their use of different methods of teaching, they did admit that they felt less confident in applying interest approaches during a lesson, involving students in the teaching-learning process, using leading questions, and summarizing a lesson. Other skills that improved as a result of the student teaching experience include using the computerized SAE record book, performing the duties of an FFA advisor, demonstrating parliamentary procedure skills, and preparing members for career development events.



Kurt Melville is practicing in class, hands-on experiences during his student teaching experience at Fruitland High School, Fruitland, Idaho. (Photo courtesy of John P. Mundt.)



Student teacher Jason Tindall is shown here with his students in the classroom at Meridian High School, Meridian, Idaho. (Photo courtesy of John P. Mundt.)

Obviously, student teaching is a key link in the preparation of future secondary agriculture teachers. But while student teaching helps to improve the professional skills of future teachers, it also indicates areas of the teacher preparation process that need improvement. The student teaching experience should not be viewed as the conclusion to the students' preparation, but one step in a continual learning process. Students who return from student teaching should be debriefed to determine areas in which they still need assistance. Teacher educators should continually assist new teachers by offering advanced methods courses to pick up where the student teaching experience ended. As we all know, learning does not stop when a student receives a bachelor's degree.

Teacher educators and secondary agriculture teachers must work together to continually revise and improve the student teaching experience. Teacher educators, state supervisors of agricultural education, and state agricultural teacher association officers should cooperate to develop criteria for selecting cooperating teachers and student teaching sites. This criteria should outline the qualifications needed by potential cooperating teachers and the programmatic components such as facilities, equipment and the FFA chapter of potential student teaching sites.

As the agricultural education profession moves into the new century, we must constantly improve on how new agriculture teachers are prepared. While the traditional 10 to 15 weeks of student teaching will continue to be the cornerstone of pre-service education for agricultural teachers, it must be revised regularly to meet the ever-changing demands on tomorrow's secondary agriculture teachers. Student teaching should be seen as just one step in a process that begins with the recruitment process, gains momentum during the undergraduate education, reaches a peak during student teaching, and then continues with the in-service education for new, as well as experienced, agriculture teachers. It has been said that "education adds life to your years." Student teaching is only one step in the life-long education of tomorrow's agriculture teachers.

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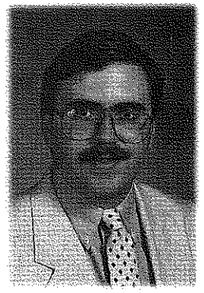
Theme Article

Positive Experiences and Problems Encountered During Student Teaching



By Kirk A. Swortzel and Lynn Weismiller

Dr. Swortzel is an assistant professor of agricultural education, Auburn University, and Ms. Weismiller is an agricultural science/business teacher, Oak Hill High School, Converse, IN.

Pre-service students look forward to student teaching. Finally, a time when the student teacher can put into practice the knowledge and skills learned from their college classes. Student teaching can be rewarding for some student teachers and difficult for others. In fact, some student teachers who enter the experience with doubts about the teaching profession will apply and interview for teaching positions because student teaching was a wonderful, positive experience. Other student teachers may encounter problems that make them reconsider entering the teaching profession.

This spring, I had the opportunity to coordinate the student teaching program and supervise five student teachers at Purdue University. These student teachers engaged in many positive activities during their 10-week student teaching experiences. They also encountered some problems from which they learned and grew professionally as they sought to decide if they should enter the teaching profession. At our final student teaching meeting, all student teachers shared the positive experiences and problems they encountered while student teaching. I asked one of my student teachers, Lynn Weismiller, who is now an agricultural science and business teacher at Oak Hill High School, to summarize and share the positive experiences and problems she and her fellow student teachers encountered.

Positive Experiences

Student teaching holds many positive and negative experiences that will influence pre-service students' opinions about whether a teaching career is the appropriate path in their lives. Throughout the ten-week student teaching period, my peers and I experienced many challenges and rewards that we all learned from and will remember as we enter the teaching profession this school year.

Many of us quickly learned that the key to having a positive student teaching experience was to stay prepared and well-organized. Through planning our lessons in advance and incorporating a variety of hands-on learning activities, it was easy to keep our students interested in what we were teaching and, in return, prevent potential discipline problems. In one instance, one of us had a student who had been labeled as a "problem" student by other teachers in the school. This young man had been uncooperative in other classes and showed no desire to learn. The student teacher realized that he would be one of the biggest challenges throughout student teaching. The student teacher specifically designed hands-on activities to involve the entire class including the "problem" student, in the lessons. The student teacher took extra time to recognize the things the student had done correctly in class and provided positive reinforcement to encourage him to continue to do his best in class. Through careful planning and positive reinforcement, the student teacher was able to see a positive change in both the student's academic performance and his attitude toward learning.

Student teachers also found it positive to work with the special needs teacher. Many of us had very limited knowledge and experiences in working with disadvantaged or special needs students. Yet, many student teachers had up to half of their class identified as special needs students. This meant selecting learning activities which special needs students could use as well as writing tests and quizzes that they could understand. Meeting with the special needs teacher allowed us to see how we should plan learning activities and prepare evaluations that were fair for these students. This also gave student teachers the opportunity to work closely with another experienced teacher to gain new ideas and activities to use in the classroom.

Another positive experience in which many of my peers engaged during student teaching was creating a mentor/mentee relationship with their supervising teacher(s). This relationship allowed us to freely discuss problems or concerns with an individual who had at one time shared a similar experience. Some supervising teachers would stay at school until 8:00 or 9:00 p.m. talking to us about our teaching and serving as sounding boards when we felt that we were having problems in the classroom. The hours our supervising teachers spent were beneficial and provided a true learning experience.

All student teachers had the opportunity to work with the FFA chapter at their student teaching site. Since some student teachers had not taken high school agriculture classes or participated in FFA activities, this allowed them to work with students on a variety of career development events and leadership contests. Student teachers not only had the opportunity to work closely with the students, but with the parents as well. Many of us developed lasting, cordial relationships with students and parents. The trust both students and their parents placed in us as we worked with these individuals on a variety of projects increased our confidence in our teaching ability.

Problems During Student Teaching

Although there were many positives, we also encountered many growing experiences or problems. Some student teachers experienced frustration with discipline problems and the procedures followed by school administrators in handling these problems. We were expected to be the "teacher" during student teaching, yet we never really had complete power when it came to disciplining students. Although the number of students we sent to school administrators for disciplinary reasons was relatively small, there were instances when the school administrator chose not to support our decisions.

> *"Student teachers also found it positive to work with the special needs teacher."*

Some student teachers experienced anxiety due to large class numbers and large laboratory classes. Large numbers of students in laboratory classes created confusion in students understanding what they were supposed to be doing, concerns for the safety of students and problems in maintaining discipline with adequate supervision.

Many student teachers also experienced problems with specific students creating distractions, leading to a negative classroom environment. We became frustrated, yet challenged, to recapture the interest of our students and to help them become involved in the learning process.

Another problem some student teachers faced was being too soft in how we disciplined students. Some of us were too lenient in disciplining students when the student teaching experience began and found it difficult to enforce classroom rules. If we had started from day one of our student teaching enforcing the classroom rules, we would have not faced many of the problems that we encountered. Although these experiences are "negative," many of my peers as well as myself felt that they were positive learning experiences and would help us improve our teaching skills.

Recommendations

As pre-service students think about their student teaching experience, there are many ideas we would recommend to help make student teaching truly a positive experience.

- Develop a positive relationship with your supervising teachers. These people will be your mentors and will be able to share their wisdom with you as you face the problems of student teaching. Talk to your supervising teacher early and often to help prevent potential problems in student teaching.
- Get to know other teachers at your student teaching site. The student teachers will be working with a number of teachers in other disciplines who teach some of the same students. Discuss with these teachers how they deal with problems.
- Be firm in disciplining students. Start the first day being firm, but fair, when dealing with discipline problems. It is always better to start off firm and then ease up than to attempt to clamp down midway through student teaching.
- Be prepared and organized before beginning student teaching. Find out from the supervising teacher in advance the lessons that will be taught and prepare as many lesson plans as possible before going to student teach.
- Get to know the community. Visit local businesses and meet the parents of students. The businesses and people can be a great asset to students on projects and career development events.
- Have a meeting of teacher educators, student teachers and supervising teachers before student teaching begins. This way everyone knows what is expected of all parties involved in the student teaching process.

Feature Article

New Directions for The Agricultural Education Magazine

By Gary E. Moore

Dr. Moore is a professor of agricultural and extension education, North Carolina State University, Raleigh and is the next editor of The Agricultural Education Magazine.

In preparing for the next three years as editor, I am asking for your help and support in supplying articles and information. There will be several new features and columns. The following describes what to expect in 1998. You are cordially invited to submit articles and information directly to me or to the appropriate editors.

The Soapbox

This new column in The Magazine will provide a forum for discussion of issues affecting agricultural education. Is there some issue on which you would like to speak? Do you have strong feelings about certain aspects of agricultural education? Are there things the profession should be thinking about? What is good in agricultural education? What needs to be improved? What would you like to see changed? You are encouraged to get on the soapbox and share your views. Columns are particularly sought from classroom teachers. The manuscript should be in the neighborhood of three, double-spaced pages.

Some sample soapbox topics might be:

- The leadership for agricultural education at the federal level should be in the USDA!
- Agricultural education is THE model for education reform!
- The problem-solving approach to teaching is passé!
- Students are more important than content!
- If we are honest, we'll have to admit SAE programs aren't worth the effort!
- Everything I needed to know wasn't learned in college (sorry about that, you teacher educators).
- The FFA needs to return to being an organization "of, by and for students"
- Is "Decisions and Dollars" appropriate for high school students?
- The best teacher I ever met was an agriculture teacher!
- Teachers need to get serious about the summer program!
- Agriculture teachers need to be more professional!

webmaster@agedmag.edu

This new column, which will be in each issue, will contain 5-10 World Wide Web sites teachers need to know about. Each issue will feature new URLs along with a brief description of the site. Sites related to technical agriculture content, teaching aids, clip art, agricultural equipment, lesson plans, agricultural publications, USDA, etc., will be featured. Two-to-three theme-related URLs will also be in each issue. We are depending on you to supply us with your favorite URLs. Please send URL addresses to our "Webmaster" editor:

Dr. Matt Raven
Department of Agricultural Education and Experimental Statistics
Box 9731
Mississippi State University
Mississippi State, MS 39762-973
phone: 601-325-3326 fax: 601-325-7832
e-mail: raven@ais.msstate.edu

Spotlight on Outstanding Programs

Each issue of The Magazine will spotlight an outstanding agricultural education program. You will learn what the top programs in the nation do and how they operate. It will be the next best thing to actually visiting the program. Please contact our Spotlight editor with nominations for programs that should be featured. The Spotlight editor is

Dr. Tracy Hoover
Agricultural Education and Communication
305 Rolfs Hall
University of Florida
Gainesville, FL 32611
phone: 352-392-0502 fax: 352-392-9585
e-mail: tsh@gnv.ifas.ufl.edu

Theme Articles

We will continue having themes but there will only be 3-5 articles in each issue addressing the theme. Other articles will address current events and emerging issues in agricultural education. If the particular theme for an issue doesn't interest you, there will be plenty of other articles and columns that should be of interest. The themes, deadlines, and theme editors for 1998 are printed in this issue on page 28 (the back cover).

Sound Off

This new column will feature the reactions of students and teachers to the theme of each issue. This column will occupy one page in The Magazine and will feature one-paragraph reactions from 5-6 individuals from throughout the nation. For example, on the topic of block scheduling, we'll probably ask three teachers and three students how they like block scheduling. If you would like to "sound off" about any of the themes, please contact Gary Moore (see contact information below).

Our Leadership in Agricultural Education

There will be occasional articles highlighting individuals who have provided leadership for the growth of agricultural education. This type of article first appeared in The Magazine in 1929 and featured Rufus Stimson. Scores of individuals have been highlighted over the years but none recently. These articles are valuable historical resources. If you have suggestions on who should be featured in this section please contact the "Our Leadership" editor:

Dr. John Hillison
Agricultural Education
68 Litton Reaves Hall
Virginia Tech
Blacksburg, VA 24061-0343
phone: 540-231-8187 fax: 540-231-3824
e-mail: hillison@vt.edu

Professional Development

A new regular feature will be titled "Professional Development." This column will feature news and information from the NVATA, The National Council for Agricultural Education, and the Policy Committee of the Agricultural Education Division of AVA.

Go to the Head of the Class

This established column will continue. Each issue will have a 10-15 question quiz about some aspect of agricultural education. Since the person responsible for this column in the past is the new editor of The Magazine, guest quizzers are invited to submit their tests to stump the profession.

General Articles

Articles of general interest to the profession are encouraged. Not all articles published must address the themes. You are welcome to submit other types of articles.

Joe Scatterscrew

The last new feature will be a humorous section called Joe Scatterscrew. In the distant past, poems, jokes and humorous quotes have been published in The Magazine. We will start publishing one short story in each issue about a fictitious agriculture teacher, Joe Scatterscrew. The former E. V. Walton of Texas A&M University wrote more than 20 Joe Scatterscrew stories. These stories will have you rolling on the floor. Even though the stories are fiction, they are based upon real teachers and students and do educate.

The readers of this Magazine are encouraged to share ideas, thoughts, and articles with the new editor:

Gary Moore
Department of Agricultural and Extension Education
Box 7607
North Carolina State University
Raleigh, NC 27695,
phone: 919-515-1756 fax: 919-515-9060
e-mail: gary_moore@ncsu.edu

Below are the answers to this issue's quiz.

1. D. Was a teacher educator who traveled from school to school working with agriculture teachers in their own classrooms.
2. A. Were required to have their selection approved by federal agricultural education officials.
3. C. Three.
4. B. Texas.
5. A. Competency-Based Teacher Education.
6. D. University of Idaho and Washington State University.
7. D. *A Handbook on Teaching Vocational Agriculture* by Cook.
8. B. Alpha Tau Alpha.
9. C. Problem solving.
10. C. Cornell, George Peabody College for Teachers, Columbia.

Student Teaching/Professional Development: A New Twist

By Lee Cole and Grant Tipton

Dr. Cole is a professor of agricultural education, Oregon State University, Corvallis, and Mr. Tipton is an associate professor, Western Baptist College, Salem, OR.

Teacher preparation has come under the same type of scrutiny as the K-12 system. Perhaps even more, because some would suggest that if teachers were well prepared we wouldn't be having the current difficulties in schools which have been the catalyst for educational reform.

Potential focal points for teacher preparation reform have been many. Changes regarding student-teaching activities have tended to focus on lengthening the time spent in the field. Other teacher preparation reform efforts have focused on the quality and quantity of technical preparation for teachers, especially those who teach at the high school level.

Where We've Come From

In the past (the 60's), student teaching was 9-10 weeks long and a student teacher received two to three on-site supervisor visits from the campus staff. Increases in time for student teaching have resulted in current Oregon standards of 15 weeks at the student teaching site with six on-site supervisory visits. In addition, pre-service secondary teachers in many states are being required to secure a baccalaureate degree in a cognate area before proceeding to a post-baccalaureate, or fifth-year teacher preparation program (Oregon State University is a Holmes Group School which requires a baccalaureate degree before starting teacher preparation).

There are concerns that the cost associated with changes prolonging the time required in college for students to become teachers before they start making a salary will reduce the number of potential teachers. Talented individuals who are willing to jump through all of the new hoops, yet face no better salary than starting teaching positions offer, may seek other employment opportunities. This may be especially true of agricultural education majors, given their training, and usual experience in applied agricultural/ environmental science.

Planning the Next Step

A commonly discussed next step to the evolution of student teaching in teacher preparation is a full year of student teaching. Costs to the student under the full-year student teaching model would most likely skyrocket. If the full-year model is divided—mornings at the teaching center, afternoons in pedagogy classes, then the total class contact time in student teaching will not increase significantly in comparison to the current 15-week full-time model. Pedagogy courses can be delivered on a distance delivery basis so proximity to campus is no longer the problem it would have been performing for the full-year half-time model; however, few other advantages accrue to this model to justify the additional costs of distance delivery pedagogy courses.

Thus, a new proposal has been put forth for consideration. The new proposal, referred to as an Early Entry Integrated Fifth Year Model, allows the student to incorporate the Initial (Beginning) Licensure Teacher Preparation component into their senior year (thus reducing student costs as compared to the Holmes model). It also provides additional classroom contact time during the student-teaching period and combines that with a full-year of on-site supervision during the first year of employment, which is also the first year of the required course work for receiving Continuing (Advanced) Licensure. Net result, the beginning professional has one-and-one-half years of teaching with on-site direct supervision, but the up-front costs to students (those incurred before employment) are reduced.

A New Idea

The system would work as follows. During the senior year, a student would begin field placement (student teaching) in late August and work through late September for five weeks. This part of the experience provides for supervised FFA/SAE activities, experiencing local high school teacher in-service at the start of the year, and getting classes underway for the year (the classroom control strategy and instructional planning/ organization of the mentor teacher plus opportunity to teach). Fall quarter provides opportunity for the teacher preparation student to take courses on campus, selecting from technical agricultural coursework and support related to student teaching to electives. During a combined winter/spring term (Oregon State is on a quarter system with each quarter 10 weeks long), four weeks of intensive pedagogy will be provided in methods, micro-teaching, program organization, and FFA/applied research. The remaining six weeks of winter quarter are then spent at the student teaching site. Spring break at the State FFA Convention becomes part of the assignment. Student teaching then continues for an additional six weeks. The last four weeks of Spring term contain concentrated pedagogy in curriculum, program evaluation, counseling/career decision making, FFA advisorship and portfolio development. The two-term combination would look like the chart below.

The student would graduate at the end of spring term, be granted initial licensure and take employment in teaching. During the first full-year of employment, the new teacher would have supervision in an advanced teaching internship during fall term from OSU staff, during winter term from an FFA district master teacher, and during spring term from a science teacher in the employing school district. During all three terms of beginning teachers' first year, they would receive assistance with classroom methodology and classroom control. The three supervisors would provide assistance from three different perspectives. In addition, each supervisor would bring specialization as follows: The OSU supervisor would bring additional focus on curriculum and program development; the FFA master teacher on FFA; and the science teacher on a science integration project for the agricultural program. All non-university supervisors would be prepared through a seminar to supervise and would be paid a supervision stipend.

The full year of advanced teaching internship described above would be part of the credits a new teacher would need to move toward advanced licensure. Teachers would thus have direct contact with persons designated as helpers—not evaluators—for the entire first year of teaching.

The concept of the advanced teaching internship should not be mistaken to be a spin-off of the Educational Testing Services Praxis III: Classroom Performance Assessments Model. As noted above, the three supervisors of the advanced teaching internship portion of this model are to be viewed as "helpers"—not as "evaluators." Other significant differences include the direct involvement of the university supervisor both on-site and in providing seminars for the other two supervisors. Most importantly, the advanced teaching internship model is aimed specifically at preparing quality agricultural science and technology teachers. This is not a generic teacher preparation plan for preparing generic teachers.

Industry Internships

In addition to the advanced teaching internship the new teacher would also do internships with local agricultural agencies (i.e. extension, NRCS, etc.) and agricultural businesses/industries. These two internships provide for community contact, technical skill development and inter-agency cooperation.

The Early Entry Integrated Fifth Year Model described here is a bit more like the model used in preparing medical doctors. It attempts to recognize that the cost of school is very high and at some point there must be return on the investment, even if the intern is still learning and still paying for credit.

What does the future hold for teacher preparation and student teaching? It is hard to predict the future, but one thing is certain—as tuition continues to increase with teaching salaries and benefit packages becoming less competitive, we cannot continue to add years of schooling and years of non-paid internships and still expect to have talented applicants for teacher preparation slots. If students have employable talents and are sought by industry they will leave teacher preparation options behind because they simply won't be able to afford teacher preparation. The days of the Holmes Group philosophy may be numbered, at least for students who graduate from colleges where employment options are high.

4 Weeks	6 Weeks	1 Week	6 Weeks	4 Weeks
• Program organization • Methods • Micro-teaching • FFA/research	• Student teaching/ internship	• State FFA Convention	• Student teaching/ internship	• Portfolio • Research • Program curriculum • Evaluation

This model as a stand alone provides an increase to 18 weeks of student teaching.

Theme Article

I Wish You Would Have Prepared Me For...!

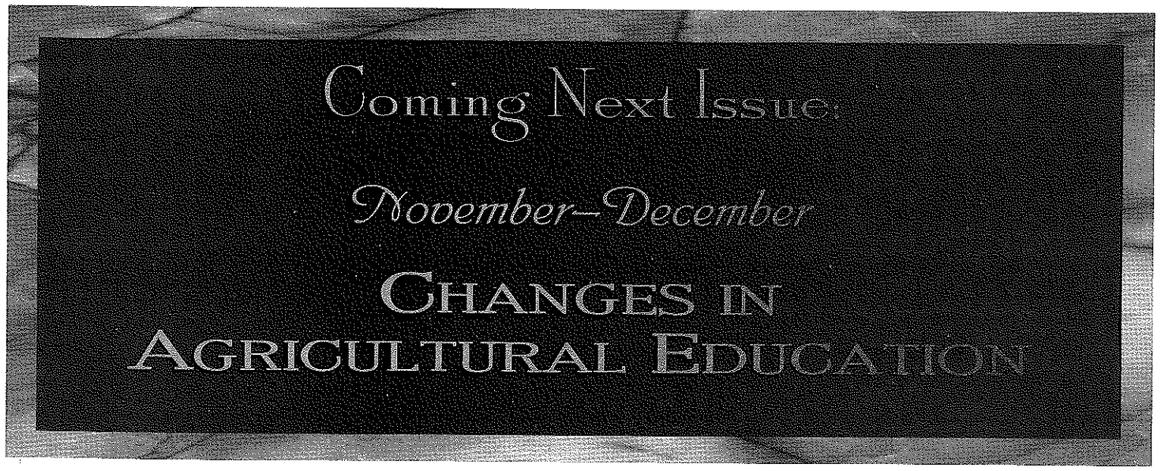
By M. Susie Whittington

Dr. Whittington is an assistant professor of agricultural education, The Pennsylvania State University, University Park.

During a "debriefing" exercise with a class of post-student teachers, the following notes were written in response to the question, "What do you wish you would have been better prepared for?" Can we strengthen our pre-student teaching curriculum by addressing any of their wishes?

I wish I would have been prepared for:

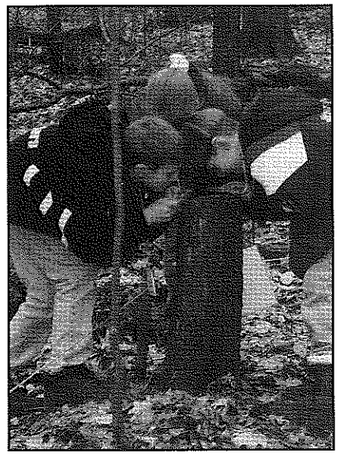
- Disciplining students
- All the paperwork
- Conflict when I awarded less than an "A"
- Lack of student motivation
- Every day after the first one!
- The content I would need to know unexpectedly
- Effective home visits
- Eighth graders
- Switching gears so fast throughout the entire day
- Poor family situations
- Societal problems that students carry
- Fast pace
- Small-town atmosphere
- Everything I was expected to do besides teaching
- Working with parents
- The emotional ties I would feel toward the students
- Leaving the students after only 13 weeks



A Residential Student Teaching Experience in Environmental Education, continued from page 7

cation curricula including Earth Education, Project Learning Tree, Outdoor Biological Instructional Strategies, and Sharing Nature with Children. Student teachers enjoy the opportunity to peruse many journals, magazines, books and resource materials that are a part of McKeever's library.

More and more, schools are integrating an environmental education experience as a part of the school curriculum. Experiencing the formal classroom situation is extremely important; experiencing the offerings at an outdoor learning center complements the classroom placement and makes for a well-rounded teacher.



Students at the McKeever Center exploring and discovering. (Photo courtesy of Jessica Naugle.)

In the end, everyone is positively affected by their involvement in a residential environmental education program. School-aged students are more aware of their impact on the earth and go away with a specific plan of action. Student teachers leave with a better appreciation of the natural world and realize the need to protect it. They also leave with an abundance of ideas on how to implement environmental education into other educational settings.

Now That I am Older and Wiser: Student Teaching Expectations, Myths and Facts, continued from page 9

hour to continue to work/plan for an upcoming FFA event

- Third hour—concrete construction/fabrication of concrete projects
- Fourth hour—lunch
- Fifth hour—concrete construction/fabrication of concrete projects
- Sixth hour—helped students with award applications/perform various departmental functions
- Seventh hour—nursery management (supervise students in various project areas within the program)
- After school—weighing animals/SAE visits/FFA teams/meetings

This daily schedule doesn't, however, paint the real picture. I have never been so busy and had so much fun at the same time. The truth was, my time was about 30 percent classroom and 70 percent everything else. Thus, time management was a key factor. If you don't have it (time management), I suggest getting it. Make daily lists of things which need to be accomplished, prioritizing and following it. Believe it or not, crossing something out on the list gives you a sense of accomplishment!

By the time I left Peoria, I was no longer a stranger in a strange land. I was older, wiser and a teacher making a positive difference in the lives of students. Everything we had talked about at the University of Arizona suddenly made sense including the paper philosophies we had developed. More importantly the reason for becoming an agricultural educator became clear to me, I could see it in smiling faces throughout my classes.

Student Teaching: What a Great Experience, When It Works!, continued from page 2

an in-depth review of progress. During the university faculty supervision, the reporting system requires that this review of progress is completed jointly with the student teacher and the cooperating instructor. In addition, each student instructor is required to complete a portfolio of his/her student teaching experiences via a daily diary, a series of self evaluations, a compilation of all instructional materials used, and a recording of perceptions developed through observation of other teachers, the cooperating instructor, and interviews with administrators of the school. The purpose of the portfolio is two-fold. The portfolio material becomes a part of the support and feedback components of the experiential learning.

Lastly, and perhaps most importantly, the overarching considerations during the debriefing stage are the implications for the student instructors if, and when, they accept a position after graduation, in other words, to begin another cycle of experiential education after signing that first contract.

Feature Article

PALS: Where Are We Now?

By Jason M. Brockshus and Greg S. Miller

Mr. Brockshus is the coordinator of Iowa FFA Leadership, Ocheyedan, and Dr. Miller is an assistant professor, agricultural education and studies, Iowa State University, Ames.

Positive role models are essential to the success of individuals in business and in education. Businesses recognize this and pair new employees with a successful person in the company. This type of relationship benefits the mentee by providing a positive role model. It benefits the mentor by allowing them to make a difference in the next generation of employees. The mentor benefits further by being exposed to different ideas and a new perspective. In education, mentoring is viewed as a valuable tool in the learning process. From "shadowing" experiences of senior high students in businesses to helping kindergartners develop a sense of ownership through planting trees, mentoring is present in all levels of education.

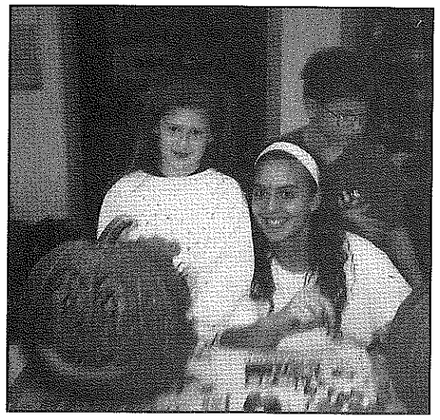
Many of today's youth lack positive role models that are essential to the developmental process. Deciding what is appropriate behavior when they are constantly exposed to negative influences through the media, at school, or at daycare is difficult for a young person. The need for positive role models that are willing to dedicate time to the development of young people is apparent in our hectic lifestyles.

PALS (Partners in Active Learning Support) is a mentoring program started by the National FFA Organization that matches high school agriculture students with elementary school students. PALS is designed to build trust in others and develop positive self-esteem. PALS was piloted in Iowa during the 1993-94 school year. Since then, several workshops have been conducted in Iowa to help chapters start this mentoring program. Many FFA chapters have attended PALS workshops, but little follow-up work has been done since the evaluation of the pilot programs (Egan, et al. 1996).

A survey conducted in Iowa identified chapters that are currently conducting PALS programs in schools and sought to identify what activities were being implemented. The other portion of the survey identified chapters interested in starting a PALS program and sought input for selecting the best time for a state PALS workshop.

Surveys were sent to 233 agricultural education departments in Iowa. Sixty-one surveys were returned to Iowa State University and reviewed. This represents 26 percent of the agricultural education departments in Iowa. Forty-five chapters indicated that they were not currently involved with PALS. One program had PALS in the past but was not currently involved. Thirty agricultural education programs are currently conducting or are planning to start a PALS program during the 1996-97 school year.

PALS workshops have been offered each year in Iowa since 1994. These programs were conducted by staff through the National FFA Organization and sponsored by the W.K. Kellogg Foundation through the National FFA Foundation. Blue Cross Blue Shield sponsored the state event through the Iowa FFA Foundation. Seventeen of the chapters that responded had attended one of these workshops over the past few years. Seven chapters currently have PALS, but have not attended a formal workshop. Thirty-nine chapters indicated that they would like to attend a workshop in the future.



High school and elementary school students build trust and friendship by working together. (Photo courtesy of Jason M. Brockshus.)

Most of the interested chapters would like the workshop to be held in June or July. This would be the time of year that would fit best into their local schedules. Due to this interest, another workshop has been scheduled for the summer of 1997.

The workshops bring in experts on the PALS mentoring program. Presenters from both the national and state level conduct activities that generate enthusiasm and excitement for the PALS program. The presenters help the participants identify the need for a PALS program in their community. This helps them focus their efforts on improving the community in which they live. Through active participation and sharing ideas, chapters learn from the experiences of others and leave with many activities to use when implementing their PALS program. The unique thing about the PALS program is that it can be tailored to the individual school and community so the most effective environment is created and the desired benefits achieved. Whatever works for you is the way to go.

Another area of the survey involved identifying what students are involved in the various PALS programs. Many programs involve various grade levels from kindergarten through sixth grade. Most PALS programs work with the second- and third-grade levels of elementary school students. On the high school level, most students are in the sophomore-, junior- or senior-level agriculture classes. However, several programs also involve first-year agriculture students. One program works exclusively with special needs students and conducts activities that are meant to enhance motor skills. As you can see, various combinations of students can be effective.

The one-on-one contact achieved through this program has no substitute. For many mentees and mentors, this may be the only individual attention that they receive in a given day. Growth is witnessed by all young people involved.

There are a variety of ways that PALS time can be arranged. Many of the popular times are during agriculture class time or study halls. Other possible solutions to the scheduling problem involve students arranging time to meet with their PALS on an individual basis; meeting before or after school; meeting during other class periods; or getting together over the lunch period. Most PALS meet weekly. The main theme of scheduling is if there is a will, there is a way to schedule time to meet. One needs to be open-minded and make this activity a priority in order for success to be achieved.

Since PALS meet weekly, what do they do? The survey yielded many successful ideas that chapters have used in their local programs. These activities range from helping the elementary students with their studies to taking educational tours to points of interest (Table 1). Some popular activities are carving pumpkins in the fall and making PALS t-shirts for both the "big" and "little" PALS. The most important aspect of these activities is to provide time for the PALS to spend together. This allows for a bond to form. That "bond" is the key to success in the PALS program. When mentors and mentees trust

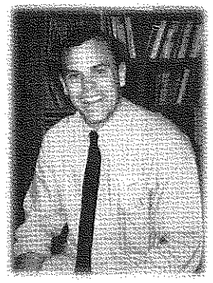
Table 1. Example PALS activities

- Homework
- Kite building/flying
- X-mas tree ornaments
- Hay ride
- Science station
- Tin can ice cream
- Candy wreaths
- "Beggar's Night" safety program
- Recess time
- Coloring contest
- Year end picnic
- Bowling trip
- Make T-shirts
- Make memory banners
- Bunny making
- Candy choo-choo trains
- Hunter's safety (child's view)
- Bowling trip
- Nature walk
- Make playdough from scratch
- Tutor on reading/spelling/math
- Work with aquaculture and Tilapia
- Attend elementary school program as a group
- Chalk drawings
- Paper turkeys
- Carve pumpkins
- Plant flowers in milk cartons
- Cookout at playground
- Home-made kites/rockets
- Powder-puff painting
- Card making
- Christmas trees from coffee cans
- Pet care and grooming
- Educational tours (science center, zoo, aquarium, botanical center)
- Plant tulip bulbs
- Plant division and planting
- Pumpkin painting
- Field trips–barbecue/fishing
- Go to Dairy Queen
- Scavenger hunt
- Pizza party/games
- Cookie decorating
- Free time/one-to-one mentoring
- Take PE with elementary students

...continued on page 23

Theme Article

Professional Development for Student Teachers: Washington, D.C. Style



By K. Dale Layfield and Marc C. Moran

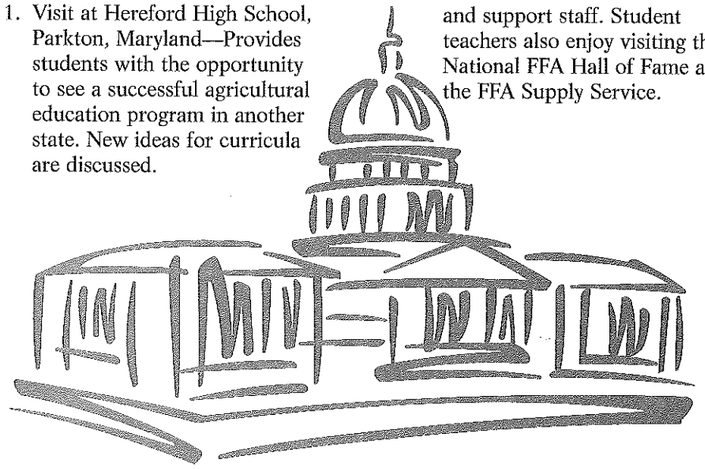
Mr. Layfield and Mr. Moran are graduate assistants at The Pennsylvania State University, University Park.

The theme of the March-April 1997 issue of *The Agricultural Education Magazine* focused on a serious concern in the profession today, recruiting new teachers. In the March-April issue, Bill Camp discussed familiar problems related to teacher shortages and noted the importance of the "agricultural education family." Many student teachers in the profession only know the "family" as teacher educators, agriculture teachers and state leaders in departments of vocational education. Often students may graduate having only heard names of their support personnel and leaders at the national level.

At Penn State, as in many agricultural education programs today, the diverse array of student teacher backgrounds often lacks knowledge of national leadership and support structures. In an effort to familiarize student teachers with national policy-makers and support staff, student teachers participate in three-day professional development trip to Washington, D.C.

As a capstone event, approximately 15-18 student teachers in agricultural education at Penn State visit Washington, D.C., each year. Sponsored through the Department of Agricultural and Extension Education, students are provided expense-free lodging and travel on the busy educational voyage. The highly intense schedule is intended to provide students with opportunities to interact with leaders at various professional organizations and supportive agencies. Some of the events included in the trip are briefly explained.

1. Visit at Hereford High School, Parkton, Maryland—Provides students with the opportunity to see a successful agricultural education program in another state. New ideas for curricula are discussed.



2. Evening Tour of Washington, D.C.—Allows students to see and tour many of the monuments in our nation's capital. Students see many of the sights which commemorate our nation's rich history.

3. Visit to the American Vocational Association headquarters—Students have an opportunity to visit with Brett Lovejoy, executive director, to discuss the goals and mission of AVA.

4. Visit to the National Vocational Agriculture Teachers' Association headquarters—Students have an opportunity to visit with Jay Jackman, executive director, to learn about the services provided through the organization.

5. Visit to the National FFA Organization headquarters—Gives the students the chance to visit and orient themselves with the inner workings of our youth organization. The students visit with FFA executives and support staff. Student teachers also enjoy visiting the National FFA Hall of Fame and the FFA Supply Service.

6. Visit to Mount Vernon—Allows the students to tour the home of George Washington. While being one of America's greatest leaders, Washington was also known for his tremendous ties to agriculture.

7. White House Visit (1997 students went to Russian Embassy)—Students get the opportunity to visit the home and main office of the president of the United States.

8. Tour and visit of National Agricultural Research Service Visitors Center at Beltsville, Md.—Allows the students to see some of the latest research and methods being used in agriculture today. Students receive resource packets pertaining to various areas of agriculture.

Professional Development: Washington, D.C.-style affords student teachers an opportunity to break out of the classroom, and see agricultural education and their professional organizations at a new level. Alan Kahler suggests that "we break out of the traditional approach to preparing prospective teachers." By freeing our students from the traditional classroom setting, we provide them an opportunity to actually meet key people in our national organizations and meet the staff who support our efforts on a daily basis.

References

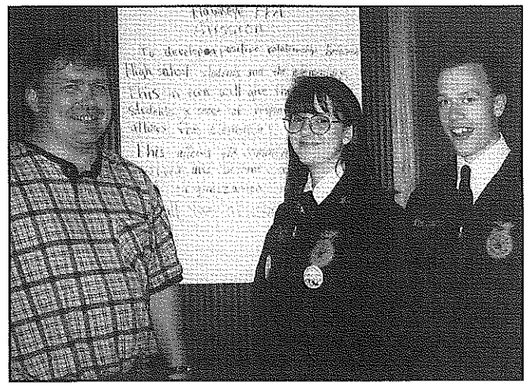
A.A. Kahler, "Dawn is breaking: Are we prepared for the new day?," *The Journal of Agricultural Education*. 37, 1 (1996): 1-8.

William G. Camp, "How can we solve the teacher shortage?," *The Agricultural Education Magazine*. 69, 5 (1997): 4,13.

PALS: Where Are We Now?, continued from page 21

each other, real progress in positive personal development can occur.

PALS offers something stable and constant in the hustle and bustle of family, community and school life. It is essential that scheduled PALS meeting times be honored, and any change in the schedule should be shared with all those involved when possible. This helps to avoid surprise and unexpected disappointment for the elementary students.



Planning is essential to the success of a PALS program. (Photo courtesy of Jason M. Brockshus.)

The final part of the survey allowed the chapters with PALS programs to identify the impact that the PALS program has made on various groups. All participating chapters felt the program had great benefit to the community, school, FFA/agricultural education program and high school students. The program seemed to have the greatest benefit to the elementary students who had "big" PALS. This is the essence of this type of mentoring program. Everyone involved reaps some benefit from helping and nurturing the young people in the community.

The high school agriculture program also benefits from the PALS program. It offers a unique educational opportunity for its members and allows them to practice the leadership skills emphasized through FFA. The mentors gain confidence in their ability to lead and realize that they really can play a very important role in encouraging elementary students to have a positive outlook on life. The elementary students value the time spent and the relationship developed with their high school counterpart. Pride is also shown by the high school student who helps a younger person to achieve.

The success of the program hinges on the commitment level and support of parents, students and school staff. PALS is not just an initiative of the local FFA chapter. It should be an outgrowth of the desire of a community to support and develop their young people. This approach helps to spread the responsibility over a broader base of resources. It is everyone's responsibility to develop a caring and committed next generation. After all, they truly are our future.

PALS is a great program that many Iowa chapters are adopting. There is much interest throughout the state in the current programs and in the possibility of beginning new ones. The potential for growth is tremendous. As the program is implemented in more schools, the positive effects will be seen state and nation wide. Many young people really need this type of program and agricultural education programs can meet a community need by starting a PALS mentoring program. Make a positive difference in the youth of your community—start a PALS program today!

Reference

Greg Egan, T. Arkfeld, Vance Vanderwerken, and Mark Zimmerman, "PALS (Partners in Active Learning Support)," *The Agricultural Education Magazine* 68, 8 (1996): 14-17.

To Student Teachers. . .

A View from the Agricultural Mechanics Laboratory Egress Opening (Shop Door)

By Jim Sorensen

Mr. Sorensen is an agriculture instructor, Kimberly High School, Kimberly, ID.

As I write this, it is about two weeks until school begins, and I am ready. It's like I tell my students—if we never get started, we never get finished. When hearing this issue's theme, I thought back to when I did my student teaching. It was a long time ago, but I don't think things have changed all that much. Student teachers are didactic critters that just need a little finish to be ready for market. For me, student teaching was probably the most humbling experience I have ever had. I was a senior in college—I knew everything. In fact, I knew that this little exercise called student teaching was just a formality to get my degree. I wasn't going to teach. I had better things to do.

However, thanks to a terrific supervising teacher by the name of Milt Osgood, I was able to get my head screwed on straight in rather short order. I had been playing the role and going through the motions. Then, it happened—Milt got a phone call and asked me to take over the class as he had to go to the district office for a little bit. Well, it took Milt about 45 minutes to get back. To me, it seemed like about a week-and-a-half.

Lesson Number One

It is prudent to be prepared for class. To this day, I don't know if that phone call was planned or a coincidence, but it got me off my duff and in front of the classroom. From then on I would mess something up and Milt would spend time working with me to see that it was corrected. In the end, I got a "B" in student teaching. I was really unhappy about it then, but now I think that I was lucky to get the grade I got. I was lucky to get the supervising teachers that I had (we student taught in two schools in those years).

At the University of Idaho, I feel that we have a model student teaching program. One thing that they do that isn't in the "brochure" is that they apparently take great pains to match the student teacher with the supervising teacher. This is the first step in ensuring that this will be a positive and rewarding experience for both the student and the supervisor. If matched properly, a student teacher that needs a "kick in the duff" will get just that and one that needs patience and understanding will get that, too.

The Supervisor's Role

So, what makes a good supervising teacher? The supervisor must have a positive outlook toward that profession and students. In other words, they must like their job. They must also be able to "lurk effectively." In other words, they must be able to allow the student teacher the freedom to teach and find their own way, but they must also be able to step in when needed. I have been known to go look up a student that maybe gave the student teacher a little too much of a "hard time" and have a little chat with them. Then I discuss the problem with the student teacher and give him (or her) some suggestions as to how to work with that individual. Low and behold, the suggestions work. The student teacher doesn't know that the student has been threatened within an inch of his life and the student is now smart enough not to tell. In the end, the student teacher has gained confidence, the student has learned a lesson, and well, for me, it was one more little problem that did not turn into a big one.

A supervising teacher should begin preparing the classes long before the student teacher ever arrives. I always liked to tell the students that it was their responsibility to train the student teacher in my image. Fortunately for the profession, they have failed. Besides, one of me is probably enough.

Now there are many other characteristics of a quality supervising teacher, but since I doubt that the editor will give me three pages, I will list just two more. First, the supervising teacher must be perceptive. It is important to "read" the student teacher and to "feel" what they are thinking. Secondly, the supervising teacher must be willing to put in the time necessary to ensure that the student teaching experience is a productive and positive experience for all. I figured that each time I had a student teacher it added at least one hour to my day and perhaps a few years to my liver.

I can't think of anything more rewarding in teaching than seeing an individual you supervised turn into a successful teacher. Maybe the reason it is so rewarding is that is also not easy.

Introduction to Landscaping: Design, Construction and Maintenance

Book Review

By Ronald J. Biondo and Charles B. Schroeder, 1998, Interstate Publishers, Inc., Danville, IL

by Robert R. Tripepi

Dr. Tripepi is an associate professor of plant physiology and horticulture in the Plant Science Division, University of Idaho, Moscow.

Introduction to Landscaping: Design, Construction and Maintenance is a textbook designed to acquaint high school students with the basic principles of landscape design and environmental horticulture. This textbook is another book in the Interstate AgriScience and Technology Series. It addresses most of the concepts students need to think about if they are involved in designing, constructing or maintaining landscapes.

The book is organized into three sections. Landscape design is covered in the first section of the book. This section contains eight chapters covering the many important and diverse aspects of landscape design, including working with the customer, landscape design principles, and pricing the plan. The authors carefully explain the landscape design process, leading the reader through various phases chapter by chapter. One of the obvious strengths of the authors, Biondo and Schroeder, is their design experience. The design section covers about 40% of the entire textbook.

The second section of the book covers landscape construction and includes five chapters. These chapters present preparing the site, installing plants and hardscapes (patios, decks, fences, etc.), and using lights and water features in the landscape. Techniques such as measuring the slope at a landscape site, planting trees or shrubs with different types of root packaging (bare root, balled and burlapped, or container grown), and concrete finishing are carefully described and well illustrated. Installation tips for many types of hardscape features are included in several chapters.

The third section of the book covers landscape maintenance. Cultural practices, such as watering, fertilizing, mulching and pruning are presented. In fact, one entire chapter is devoted to pruning woody plants, demonstrating the importance the authors place on completing this cultural practice correctly. Establishing and maintaining turf grass is also covered in a separate chapter. The final two chapters in this section cover control of insects, weeds and rodents as well as calculating maintenance costs.

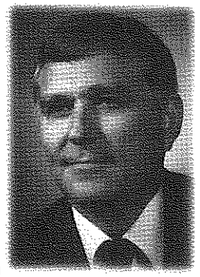
Each chapter throughout the book contains educational objectives and terms used in the chapter. Several paragraphs summarizing what was covered are also found at the end of each chapter, along with review questions, self-checking exercises and exploring activities. Although some of the questions and activities seem simplistic, they should provide instructors with some ideas they can use to make up their own questions or activities.

The last part of the book contains four appendices. The first one is a useful mathematical conversion chart, but this chart uses only English units (e.g., inches, feet, yards, pounds, etc.) of measure and lacks metric units. The second appendix is a very useful plant materials list that covers annual and perennial flowers, bulbs, vines and ground covers, as well as deciduous and evergreen trees and shrubs. A number of plant characteristics are included for each species. The third appendix provides landscape design examples. The fourth appendix provides an up-to-date list of professional landscape and nursery associations for most states in the U.S. Several national associations and several Canadian associations are included in the list. Each listing provides a contact name, address and phone and fax numbers. E-mail addresses and web sites are also listed for many of the associations.

Agriculture instructors should find this book useful for teaching landscape design and environmental horticulture. I was impressed by the authors' holistic approaches to landscape design, construction and maintenance. They included many topics I didn't expect to see, such as interacting with the potential design customer, providing a sun calculator to help locate trees in the landscape, and constructing several types of retaining walls. The authors also presented the latest techniques of landscape maintenance, making the text a valuable resource. In my opinion, more information on some specific topics within each section of the text could have been presented to provide a deeper understanding of the material, but then the book would have been too long. Overall, the authors presented the appropriate amount of information, making Introduction to Landscaping: Design, Construction, and Maintenance a valuable high school textbook.

Go to the Head of the Class

What Do You Know About Teacher Training?



By Gary E. Moore

Dr. Moore is a professor of agricultural and extension education, North Carolina State University, Raleigh, and is historian for the American Association for Agricultural Education.

One thing most agricultural educators share in common is they completed some type of teacher training program. Over the years, teacher training has evolved and changed. Go to the head of the class if you can answer the following teacher training questions.

1. In the early days of agricultural education, there were a number of "itinerant" teacher trainers. An "itinerant" teacher trainer:
   A. Was any teacher educator who did not possess a doctoral degree.
   B. Was a teacher educator whose primary responsibility was as a state supervisor.
   C. Was a teacher educator who worked across-the-board with all vocational teachers.
   D. Was a teacher educator who traveled from school to school working with agriculture teachers in their own classrooms.

2. During the 1930s and 40s, universities desiring to hire an agricultural teacher educator:
   A. Were required to have their selection approved by federal agricultural education officials.
   B. Administered an agricultural competency test to insure the candidate possessed a sufficient knowledge of agriculture.
   C. Were expected to pay the individual hired at least $100 more than the highest paid agriculture teacher in the state.
   D. Required the prospective faculty member to demonstrate a working knowledge of a foreign language.

3. To be hired as an agricultural teacher educator today, candidates are generally expected to have as a minimum, X number of years of teaching experience at the secondary or post-secondary level. What number does X represent?
   A. One.
   B. Two.
   C. Three.
   D. Four.
   E. Five.

4. The state with the largest number of institutions to prepare agriculture teachers is:
   A. California.
   B. Texas.
   C. Illinois.
   D. Missouri.

5. During the early 1970s, a new approach to teacher preparation in agriculture emerged. This new approach was called:
   A. Competency-Based Teacher Education.
   B. DACUM.
   C. Student-Centered Teacher Education.
   D. The Problem-Solving Approach to Teacher Education.

6. Agricultural teacher education programs are commonly found at land grant institutions. Which two land grant universities with agricultural teacher education programs are within 10 miles of each other.
   A. University of Vermont and University of New Hampshire.
   B. Mississippi State University and Auburn University.
   C. West Virginia University and Virginia Tech.
   D. University of Idaho and Washington State University.

7. The most enduring textbook (used the longest) in agricultural teacher education was originally called:
   A. *For More Effective Teaching* by Krebs.
   B. *Methods of Teaching Agriculture* by Newcomb, McCracken and Warmbrod.
   C. *Teaching Vocations* by Hammonds and Lamar.
   D. *A Handbook on Teaching Vocational Agriculture* by Cook.

8. The collegiate honorary society for agricultural education students is:
   A. Omicron Tau Theta.
   B. Alpha Tau Alpha.
   C. Gamma Sigma Delta.
   D. Phi Delta Kappa.

9. The primary "way" to teach agriculture advocated in most teacher education programs is:
   A. Allen 4-step method.
   B. Task analysis.
   C. Problem solving.
   D. Programmed instruction.

10. Prior to 1940 the majority of the teacher educators obtained their doctoral degrees from only three universities. These three universities were:
    A. Ohio State, Penn State, University of Chicago.
    B. Iowa State, Cornell, Harvard.
    C. Cornell, George Peabody College for Teachers, Columbia.
    D. Penn State, Ohio State, Iowa State.

The answers to this quiz are located on page 15 of this issue.

Partners for Success

Reprint Article

Research, Industry and Education Come Together to Make Agricultural Biotechnology the SAE Opportunity of a Lifetime

Editor's Note: Due to a supplier error, the wrong photo appeared with this story in the July-August issue. Our apologies.

By Christy Mecey-Smith

Ms. Smith is a biotechnology instructor at Carl Hayden Community High School, Laveen, AZ.

High school students enrolled in the agricultural biotechnology program at the Carl Hayden Center for Agribusiness must complete a demanding curriculum. Not only are they required to complete extensive agricultural-based research, but they must also interact with industry and universities to complete internship experiences. Such standards have always been considered a deterrent in maintaining student enrollment in vocational programs, but in this program academic achievement is up, enrollment is on the rise and the dropout rate has decreased dramatically. Why? Much of the students' success is owed to mentors from industry and academia who donate hours of time, materials and support.

Industry-Based Research

h.e.r.c. Inc. is a Phoenix-based corporation that develops biological solutions for industrial and agricultural challenges. The company employs students to conduct research studies and intern as laboratory technicians. Protocols are developed in cooperation with the company's research division and related university programs.

A senior agriculture student, Emma Gibson, spent the summer of 1996 conducting phytotoxicity studies to analyze the effects of bacteria (used to digest lime in commercial plumbing systems) on common greenhouse production crops. At completion, the product proved to be safe and can now be marketed to greenhouse growers for use with drip irrigation and evaporative cooling systems.

An advanced biotechnology student, Dawn Towery, evaluated the anti-transpirant, "Stressguard," as a potential flame-retardant for Christmas trees. The student worked with the local fire department to determine flash point and flammability of a group of trees treated with varying concentration levels of the product. As a result, h.e.r.c. will market the new product during the coming holiday season.

Another student, Timothy Miller, has worked with researchers at Seminis Vegetable Seeds to identify molecular markers that can be used in proprietary protection of the company's vegetable varieties. Students isolated DNA from 12 Seminis vegetable hybrids and used PCR with microsatellite primers to produce unique molecular "fingerprints." Seminis is the largest commercial vegetable seed breeder in the world. The company consists of the newly formed conglomeration of Petoseed, Asgrow, Royal Sluis and DNAP and has a large research facility located in Woodland, California.

The USDA Agricultural Research Service facility located in Phoenix, Arizona, is devoted to water conservation. Scientists at the laboratory are working to develop drought-tolerant, experimental oil crops. Carl Hayden students Aaron Moffett and Crystal Gillham participated in research internships using molecular markers to identify male sterile lines within these crops. The development of male sterile lines can protect and accelerate experimental breeding programs.

University Liaison

When students begin the process of choosing an agriscience research project, they must first identify a career goal and then a specific area of interest. This process led Frank Jones, an agricultural biotechnology student and dairy goat farmer, to the concept of developing an "on farm" pregnancy test for dairy goats. Frank has worked with Dr. Coralie Munro at the University of California-Davis to develop an immunoassay that tests for estrone sulfate concentrations in goat urine. Hopefully this can be developed into a color-based test that can be used at the commercial level.

These examples just scratch the surface of what has been accomplished by this group of students and their mentors. All in all, this probably doesn't seem like your typical agricultural education program. Yet, all of these research applications lead back to increased, diversified production for agriculture. The occupational training provided to these students leads to skill development, awareness of current agricultural issues and direction towards career success. Industry, research and agricultural education are coming together to make a winning combination!

Upcoming Themes

Issue	Theme	Deadline	Editor
January-February	Block Scheduling and Its Impact on Agricultural Education	October 15, 1997	Dr. Tony Brannon Department of Agriculture Box 2016 Murray State University Murray, KY 42071 Phone: (502) 762-6923 Fax: (502) 762-3441 e-mail: tony.brannon@murraystate.edu
March-April	Career Development Events	January 15, 1998	Dale Crabtree National FFA Organization P.O. Box 15160 Alexandria, VA 22309-0190 Phone: (703) 360-3600 Fax: (703) 360-5524 e-mail: dale_crabtree@ffa.org
May-June	What Do Tech Prep, School To Work And All Those Other Buzz Words Have To Do With Agricultural Education?	March 15, 1998	Marshall Stewart Department of Agricultural and Extension Education Box 7607 North Carolina State University Raleigh, NC 27695 Phone: (919) 515-4206 Fax: (919) 515-9060 e-mail: mstewart@amaroq.ces.ncsu.edu
July-August	It Isn't Your Father's SAE Any More!	May 15, 1998	Elizabeth Morgan, Ray Chelewski, Aaron Buzza and Debbra Martin Presque Isle Regional Vocational Center 79 Blake Street #3 Presque Isle, ME 04769 Phone: (207) 764-8113 Fax: (207) 764-8107
September-October	Putting Research Findings Into Practice To Improve Teaching	July 15, 1998	Dr. Jim Dyer Agricultural Education and Studies 201 Curtiss Hall Iowa State University Ames, IA 50011 Phone: (515) 294-5904 Fax: (515) 294-053 e-mail: jdyer@iastate.edu
November-December	An Agricultural Education Primer	September 15, 1998	Dr. Paul Vaughn Department of Agricultural Education and Communications Box 42131, Texas Tech University Lubbock, TX 79409-2131 Phone: (806) 742-2816 Fax: (806) 742-2880 e-mail: pvaughn@ttu.edu