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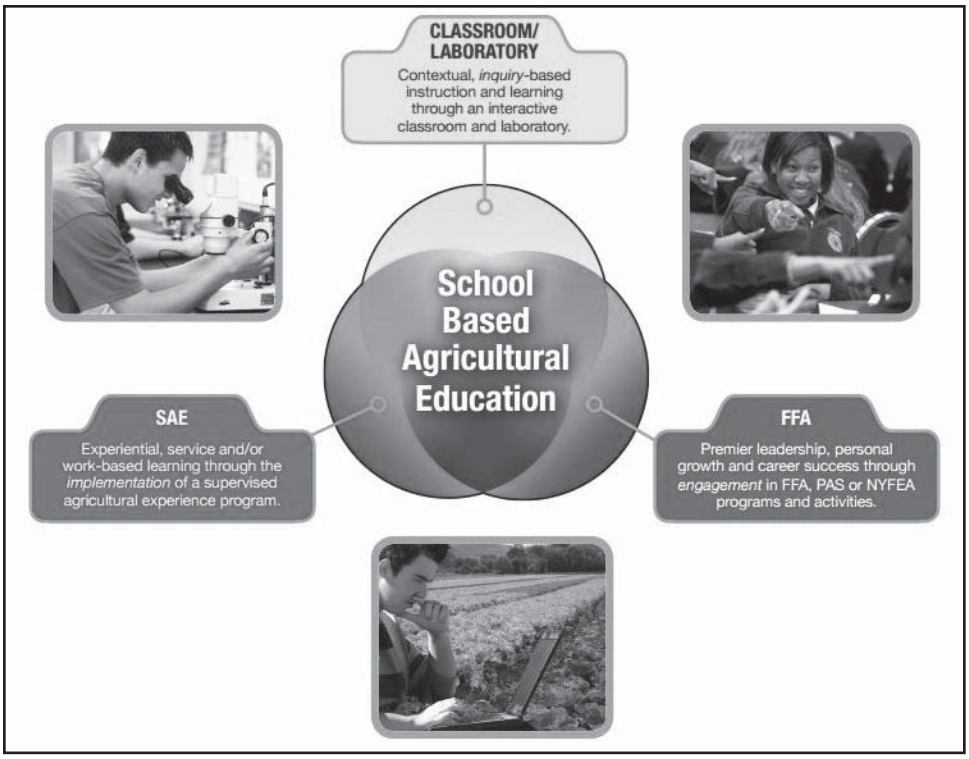

State Supervisors and Teacher Educators Reflecting on the Past While Looking to the Future

Does Agricultural Education Have a Future?

by Harry N. Boone, Jr.

This is the second issue devoted to the topic of "reflecting on the past while looking to the future." Over the past two issues I have encountered a familiar problem with agricultural educators at all levels. They do not like to "toot their own horn." Keep in mind the old proverb that says "He that toots not his own horn, the same shall not be tooted." I have had trouble with people not wanting to share their story because they feel their story is not unique. I feel that everyone has a unique story to tell.

For this editorial I am going to devote my comments to "does agricultural education have a future?" I could answer this question with one word, "yes," and stop, however, that would leave a lot of blank space on this space. While blank/white space has a role in a publication, two thirds of a page is frowned upon.

Does agricultural education have a future? Again the answer is "yes," however there are some lessons from the past we must carry forward to the future. It is easy to listen to the buzz words of today and modify our curriculums to fit. The buzz words of today, however, will quickly be replaced by the buzz words of tomorrow and if we are not careful the agricultural education programs built on those buzz words will fade as quickly as the trends they tried to emulate.

What were the basic principles that early agricultural education programs contained? Others may disagree, however, I would argue that the components that made agricultural education great were; experiential learning (what we know as SAEs today), instruction through problem solving, kinesthetic learning, and the use of leadership as a motivational tool. Regardless of the curriculum agricultural education must contain these elements to remain strong.

A strong agricultural education program starts with a modern curriculum. All three phases of the agricultural education profession; teachers, teacher educators, and state supervisors; are responsible for making certain this need is met. The curriculum must change with changes in agriculture practices, technology, and needs of the community. In my years in the profession I have seen changes in the profession accelerate at an alarming pace. My career has spanned the introduction of personal computers in the classroom to global positioning devices determining the location and amount of fertilizer that is added to a field.

Experiential learning has been the component that has separated agricultural education from other educational programs including most of the career and technical education areas. It is not enough for agricultural education students to learn the material in the classroom/laboratory, they apply these principles/concepts in personal situations through their supervised agricultural experience programs. By taking the knowledge to the application level students develop a deeper understanding of the subjects and retention of the knowledge is vastly improved.

Agricultural education programs are known for their vast number of laboratories ranging from school farms to biotechnology laboratories. The kinesthetic learning (hands-on) that occurs in these laboratories also assist in the development of a deeper understanding of the subjects and improves the retention of the knowledge.

Agricultural education was built on the concept of problem solving instruction. That is one uses real problems to teach the agriculture concepts. Problem solving in agricultural education can be traced to John Dewey, W. F. Stewart, Carsie Hammonds, Alfred Krebs, Harold Binkley, John Crunkilton, Rodney Tulloch, L. H. Newcomb, Robert Warmbrod, and David McCracken to name a few. Problem solving instruction requires in-depth understanding of the topic in order to "solve" the problem. Students develop higher order thinking skills. I am begin-

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Dr. Harry N. Boone, Jr., is a Professor at West Virginia University and Editor of ***The Agricultural Education Magazine.***

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Reflecting on Three Decades in State Leadership

by Nancy J. Trivette

Fall always begins with excitement and anticipation for the upcoming school year. As the air cools, the leaves begin to fall and school buses travel the roads, I am reminded of my first days on the job as state FFA staff in the fall of the early 80s. I could not wait to tackle the daily tasks that would impact our state's agricultural education students, FFA members and agricultural education programs; often investing 10-12 hours a day. There were endless details to manage; all without the use of today's smart phones, tablets, Internet, websites, creative software, and convenient apps.

The things I did not know easily outweighed what I did know. Luckily, my agriculture background and upbringing provided me a positive outlook, a solid work ethic and lots of ambition to take on the multitude of details required of a state FFA program. I loved every aspect of my job and did not realize at first that I was in a unique role and position for a female. I soon noticed that I was often the only female among the group of national agricultural education/FFA conference attendees. I recall one conference photo where I was the only female in the group of 100+ state staff in front of the National FFA Center in Alexandria, VA. I was one of the youngest, if not the youngest, state staff member in the country at that time. This was all very clear as I sat in a conference room full of men, many with more years of experience than I had been alive. For several years, the comments from the podium began, "Good morning gentlemen" and sometimes would include a gender specific joke not complimentary to females. Eventually, the trend began to change and opening comments were more inclusive. Being one of a few females at the state level in those years afforded me outstanding opportunities to begin my career. I quickly invested my time in many excellent career and technical and agricultural education professional development activities at the state and national levels.

> We all need to be diligent in all aspects of agricultural education to prepare students for future careers in an ever changing agricultural industry filled with science, technology, engineering and math.

Fifteen years flew by before my transition to New Jersey's State Supervisor. Now, three decades of state leadership later, I continue to experience outstanding professional development opportunities and can now reflect on how far we have come. We have seen a variety of impactful state and national initiatives, as well as a healthy transition to a better balance of females in state staff and in teaching positions over the years. Unfortunately this gender balance at the state level has not led to a balance in cultural diversity among state staff positions.

Agricultural education professional development opportunities have connected me to a nationwide network of professionals in career and technical education. My early mentors introduced me to our state and national professional organizations and highly encouraged my membership in each. I became a member of New Jersey Association of Agricultural Educators (NJAAE), National Association of Agricultural Educators (NAAE), Career and Technical Education Association of New Jersey (CTEANJ), Association for Career and Technical Education (ACTE), FFA Alumni Association, New Jersey Farm Bureau, and the list continued to grow over the years. All of these professional organizations have deepened my knowledge, appreciation, experience and ability to deliver quality programs for New Jersey.

Today, my message to early career educators is consistent with my mentors' advice 30 years ago, "Become members of your professional organizations. It is your duty as a professional. You will benefit personally and professionally and agricultural education will prosper!"

There have been many initiatives over the past three decades that have had impact on agricultural education including, but not limited to, the 1983 "A Nation at Risk" education movement which emphasized more science in agricultural education. Efforts to increase the integration and/or recognition of science in agriculture continue today.

Other major initiatives impacting work at the state level, especially in New Jersey, included Re-Invent Agricultural Education for the Year 2020. This grassroots effort helped communicate New Jersey's need for state leadership and led to the establishment of the Office of Agricultural Education in the New Jersey Department of Agriculture to administer our state agricultural education program. As a result, the office continues to have three staff (state supervisor, FFA specialist, and conference/fiscal coordinator) and operates with support of and in co-operation with the New Jersey Department of Education.

The National Agriculture, Food and Natural Resources Career Cluster Content Standards and the National Quality Program Standards initiatives, as well as their respective revisions, helped to advance agricultural education over the years. However the national program that has had the greatest impact, in my opinion, in our state and nation is the Curriculum for Agricultural Science Education (CASE) Model Project. As with any new initiative there were doubters and lots of questions. Now after seven years and over 1,100 teachers from 40 states certified, it is easy to see the value and positive impact that CASE, an academically/STEM based program, is having on schools, teachers and students. I am convinced that there would be fewer agricultural education programs in New Jersey and maybe other states too, thus fewer FFA members, if not for CASE. Half of New Jersey's agriculture teachers are implementing CASE courses; many have multiple CASE certifications and one instructor is certified in seven CASE courses. The professional development component of CASE is strong and provides consistent support to teachers. It has had a greater impact on our teachers in New Jersey than any other initiative I have experienced in over 30 years. Teachers learn and understand the philosophy of CASE, utilize inquiry based/project based education as well as learn how to deliver each lesson, lab and course by using equipment and experiencing the course just as their students will.

Laboratory activities are vital to a successful agricultural education program. (Photo courtesy of Stacy A. Gartin)

I often get calls and emails from teachers before they return home from a CASE Institute about getting certified in more CASE courses. The teachers report that they see great value in the CASE

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Some Things Never Change

by Karen C. Hutchison

It is an exciting time to be in agricultural education. One feeling that has stayed the same for me during my 36 years in agricultural education is that it is an exciting time to be a part of this profession. During those 36 years I have enjoyed 13 years teaching, 22 years as State Supervisor and FFA Advisor, and now as an LPS Specialist for National FFA. One of the most exciting periods was during the time I served as the State Supervisor and FFA Advisor in Delaware. During this time I saw changing demographics, curriculum focus, and technology.

I began serving as the State Supervisor for Agriculture at the Delaware Department of Education in September of 1992. When I arrived at my first NASAE conference that fall I found I was in a very unique position: I was young and female serving in a state supervisor position. All of my counterparts were male and many were 20 years older. Though there were a few female Executive Secretaries there were no female State Supervisors. It was a very intimidating conference for me. I still clearly remember Dr. Larry Case telling me to hang in there, which I obviously did with his support and the support of many others. During my time as State Supervisor I saw the first female elected to the FFA Board of Directors (Belinda Chason) as well as women elected into the NASAE leadership. Today the number of female State Supervisors and Executive Secretaries continues to grow.

> Much has changed during my career yet the important things have not. So, for me, it is still an exciting time to be involved in agriculture education!

It has not only been in the leadership realm that I have seen changes; one just needs to look at those attending NAAE or AAAE conferences and meetings to know that the number of females has grown throughout the profession. In Delaware over 50% of the teachers are female and have been for a few years. In many universities the agriculture education majors are predominately female. During my years in agriculture education the discussion has changed from how to attract more females into the classrooms to how do we make sure the classrooms are reflective of the schools population. Many state officer teams are now majority female and many struggle with how to get males interested and motivated to take on leadership roles. The one question that has stayed the same though is how we attract a more diverse student and teacher population.

Just as agriculture has changed so has the agriculture classroom. In the fall of 2001, through funding provided by the US Department of Education for all career and technical education areas, a group of agriculture educators came together to begin the work on agriculture career cluster knowledge and skill statements for the Agriculture, Food, and Natural Resources (AFNR) pathways. The work helped define what students needed to know upon the completion of a pathway. This work changed and broadened the focus of agriculture education from mostly production agriculture to the science and systems of agriculture including areas such as food, environmental, natural resources, plant, animal, power, structural, technical, and agribusiness systems. Since that time, curriculum standards have been developed and revised including the addition of biotechnology to the pathway list. Activities at the National FFA also changed to reflect the changing classroom instruction. The Agriscience Fair was added while other Career Development Events and proficiencies were revised to reflect the changing industry students are being prepared for.

Even though I have seen major changes in the demographics of

the profession and the curriculum focus the greatest change would be in technology; the rapidity in which it is changing as well as the increase of available resources. In September 1992 I left the classroom to take a job at the Delaware Department of Public Instruction (now the Department of Education) as the State Supervisor for Agriculture. When I walked into my office I had a desk with all the basic office supplies and a phone; no computer and no cell phone. It took a few weeks to convince those I worked for that I needed a computer. At that time all communications with teachers was written, typed by the secretary, and then mailed since many teachers did not have access to computers either. If teachers did have computers it usually was just one for their use not the students. Gradually we moved to all communication taking place electronically. More importantly the computer had become a common tool for use in the classroom by students.

When computers started to become more common in the classroom, it was usually through a few placed along the walls of the classroom. During my years as State Supervisor I saw the addition of shared computer labs in the Career and Technical area become a common aspect of school renovations. Over the last few years the use of laptop carts became more popular enabling students to take the computer with them as they worked in the greenhouse, animal lab and barn, food science lab, or into the classroom for research. Now some schools are assigning iPads instead of textbooks to students as more curriculum is available online.

Computers are not the only technology that has changed the classroom. As many of our classrooms became more math and science focused, teachers were trained on how the graphing calculator could be used within the agriculture classroom for conducting research and charting results. This created a need for different types of professional development so teachers can stay current. Other technologies teachers have had to keep up with include Whiteboards (initially) and now interactive smart boards. I remember my college technology training on using a video recorder, overhead projector, and how to thread a film projector! Now teacher preparation focuses less on learning how to use the equipment (or hardware) but on using the numerous resources available such as YouTube, Kahoot!, Blackboard, Google on Air just to name few.

Technology takes many forms in the agricultural education classroom/laboratory. (Photo courtesy of Stacy A. Gartin)

What would we do today without cell phones? My first cell phone in the early 90's was a bag phone; only good for making and receiving calls! Now I use my cell/smart phone to check and send emails, provide directions to wherever I may be traveling, checking the weather, staying current on the news, taking photos, reading a book, listening to music, checking my calendar, keeping track of my contacts, checking in for flights, staying connected with friends and colleagues through Facebook or LinkedIn, tracking events such as the National FFA Convention and even making and receiving calls! All this technology has created endless opportunities as well as challenges.

Technology has also increased the availability of information to students and teachers. No longer is it just text and resource books but the entire Internet at everyone's fingertips. Even though this has made more information available and current it has also created a challenge in determining what is reliable. Many people jokingly state, "If it's on the Internet it must be true" but how do you teach students how to differentiate what is fact and what is opinion? How do

you explain that Wikipedia should not be your only source for a report but that you need to verify the information since anyone can add to it? What are the reliable sources?

We now have agriculture classes available online for students who do not have access to programs in their school. How will that change classroom instruction? Students and teachers now have incredible resources available to them on the National FFA and NAAE websites, not through VHS tapes, "floppy" discs, or even CDs. Students can watch videos on career opportunities and see stories about what other agriculture students across the country are working on. Teachers can reach out beyond their own state to teachers across the country for help and suggestions. The information and technology are changing so rapidly that it is sometimes difficult to keep up and not feel overwhelmed.

Much has changed during my career yet the important things have not. The agriculture education community is a great one to be involved in and always has been; the three component model is as relevant today as it was when agriculture education began; and agriculture educators are passionate about what they do, the students and people they work with as well as the future of agriculture. So, for me, it is still an exciting time to be involved in agriculture education!

Dr. Karen C. Hutchison, former Education Associate for Agriscience with the Delaware Department of Education is currently serving as a LPS Specialist with the National FFA Organization.

Reflecting on Three Decades... *(continued from page 5)*

Model for personal professional development, as a method to update their facility and equipment as well as a way to assess students' skills, knowledge and competencies using the CASE national assessments. The fact that Rutgers University and Delaware Valley University, along with other postsecondary institutions in our region offer college credit for CASE courses further validates the value of the program.

The future success of Agricultural Education lies with initiatives like CASE that connect instruction with current and emerging industry needs. Success will continue to be realized with efforts like CASE because business and industry is involved in the development of courses and educational resources thus keeping CASE relevant to educational and industry needs. Connecting students to skills, knowledge and competencies necessary for successful careers in the broad industry of agriculture is critical, especially if we are to meet global industry employment demands.

FFA will also be an important part of agricultural education's future. FFA members are known for their excellent leadership skills and will continue to be in demand to fill the gap in agricultural career openings. FFA's continual adjustment of its programs and offerings will help make students 'career ready' for the 21st century. Continual focus on global agricultural issues will be important as our population exceeds 9 billion people over the next few decades. Great strides have been made by FFA over the last 30 years to keep FFA on the forefront of change; however we must not lose our focus and continue to make changes for emerging agricultural careers, global issues and the development of premier leaders. This may include the need to curtail some 'old favorite' FFA events to make room for events meeting emerging needs and employment demands. We all need to be diligent in all aspects of agricultural education to prepare students for future careers in an ever changing agricultural industry filled with science, technology, engineering and math.

Our History Doesn't Matter Unless We Have a Future

by Matt Chaliff

Over the past several years I have had some unique opportunities to interact with the history of agricultural education and FFA in Kentucky. A folder of black and white photos led to lunch with a past state staff member. A call from a retired ag teacher led to a binder full of artifacts from the 1920s. A special recognition for past national FFA officers led to sitting at a kitchen table with the daughter of a past national officer looking through his scrapbook from the late 1930s. These have been some wonderful experiences for a self-proclaimed history buff.

There is no question that agricultural education and FFA have a rich history. In addition to the facts that all freshmen learn, there are untold volumes of stories about the impact of our profession over the past nine decades. I recently ran across the quote, "Your history doesn't matter unless you have a future," and I was struck by how applicable that is to agricultural education and FFA. Unless our classrooms are full of young people excited to be learning about agriculture, the fact that E. M. Tiffany wrote the FFA Creed really doesn't make any difference.

The Past

When I entered agricultural education as a student in the fall of 1993 Kentucky had just made the move away from Ag I, Ag II, Ag III, and Ag IV to a broader spectrum of courses. Horticulture was a new offering for most schools and the greenhouses at Rockcastle County High School were still new and fresh. Of the six FFA officers my freshman year, all six were male and all six lived on farms. While I heard the term "SAE" mentioned "farming program" was the more common term for experiential learning.

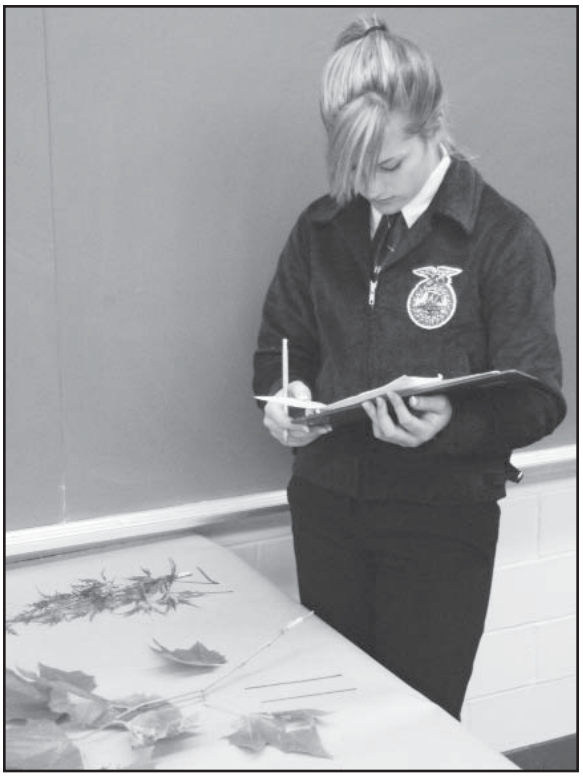
> The investments we make today in recruiting and training teachers, sharing the story of agricultural education, and keeping our programs up to date will determine everything that happens in the years ahead.

While I was attending college, the Kentucky Occupational Skill Standards were introduced for agriculture and these were rolled out at the first Teachers Conference I attended. Older teachers believed these standards were the State Director's way of getting rid of agriculture programs and did their best to pass the fear on to younger teachers.

When I began teaching in July 2000, the state office gave teachers an option of whether to received electronic messages or paper mailings. In 2004, Kentucky received a grant to develop a computerized curriculum resource known as the CAERT CD. This included worksheets, PowerPoints, and even the ability to give tests online; all fairly modern concepts in 2004.

One of my first jobs after coming to the state office was to update the Kentucky FFA website. At that time, the website was stored on a 3.5 inch floppy disk and updating it was an all day job for a trained professional. Facebook and YouTube were founded around the time I moved to the state level but it was three or four years before we realized they could be great tools for promoting agricultural education and FFA. I inherited a 35 mm camera and several rolls of film from my predecessor as well as some State Fair photos that needed to be mailed out.

During my early years as a member of state staff, a new project called the CASE Curriculum became a hot topic at national meetings. The shortage of agriculture teachers was a constant topic of discussion that morphed into the Teach Ag Campaign. National standards for curriculum



Competitions such as the Career Development Events allow students to demonstrate the knowledge learned in the classroom. (Photo courtesy of Stacy A. Gartin)

and program evaluation were discussed, discussed some more, and eventually adopted.

The Present

Today, Kentucky offers seven career pathways and much of the growth in agricultural education has been the result of new courses such as Floral Design and Small Animal Technology. Greenhouses are as common as ag shops in Kentucky and there are as many agriculture programs with microscopes as pipe benders. Across Kentucky, more females serve as chapter, regional, and state officers than males and fewer and fewer of them come from a farm background. Service learning and research based SAE programs have taken their place alongside more traditional entrepreneurship and placement projects.

The dreaded Kentucky Occupational Skill Standard Assessments are still in place and are now part of state accountability for College and Career Readiness. Instead of closing agriculture programs, this has actually helped add new programs across the state; three this year alone. These standards are driving what is taught in local programs and helping connect local teachers with the needs of business and industry.

The CAERT CD has given way to a number of online resources. Instead of developing resource binders or CDs we now post all of our resources on the NAAE Communities of Practice page. Local teachers are using Pinterest and Prezi to spice up what is taught at the local level and Skype to bring in guest speakers from around the world. The cell phones that I fought against as a new teacher are now being used during class time to look up information on projects.

Our FFA website has come a long way since the days of the floppy disk. Today multiple people can update the site from multiple locations using any wireless device. If the newly elected state officers are not posted on the site the day after Convention, folks think we are behind the times. Today Kentucky FFA has a YouTube account in addition to Facebook, Twitter, and Instagram. We can communicate with thousands of FFA members directly and instantly.

Dozens of Kentucky teachers have been trained in the use of the CASE curriculum and it has helped them move classroom teaching forward in our state. The Teach Ag Campaign has grown from an afterthought to a major focus for all of Team Ag Ed. The National AFNR standards and National Program Quality Standards are still around and are actually ready to be revised.

The Future

As noted above, our past and even our present mean little unless we have a future and that future is in our hands.

The future for agricultural education and FFA seems as bright today as at any time in the last 20 years. The challenge of feeding 9 billion people is driving interest in agriculture and agriculture related careers to new levels. FFA membership is at record levels and all kinds of participation numbers continue to grow. Still, there are many issues facing our profession that must be dealt with in the coming years to ensure a bright future.

The agriculture industry continues to grow and change and we have to be willing to grow and change with it. We have to figure out how to keep our teachers up to date and our curriculum relevant in a time of constant change. We have to have some hard conversations about what we are teaching

and why. In a day and age when drones are being used on farms and cattle are being given electronic ear tags, we are still restoring Farmall H tractors and teaching about Belted Galloway cows. A growing number of our students will work overseas at some point in their careers. We must teach them appreciation for other cultures and help them learn to adapt to new and changing situations.

Data collection, analysis, and use must become a bigger part of agricultural education in the coming decades. Collecting quality data at the local, state, and national levels must become a priority and we must learn to use this data in making decisions and promoting the work that we do. If data shows that our students are not performing, we have to figure out why and work to fix the issue. We can no longer afford to ignore data that we don't like. Anyone who has been in agricultural education for 15 minutes can tell you a great story about someone whose life was forever changed through our program. Unfortunately, policy makers don't care as much about our great stories as they do the number of students who are enrolled and achieving academic and technical benchmarks.

As the American population becomes more and more removed from the farm and a rural lifestyle in general, we must step up our efforts at advocacy and public relations. We can never assume that anyone knows who we are and what we do. Experience has taught me that even in rural communities, people assume that agricultural education and FFA are exactly what they were when they were in school 10, 20, or 50 years ago. The burden of proof for our relevance will be on our profession and this becomes more true with every passing year. We cannot afford to assume that school board members, administrators, and legislators know what we do and why that is important. We have to tell them in purposeful and effective ways on an ongoing basis.

No challenge is greater than that of providing quality agriculture teachers for every agricultural education program in the nation. Our efforts to recruit teachers, train teachers, and keep teachers is the single most important piece of ensuring that we have a future. Local agricultural education programs are never more than one bad agriculture teacher away from being closed down. We don't just need people to fill spots; we need quality individuals who can lead programs forward. We cannot depend on these quality individuals to just appear, we must recruit and train them with purpose and intensity. The future is simply not possible without them.

The future of agricultural education is truly in our hands. The investments we make today in recruiting and training teachers, sharing the story of agricultural education, using data to drive decisions, and keeping our programs up to date will determine everything that happens in the years ahead. The future of agricultural education, in fact whether there is a future, depends on us. For the sake of all our wonderful past history, I pray that we take this challenge seriously and do all we can to ensure that agricultural education does have a future.

Matt Chaliff is the Executive Secretary for the Kentucky FFA Association. He is also the Eastern Region Vice President for the National Association of State Supervisors of Agricultural Education.

Agriculture is our wisest pursuit, because it will in the end contribute most to real wealth, good morals, and happiness. Thomas Jefferson

Food for Thought… Are We Still Providing Students with Life-long Knowledge and Skills?

by Stacy A. Gartin

Do you have IT?" "DO YOU HAVE IT?" IT is hard to describe or define, but if you have IT, people will trust in you, believe in you, and will follow you. Do your students think you have IT? I believe during a teacher's initial employment most of them have IT. However, it does seem like many teachers lose their IT. My perception is that allowing students who do not have a career aspiration related to agriculture into your classes, part-time employment, farming, and coaching hinders a teacher's IT. One needs to ask, what do I need to change in my life to get my IT back. I have witnessed over the past 40 years that those teachers who have IT make a difference in the lives of their students, their program, and their community. These same teachers have an active advisory committee and understand the importance of providing adult education related to agriculture and natural resources.

> The time is now for teachers of agricultural education to "over-haul" the way they are training agricultural students to become leaders. Teachers need to rethink how to better engage the active participation of the members.

When I taught secondary agriculture, I had a community advisory committee to serve as part of a check and balance system to make sure I was meeting the educational needs and expectations of the community. The committee was made up of a magical blend of gender, age and culture. I maintain that the vested interest of that group of individuals has had a major impact not only on that high school agriculture program, but on my professional life. Their commitment and dedication was always measured by their willingness to go the extra mile. The state expectation was that an advisory committee should meet at least three times per year. However, these individuals were professionals. They didn't just want to be participants. Thus, we met monthly and maintained a proactive approach to moving the day program and our young and adult farmer program forward.

Michael Murray once said, "leaders are those who dare to dream dreams and have visions and then can communicate those dreams and visions to others in such a way that they say Yes." What are we saying YES to? We are saying "yes" to doing our part in providing our students with life-long technical agriculture knowledge and skills. This author maintains that the greatest challenge facing America in the next 25 years will be a lack of skilled laborers. If secondary agriculture programs don't help produce this skilled laborers, who else will. Thus, all the more reason to make sure high school students have high quality supervised agricultural experience programs (SAE). According to Merle "Dutch" Carwin, my high school ag teacher and author of the *Supervised Occupational Experience Manual*, he notes that the SAE should be related to the career path of the student, be challenging, and of enough size and scope to earn respect. Carwin also noted that the SAE should grow and expand in order to reflect real-life situations. Currently the first obvious problem I see is that our students are engaged in more short term, 4-H type projects. I see students earning their American FFA Degree from selling show/fair type animals and value added products at unrealistic prices. I think the profession has lost sight of the intent of the SAEP. Remember the "P" stands for "Program" not "Project." The second problem that is evident is that ag teachers are not supervising their students often enough. Teacher supervision of a

student's SAE is a motivator to the student and allows the teacher to being real-life examples into the classroom. Let us not forget that the supervision of a student's SAE whether it be entrepreneurship, placement, research, or exploratory is vitally important to motivating the student to expand his/her SAE in size and scope. These experiences are important for a student to have in his/her tool box for the rest of his/her life.

It has been said that "on the Way to the Future there will be Drivers, Riders and Roadkill." Guess who you are? You are the "Driver!" It is obvious that the success of your students and your program is dependent upon you performing your job to the very best of your ability whether you are 21 or 61. You are the "Drivers" because you are agricultural leader who should be committed to making a positive difference in the lives of the students whom you teach. I am concerned that teachers have bought into the philosophy that all kids should go to college. This author would maintain that nearly 20% of the students attending college don't belong there for whatever reason; maturity, lack of career direction, or academic preparation. For those students who don't attend college and even those who do, this author would maintain they do not have adequate "tools in their personal tool box."

I visit with college students across the country who desire to become ag teachers and they can't weld, can't read a ruler, don't know mechanical tools or how to use them correctly. They don't know breeds of animals, characteristics of animal diseases and how to treat them. They have an extremely weak knowledge of small engines, animal nutrition, genetics, wildlife, economics, and marketing. They are weak in identifying flowers, trees, insects, grasses, and production crops. Agricultural education curriculum at the secondary level has always been based on science, yet our students still lack basic agricultural knowledge and skills. The tools in their tool box should be life-long skills which should be valuable in assisting them in obtaining a good job or in pursuing further education. In the recent October GOP debate Senator Marco Rubio stated, "We need to get back to training people in this country to do the jobs of the 21st century." Why for the life of me, I do not understand why did we stop doing vocational education in America, people that can work with their hands; people you can train to do this work while they're still in high school so they can graduate ready to go to work.

Teachers of agricultural education owe it to all their students to equip them with the best tools possible in order to be successful.

This author's undergraduate advisor, Dr. Ramsey Groves at Colorado State University, always said, "if the student hasn't learned, the teacher hasn't taught." Initially I thought he was incorrect in that you can't "make students learn" if they don't want to learn. However, I was wrong. What Dr. Groves was really saying is that all students will learn if the teacher employs appropriate types of motivation and teaching strategies. I would hope that teachers realize that one size does not fit all. So, why are we buying into pre-planned curricula. Are teachers incapable of designing lesson plans which stimulate learning, utilizing the problem solving approach to facilitate learning, expecting critical thinking, and takeing learning to the doing stage?

With the development of the global market place the need for high quality leadership is more critical now than ever before. This author believes that in the near future the preparation of individuals to help lead the agricultural industry may be as important as the production of food and fiber. Traditionally, students of agricultural education have acquired leadership traits by participating in contests, conventions, hands-on training and school and community service activities. It is believed that these activities motivate dues paying members and help them develop into leaders and productive citizens of society. This author would question whether this traditional approach to teaching leadership and developing leaders is satisfactory for the 21st century and beyond.

One of the greatest challenges is to motivate our students to be the best that they can be. This is not a simple task. Creating an environment in which people feel good about themselves and their contributions is still a major problem. The climate should foster innovation and creativity. The air should be filled with genuine enthusiasm for individual as well as group goals. The clarity of verbal and nonverbal messages, listening, and feedback have a major impact on the entire communication process between and among members.

Yes, these human models not only have different exteriors and interiors, but they also have different "fuel" requirements." The "fuel" requirements which keep students actively participating come in the form of reinforcement and rewards. Teachers of agricultural education need to be aware that individuals with different personality types will require reinforcement or reward specifically tailored to meet his/her individual needs.

The time is now for teachers of agricultural education to "'overhaul" the way they are training agricultural students to become leaders. Teachers need to be rethinking how to better engage the active participation of the new members. Are they provided with multiple opportunities to be actively involved or are they expected to be bored by sitting on the sideline as an observed and not a player. Educating students to become leaders is similar to training teams for career development events (CDEs). Teachers wouldn't expect students to be successful in career development events if they weren't properly prepared. Likewise, teachers can't expect students to become leaders if they haven't received the necessary prerequisites. Furthermore, CDEs don't really teach leadership as they are the application of technical agricultural knowledge. I think we are only kidding ourselves if we think differently. I think the best we can hang our hat on is that they gain self-confidence and maybe some speaking skills.

The changing world in which we live demands more knowledgeable individuals with better leadership skills. Teachers of agricultural education owe it to all their students to equip them with the best tools possible in order to be successful. This concept is vital if we subscribe to what Tom Hennesy, 1990 Chairman of the National FFA Foundation, said, "Our product is a highly motivated, industrious young American who is self-confident, self-reliant, and selfrespecting. Through FFA we are providing a cadre of bright and capable young people with good moral values and common sense. From them let our future leaders be chosen" (National FFA Foundation Report, 1990, p. 7).

"Now is the Time, This is the Place and You are the Person." Yes, you are the person. You are the person who has the challenge of making all of your students productive citizens of society by giving them the academic tools to be successful regardless of career path. America needs you and America needs your highly skilled and knowledgeable students of agriculture.

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Reflecting on the Past While Looking to the Future

by James Knight

Reflections on the Past:

Growing up on a small dryland farm in northeastern Colorado was idyllic. I loved everything connected with that experience and when I was nine years old, I joined a 4-H club that further cemented my love for the farm and the life style that came with it. By the time I started high school, I already knew that I wanted to spend my life somewhere in the agricultural industry and enrolling in the vocational agriculture program was a "given." Fortunately, the teacher in the program was terrific and he helped me find my way. He encouraged the development of my supervised farming program and involvement in the FFA. What a great experience that was!

Initially, I wasn't sure about my major as an undergraduate but soon realized that teaching vocational agriculture would be a good career fit for me. After graduation from Colorado State University, I taught vocational agriculture for six years and loved every minute of that time in my life. With the encouragement of a mentor, I went back to College where I earned the doctorate in Agricultural Education from The Ohio State University and became a faculty member there. After 13 years at Ohio State, I transitioned to live in Arizona and spent 8 years working as an educational consultant. Then I returned to be a teacher educator in Agricultural Education at the University of Arizona where I retired after 18 years on July 1, 2014.

During the years of my experience with agricultural education, I have watched it evolve into the program that exists today. It has been interesting to watch the name change with the times. Going from vocational agriculture to agricultural education with a number of different areas of focus over the years all occurred while I was in the profession and not without some controversy along the way.

I was present at the National FFA Convention as a voting delegate for Colorado when the NFA was merged into the FFA. Then as a young vocational agriculture teacher when girls were officially admitted into the organization, I actively sought boys AND girls for my high school program. As I reflect back on those changes, I have come to believe that the agricultural education program as we know it today would not have occurred without those changes. The program was no longer just for rural white boys but became available to both boys and girls in all kinds of settings.

By the time I was a young faculty member at Ohio State, the "overhaul" of the technical side of agricultural education programs had begun and was in full force primarily as a result of the vocational education acts that were enacted at the federal level. This led to some major expansion of the definition of agriculture to include technical areas beyond farming and ranching. As a result, many specialized programs were created across the country. We also began to value the notion that the program was a "science" based program because of the nature of the technologies in the agricultural industry.

During that same time, the notion of "vocational," which tended to have a negative stigma attached, pushed the name changes that followed. As each of those changes came to the profession of agricultural education, there was more than a little debate about them. In fact, it seems to me that many of those issues still find their way into the discussions that occur today.

> Agricultural education instructional programs will continue and be an even more important part of the educational mission for this country in the future!

From an instructional perspective, consider the growth and the nature of the activities and initiatives that have come out of the FFA. (Photo courtesy of Stacy Gartin.)

In retrospect, it seems to me that sometimes the agricultural education profession was too slow to make some of the changes that needed to occur to keep the instructional programs relevant. At the same time, I believe that the profession was also too quick to adopt some of the changes because they saw a financial boost for those instructional programs. As a member of the profession for over 45 years, I'm sure that I have been complicit in both cases.

Current Observations:

One area of the program that has been of concern to me is what I would call "the boy crisis." I was active as a high school teacher and later as a teacher educator in seeking ways to open the doors for girls to enter the program. Of course, a major tool in that process was the FFA. What concerns me now is that the boys seem to be retreating from involvement in the program and in the FFA. Since girls generally mature faster than boys, they are often more capable than boys the same age, especially when considering the "leadership" types of activities made available in agricultural education and FFA programs. No doubt this comment may cause some to stir and even for some to be offended but it seems worth mentioning. Note that this year's National FFA Officer Team includes five young women and one young man. This is not a new trend.

In terms of the agricultural education programs, I believe that the profession has gotten more right answers than wrong. We have deep roots in the notion of "problem solving," which is now coming into vogue in other areas of education. The idea of making instruction relevant for the students and to have them gain "hands on" experiences are "bedrock" in our profession. Our general commitment to a pragmatic philosophy has been important to the stability and acceptance of our instructional programs across the country. This approach to instruction is the envy of many other instructional program areas. In fact, it seems to me that agricultural education is the "best kept secret" in the educational arena.

One of the most obvious and clearly successful efforts in the agricultural education profession has been the development and growth of the FFA. I'm aware of the skeptics' comments about the "tail wagging the dog" but I don't think that view holds much water. From an instructional perspective, just consider the growth and the nature of the activities and initiatives that have come out of the FFA. It seems to me it is one of the most, if not the most, productive and positive area that has grown out of the agricultural education profession. Just go to a state or the national convention and feel the energy that emerges from the participants in attendance. I feel very confident that the capacity to raise financial support for the organization is directly linked to that energy. Business and industry sponsors recognize it and are committed to supporting it. Being associated with the FFA is a GOOD thing in their eyes and we as a profession should capitalize on that in every way possible.

Of course, getting and keeping high quality agricultural instructors for the instructional programs in public schools continues to be a serious and nagging issue. In fact, that was even the issue I addressed in my doctoral dissertation in 1977. A number of activities have been attempted to deal with this issue but as far as I am aware those have only met with marginal success.

What about the Future?

Since I'm not a futurist and don't have a crystal ball, I'm not sure how well I can see into the future. In fact, I doubt that many people actually can predict the future with much degree of accuracy. However, I do have some thoughts about where I believe the profession can and should be headed in the future. As I have reflected on the agricultural education program over my involvement from a beginning student in 1960 until now, which is 55 years of contact, I am left to make the following observations:

The need for agricultural education at all levels needs to be sustained and expanded if possible. Obviously, we all rely upon an abundant and healthy supply of food in this culture and that will require lots of trained and educated people up and down the production chain. Thus, the technical side of what we do in our instructional programs will need to keep up with the times. For example, it is no longer a "sin," as it once was, to graduate from a secondary school agricultural science program and then pursue a college degree in a related field of interest. This means that teachers in the field will need to keep up with the technical developments in agriculture. Lifelong learning is needed now more than ever in the past and with the kinds of scientific developments in agriculture that seem to be coming out all of the time, teachers cannot be content with just a Bachelor's degree. More will be needed.

I believe that the basic tenets that have sustained the agricultural education programs throughout the country for nearly a century need to be a part of our future. It seems to me that the three ring model continues to be relevant to our future because it is built upon principles rather than specific content. Those principles have been successful for a long time and I don't see any reason they won't be just as important in the future. Being student centered and using relevant, "hands-on" learning works; and what would make us think that would change over time? Learning that comes from involvement and engagement is principle based as is the development of the "whole" person. Thus the use of the FFA as a tool to accomplish many of the future goals is still pertinent.

Will things change in our instructional programs in the future? Undoubtedly, they will. If, however, we keep up with the times and hold on to the basic principles that have proven out over such a long time, the agricultural education instructional programs will continue and be an even more important part of the educational mission for this country in the future! How is that for a prediction?!

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Fast food may appear to be cheap food and, in the literal sense it often is, but that is because huge social and environmental costs are being excluded from the calculations. Prince Charles

Trendy or New Teaching Aids in the Future will NOT Replace the Fundamentals of Good Teaching

by John R. Crunkilton

How many times have you heard a coach of a losing athletic team say; "We must return to the fundamentals," "We did not execute the basics," or "We were not effective in implementing what we know to be sound practices." These same questions could be posed when we as teachers feel that a class did not go well or the students did not achieve the lesson objectives.

> Agricultural education instructional programs will continue and be an even more important part of the educational mission for this country in the future!

As we look to the future and as I reflect on what it is that leads to an effective agricultural education program and specifically to the learning environment, there are some basic fundamentals of the teaching-learning process that were stated years ago that still hold true today and will continue to be applicable in the future. The purpose of this article is to highlight and remind us of several fundamentals of the teaching-learning process that have proven to be sound teaching-learning principles, either through proven research or first-hand experiences. Thus, I would return to Lancelot's three principles of learning. Each will be stated with a brief discussion to follow.

Principle of Practice - The principle of practice is that a person learns what is practiced and continued practice or use is necessary for retaining what has been learned. It must be remembered that the practice is not a mere repetitive activity, but educational practice must be a meaningful activity in which students are actively practicing sound, correct, and proper habits or skills. Also, at first glance one might think this principle of learning applies only to psychomotor or manipulative skills, but this principle also applies equally well to affective or cognitive skill development. The teacher must take on a quality control approach such that as the student practices, improvement of the skill should be measurable until such time the skill develops to the level that is acceptable.

Principle of Effect - The principle of effect implies that if students are satisfied with a learning activity, it tends to promote further student learning and encourages further practice on the part of the student. Or it could be conversely stated, if a student is dissatisfied or annoyed with a learning activity, it will stifle effective learning. Teaching-learning activities that will promote or encourage students to continue learning are those that include opportunities for students to experience approval, recognition, success, activity, ownership, confidence, creativity, service to others, and security. Further learning will be hampered when activities lead to disapproval, neglect, failure, inactivity, non-ownership, fear, self-centerness, and insecurity occurs.

Principle of Association - The principle of association implies that those experiences that first occur together tend to recur together. This principle requires that the teaching-learning process as well as content to be taught must be aligned or sequenced in the natural way that people tend to learn; and that the content is presented as it appears in real life experiences and/or in the field of agriculture. For example, teaching the correct steps to follow in planting a tree must mirror the correct steps that would be used by a landscaper in planting that tree. This principle would also include teaching students any theory as well as the practical aspects of tree planting;

that is weaving the two together such that students can understand the relationship and value of understanding theory and practice as a mutual event. And last, the teacher should generalize the correct steps in planting a tree to the planting of any shrub.

To illustrate the importance of these three principles and how as a beginning teacher educator I failed to convey these principles of learning correctly to my students, I offer this example. At the time I began my career as a university professor, the overhead projector was becoming the "big thing" in teaching aids. Thus, in my method's course, I encouraged students to use this new, innovative teaching aid. I soon learn that as I visited the student teachers, they were indeed using the overhead, but incorrectly. They were flipping the slides on the projector right and left and at a speed their students were soon left behind. Even worse were those overhead projectors that had a roll of film on the side. The student teachers were preparing their class notes prior to class and once the class began, the student teachers were merrily on their way spinning the roll of film at neck break speed without any regard to involvement of the students. Fast forward this scene to several years ago when the PowerPoint became the "in thing" to use in the classroom. Again, PowerPoints allowed teachers to present information at a speed much faster than students could absorb. If the teacher was not careful, students were left aside and soon became spectators in the learning environment. These two examples illustrate that any trendy or new teaching aid or technique now or in the future will not replace the fundamentals of good teaching. Referring back to the principle of practice, incorrect use of overhead projectors and later to PowerPoint presentations can stifle meaningful practice for the students; unless the teacher purposely slows down to allow practice as part of the daily lesson. For the principle of effect, misuse of the overhead projector or power point presentations soon left a bad taste in the mouth of students. If the teacher did not plan accordingly, students felt neglected, were inactive, exposed to dull teaching, and in general, this situation led to poor performance on tests, all illustrating the importance of this principle of learning. For the principle of association, it is true with proper prior preparation of a transparency or power point, the sequence of an instructional topic or curriculum content can be assured. But what can be overlooked if the teacher does not purposely plan is on-the-spot teacher input and dialog, student input and dialog, and an overall group and shared effort in the teaching-learning environment.

As observed in the past and applied in the future, all educators must remember what is involved in any effective educational program (see Figure 1). If we look at this formula, what do teachers really control every day in the classroom or laboratory? Certification standards in each state govern who can teach and the qualifications needed to be eligible to teach. Students come into our programs basically on their desire to enroll rather than on any admission standards. The agricultural technical content to be included in a curriculum is a place where teachers might have great influ-

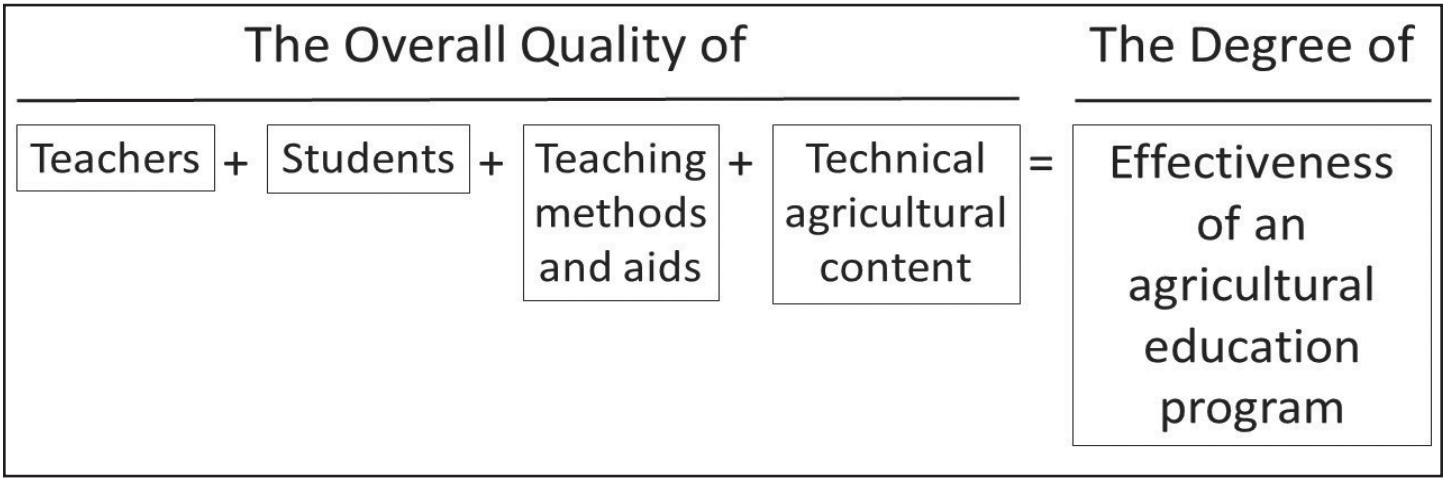

Figure 1: A Model of An Effective Educational Program

Skill development and problem solving go hand-in-hand in agricultural education programs. (Photo courtesy of Stacy Gartin.)

ence, but even here some states may have approved curriculum guides that outline what is to be included in a course. The actual agricultural content that needs to be taught in our classrooms and laboratories should be based on the agricultural industry standards. It is here that the industry, society, and general welfare of the public of tomorrow must have a strong influence on what is taught in an agricultural education program of the future. The place where the teacher truly has the greatest day-to-day decision making task that will determine the effectiveness of the learning environment is how to put all of these elements of a program into a package that will lead to an effective teaching-learning environment. This is where the art and science of teaching merges and ultimately determines the success of the program. Science enters this equation by the fact that the teacher, in planning a lesson, should incorporate the findings of research studies which identify those teaching practices and approaches that lead to an effective teaching-learning environment. The art enters the picture once the bell rings and class begins. Once the instruction begins, the teacher must be ready spontaneously to bring in thoughts that occur on the spot and that relate to the teaching material, take advantage of relevant student input not envisioned, use current events or activities that may have occurred recently and that relate to the content, and use any unforeseen input that will help to bring into clearer focus the material to be learned. This is where the true science and art of teaching merges, that being the blending of the science of good teaching with the humanistic and personal strengths of the teacher.

In a review of the writings of early educational philosophers on the subject of effective teaching and learning in Ulich's book, *Three Thousand Years of Educational Wisdom*, one will find that Lancelot's three principles of learning reflect what the early educational philosophers thought and wrote about many years ago. Thus, until such time that science produces an injection, pill, or brain microchip to instill knowledge in humans, we as teachers must continue to use and apply basic teaching-learning principles in our teaching environment in order to expect and achieve an effective teaching-learning educational program. It is imperative that teacher certification course syllabi today and in the future continue to include those basic fundamental principles of good teaching-learning.

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Editor's Note: *The National Collegiate Agricultural Education Essay Contest is held in October of each year with participants developing their essays from a topic selected by the host chapter advisor. The essays are presented at the National ATA Conclave. Students competed in two divisions this year: the traditional Individual Essay division and the Co-Author division (two or more authors). The winning essays are included in this issue.*

Modern Day Interpersonal Skills in Agricultural Education

by Taylor Cooper

As a soon to be second generation agricultural education teacher, I enjoy comparing the teaching style that my father developed when he went to college 30 years ago with the one that I am creating for myself currently. The differences between the two are astounding. Whereas he learned to focus more on the production side of agriculture because that was what was going to be essential for the kids of that time, I am learning that developing a different set of skills that are essential for students in the 21st century. Interpersonal skills such as critical thinking, adaptability and collaboration are becoming the essential skills for students when they enter the work force in our modern day society. The best way for students to really develop these skills is for teachers to apply them in aspects of the three-circle model that agricultural education is based. The three-circles that make up the basis of agriculture education consist of: SAE or supervised agricultural experience, FFA participation, and finally classroom learning. It is in these different circles of agricultural education that we see these century skills being applied.

> The agricultural education three-circle model plays an important part in developing modern day skill sets that are required for students of this generation.

In the supervised agriculture experience (SAE), students are expected to begin and manage their own project. This project can be one that focuses on what students may do at home, on the farm or another job they may have. Critical thinking plays a huge role in what a student must complete with their SAE projects (Lamm, 2012). With critical thinking skills, students are able to solve problems that they may come across during their projects. If there is a shortage of feed for their herd of cows or if one of their tractors broke down during planting, students need to possess these critical thinking skills to help with that. With critical thinking skills, students will be able to work around any problem that is set in front of them.

In FFA, a leadership based organization that students can participate in outside of their classroom learning, students have a wide range of different competitions and other activities that students can participate in. Through career development events or competitions, students are afforded the opportunity to discover and tap into their potential as leaders (Rose, 2014). Adaptability is one skill that is essential for potential leaders and students to gain from FFA. Because of the numerous different competitions that are offered to students of this organization, they must be able to be diverse enough to participate in any of these competitions at a moment's notice. On the other side of FFA, the ability for students to be adaptable at different conventions really shows how well they can fit into new environments and organize themselves into a group. Adaptability in the workplace is essential for working in a new surroundings as compared to their past setting.

In an agricultural education classroom, students are able to learn information that is more

agriculture based through classes such as animal science or agribusiness. It is in these classes that we see skills such as collaboration and communication really come forth. Harnessing that and teaching them "how" to collaborate is critical in ensuring they learn this skill and can apply it successfully in all educational and life situations (Jones, 2015). By allowing students to work in groups really allows collaboration between students to become stronger. They are forced to communicate with each other and work on ways to solve a problem or work on a worksheet. If students don't have these skills going into college or the work place, working with others will not go well.

In conclusion, the three-circle model for agricultural education consisting of SAEs, FFA and classroom instruction play an important part in developing modern day skill sets that will be required for students of this generation. The competition for jobs is starting to pick up, requiring more interpersonal skills as compared to when my father was in college when they were taught that production skills could get any agriculture student the job they wanted. The world is changing and it is important for all agricultural education instructors, new as well as old, to learn how to apply all of them in their everyday lives.

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I have always loved the fast pace of the city and am interested in bringing the rural agriculture that I grew up with to the city and urbanizing it. However, my long term goal is to become a professor of Agriculture Education at a university because I want to be able to help educate our next generation of Agriculture Education Teachers. To pass on my knowledge of what I have learned in my time and inspire our next generation of Ag. Educators is my greatest passion. This passion stems from my father and his drive to educate others as well. I want to be able to continue where he leaves off and continue to spread the knowledge he and many others have bestowed upon me.

I have always said there is only one thing that can bring our nation down – our dependence on foreign countries for food and energy. Agriculture is the backbone of our economy. John Salazar

How the Three Circle Model Develops 21st Century Skills in Students

by Erin Yoest and Miranda Kane

The dynamics of professionalism were much different before the turn of the century. Society has since shifted and realized that perhaps soft skills, known as twenty-first century skills, are just what people need for successful careers. Alongside society's push for these skills are agricultural education programs and the implementation of the three circle model. It is the framework for any efficient agricultural program. The three components of this model are classroom/laboratory instruction, FFA, and supervised agricultural experience. When all three of these components are implemented correctly, it generates student success. Therefore classroom instruction yields problem solving skills, FFA creates leadership and teamwork, and SAE provides critical thinking and responsibility.

> The major result of the study was that students who participated in the program gained social skills, possessed knowledge of the industry, and were capable of becoming effective members of society.

Classroom and laboratory instruction present problem-based learning of topics within the agriculture and natural resources industries. These industries are constantly changing due to advances in science and technology, which means the curriculum, is constantly changing to match the industry growth. One example is the natural gas industry. This industry has brought jobs to small town communities and recent high school graduates. Students also attend college to gain skills for work in the oil field. Students can develop the basic skills and knowledge on the industry in an agriculture classroom. By having hands-on experience that agricultural education promotes, students can look critically at situations presented to them. The classroom component prepares students for careers in innovating new solutions to world issues through problem solving skills.

The second component of the three circle model is FFA. FFA is an intra-curricular organization that strives for students to develop premier leadership, personal growth, and career success through the many opportunities available to students. The FFA has a code of ethics, official dress, multiple leadership conferences, career development events, and awards. Each of these factors in FFA cultivates strong leaders who can effectively communicate and be team players. Employers constantly seek recommendations and skills that emphasize this. Skill sets are installed in students through all that the FFA offers. Career development events, for example, are contests that allow students to develop career-ready skills and self-efficiency based on Herzberg's Motivation-Hygiene Theory (Phipps, Osborne, Dryer, & Ball, 2008). FFA is connected to the classroom through these contests and the ever changing industry of agriculture.

The final component of the three circle model is supervised agricultural experience, or SAE. Students have projects that they keep records on throughout the year. These projects are based on the problem-solving approach used in the classroom. Twenty-first century skills are gained through students participating in the real-life situations that SAEs present. Students become marketable for employment because of these projects. They gain skills in record keeping, finances, and critical thinking. They develop a sense of responsibility that is important for young members of society to have. SAE programs are integrated into the classroom and FFA experience through application of information learned in the classroom and proficiency awards.

When all three components are implemented in a program, students gain the twenty-first century skills needed in the workforce today. According to a study published in the *Journal of Agricultural Education*, In a contextualized learning environment, such as the agricultural education classroom, students use knowledge learned in class (i.e. FFA, SAE projects, etc.), to transfer and apply in daily life (Dailey, Conroy, & Shelley-Tolbert, 2001). The major result of this study was that students who participated in the program gained social skills, possessed knowledge of the industry, and were capable of becoming effective members of society. Each of these skills is learned through the three circle model that agricultural education stands true to today.

Deeper examination of the Three Circle Model reveals that just as the three circles in the diagram overlap, so do the skills. This is perhaps the most critical part of the Three Circle Model and how it relates to the twenty-first century skills. Students can walk away not only learning the skills, but applying it and using it in all aspects of agricultural education and life.

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Does Agricultural Education Have a Future?

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ning to sound like a broken record but this leads to a deeper understanding of the subjects and improves the retention of the knowledge.

Implemented properly the leadership component (FFA Organization) becomes a valuable teaching component. It provides incentives for students to excel in their classroom/laboratory education, as well as their experiential learning components. It is the tool that is used to teach leadership and citizenship skills.

Does agricultural education have a future? The content and composition of agricultural education programs have changed radically since its inception. Just as the number of individuals involved in production agriculture has dropped steadily to a low of less than three percent, the composition of agricultural education programs has changed from a majority of "farm students" to today's programs composed of few "farm students." There is still a need for a workforce of individuals with knowledge of agriculture concepts, therefore there is still a need for agricultural education at the high school. As we change programs to meet these new circumstances, don't forget the cornerstones of our success to date: experiential learning, problem solving, kinesthetic learning, and the leadership component. If we keep these items as cornerstones of our program, agricultural education will have a bright and prosperous future.

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