

## **FOOTPRINTS IN THE AGRICULTURAL EDUCATION PROFESSION: THE APPLICATION OF PRINCIPLES**

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A principle is defined as a basic rule that guides practice or future action. Over time, principles are tested, and based on the results, each is confirmed, eliminated, or modified. Principles that prove to be effective and efficient are valued, continued, and shared with others to provide order, integrity, and strength to practice.

Agricultural education principles are the foundation for education in agriculture. Some have been derived from years of research and practice; others are new and still being tested. Agricultural education principles are applied through program planning, teaching and learning methodologies, and program evaluation in a variety of settings, including universities, schools, extension, agencies, and industry (Williams, 1991a). Barrick (1989) concluded that the principles of teaching and learning in agriculture are the same; only the application settings differ.

Principles also guide research and scholarship. The discovery of new knowledge is crucial to the development of the agricultural education discipline, and scholarship communicates new information to drive the profession forward. Both are highly important to the development of the discipline and profession of agricultural education (Williams, 1997).

### **Purpose and Methods**

The purpose of this paper is to focus on selected principles that have made the agricultural education profession strong. The methods used to achieve this purpose are somewhat unique, requiring participation by readers. I will share scenarios, and readers can identify the embedded agricultural education principles. A scenario is defined as the plot of dramatic work, giving particular scenes, characters, and situations. Readers can note the agricultural

education principles at work in the scenarios and compare them with a list provided in the summary section. In addition, readers are encouraged to make a list of scenes, characters, and situations from their personal lives and careers.

### **Presentation and Analysis of Scenarios**

#### *Family Scenario*

Some readers are from Oklahoma, others have visited there, and some may know about the state from stories heard or from seeing the play or movie entitled *Oklahoma*. The first scenario introduces a family from the plains of Oklahoma.

A young man named Lewis grew up in southwestern Oklahoma on a farm that his father homesteaded at the opening of the Big Pasture, now known as Cotton County. He had his eyes on a young neighbor lady named Bertha whom he observed to be very handy in helping with family chores. The two decided on matrimony, became tenant farmers, and started a family during the Great Depression. After a few years, the couple set their sights on buying a farm down the road with a white house and a big red barn, two miles from Red River. When they moved to the new farm, their first-born son, David, was five years old and ready to start school at the Rabbit Creek Elementary School, a one-teacher, country school.

The new farm was the family's pride and joy. Plans were made with the help of the Soil Conservation Service (now Natural Resources Conservation Service, NRCS) to build terraces and ponds to help conserve soil and water on the farm, and contour farming and crop rotation practices were valued. Yes, the character named David is me, and I apologize in advance for the use of personal references and pronouns, but they seem appropriate for the methodology employed.

### *High School Student Scenario*

My awareness of careers in agricultural education started while I was a 4-H member. Our county extension agent, Jasper Harl, inspired me through his occasional visits to our farm and his encouragement for me to develop a beef cattle 4-H project. He was my first professional role model beyond my parents, schoolteachers, and church pastor.

While showing livestock as a 4-H member at the county fair, I found the FFA members from neighboring schools to be stiff competition. I observed that they had agriculture teachers on a daily basis compared with my occasional instruction from a volunteer 4-H leader or the county extension agent. I did have help from my parents however, as do most 4-H and FFA members. My mom tells the story of my dad saying one day in his later years, as he looked out the kitchen window at the farmstead, "I really miss helping the boys get their projects ready for the fair."

County fairs provide a community-based learning environment where students can compare and showcase their accomplishments while developing civic responsibilities. The knowledge gained by fair exhibitors and spectators helps meet community needs and improves agricultural practices. For example, the beef animals I owned and managed as 4-H projects had a positive impact on the quality of the cow-calf program on our family farm for years after the ribbons were gone. My dad even allowed me to experiment with a new variety of wheat on the "Back 40," away from the road so neighbors would not see it in case of a failure.

Agricultural education was added to the Randlett High School curriculum a few years after I graduated, allowing my younger brother, Jerry, to participate. And, my sister, Bonnie, was selected to serve as Sweetheart of the Big Pasture FFA Chapter one year.

### *College Student Scenario*

Upon entering Cameron Junior College at Lawton, Oklahoma (now Cameron State University), I was asked to declare a major for later transfer to Oklahoma State University (OSU). Thinking of my success in raising, showing, and judging livestock, I

initially declared animal science as my major, but later changed to agricultural education, setting my goal to become a teacher.

During my agriculture teacher education program at OSU, I learned that secondary school agricultural education programs provide systematic learning opportunities through classroom instruction, supervised agricultural experience (SAE), and the FFA. My cooperating teacher, Gene Beach at Muskogee, Oklahoma, was a master at integrating these three learning components. It was widely known that when Chris White visited a student teacher, he expected to see students involved in problem-solving learning.

Through encouragement from Robert Price, I became an active member of the Collegiate FFA Chapter at OSU. My involvement included attending the 1958 National FFA Convention and reporting back to the chapter. Observing FFA members in action at the national level confirmed my desire to be a teacher of agriculture. "In the Collegiate FFA an active member has the opportunity to speak in public and to assume responsibility. These are important qualities of a good leader..." (Williams, 1959, p. 1).

While at OSU, I enrolled in soils courses, including soil and water conservation and soil morphology. The scientific study of soils, including soil judging, classification, and mapping, intrigued me.

During my senior year at OSU, one of my agricultural education classmates, Wesley Rayner, introduced me to his redheaded cousin, Sylva Secord, from Nash, Oklahoma. Every time my learning team met at Wesley's house, she was there. A wedding at Boot Hill in Dodge City, Kansas on September 11, 1959, yielded a long-lasting serendipity from my college days.

### *High School Teacher Scenario*

After turning down a career opportunity with the NRCS, my goal to be a teacher of agriculture education came true in 1959 at Ensign, Kansas, a small town southwest of Dodge City, where I had an opportunity to apply agricultural education principles. Those first few years of teaching were

challenging but rewarding to observe the growth and development of my students. Sylva helped me with FFA activities, including cooking mountain oysters, accompanied me on SAE visits, and baked cookies for my young farmer and adult classes, facilitating community relations for a new teacher in the community.

Students had many learning opportunities available to them, including study abroad programs beginning in the early 1960s. One of my high school students, Arlen Etling, was among those early FFA globe-trotters. He is now Professor and Director of International Agriculture Programs at the University of Nebraska-Lincoln. Student engagement in highly visible activities is an important program marketing strategy. My international experience at that time was limited to an assignment in Germany with the Army.

While serving as a cooperating teacher for Kansas State University (KSU), I observed Howard Bradley supervise student teachers at my school. I started thinking, I could do that, I would enjoy doing that, and I set a new career goal to become a university professor of agricultural education.

A few months ago, one of my former students, a sophomore my first year of teaching, called to say he and his son were in Ames for a couple of days and wanted to see Sylva and me. Terry Hamilton and his son are now partners in a farming operation near Ensign, Kansas and they were in Iowa for training on the operation of a new corn planter they had purchased.

#### *Master's Student Scenario*

While teaching in Kansas, I earned my master's degree at KSU. I recall one summer session enrolling in my first research methods course that focused on basic research methodologies, introducing me to the scientific method used in research.

Upon completion of my thesis under the supervision of Ray Agan, I tried my hand at publishing and prepared an article for *The Agricultural Education Magazine*. I was shocked when I received the manuscript back and saw all the red comments by the editor, J. Robert Warmbrod. But I did

exactly what he suggested and the article was later published (Williams & Agan, 1965).

I had the opportunity to serve as an officer in the Kansas Association of Agricultural Educators. In 1966, I was selected to represent Kansas at the National Association of Agricultural Educators Convention in Denver, Colorado, my first opportunity to participate in a national professional meeting.

#### *Doctoral Student Scenario*

After eight years of teaching, I was encouraged by Robert Price to return to OSU to pursue the doctoral degree. Courses that examined agricultural education principles and practices along with advanced research methods and statistics courses provided me with a better understanding of the discipline of agricultural education, the scientific study of teaching and learning in agriculture (Barrick, 1989; Williams 1991a). Writing a U. S. Department of Education grant with the help of Bill Hull funded my dissertation research on SAE (Williams, 1968), a research signature area that I would return to later in my career.

Looking back, I could have done a better job relating my graduate studies to the discipline of agricultural education. I did not fully realize the impact that changes in agriculture and education have on agricultural education. I could have made better use of my professors as mentors. My dissertation research could have had a stronger theoretical base in experiential learning. I could have set earlier goals to practice sound science and to become a scholar (Williams, 1997).

#### *Assistant Professor Scenario*

My first assignment upon entering the professoriate at the University of Illinois (UI) was to teach the methods of teaching course that seniors take prior to student teaching. The expectation was that the student teachers would be able to use the problem-solving approach in teaching that Al Krebs had perfected earlier in the cooperating teachers. I remember observing Illinois master teachers in the classroom where each step in the problem-solving approach to teaching was evident.

My research included work with Lloyd Phipps and Hollie Thomas on an educational program for rural youth with special needs funded by the U. S. Department of Education (Phipps, Thomas, & Williams, 1971). The project bridged educational and agricultural initiatives to address social and economic problems, providing me with first-hand experience with the foundation and footings of the discipline of agricultural education (Williams, 1991a).

Another initiative in the early 1970s was program planning in agribusiness education and related professional development of teachers, including such for postsecondary technical agriculture programs. These initiatives frequently included partnerships with agricultural business and industry (Williams, 1972).

Lloyd Phipps challenged me to try my hand at writing a high school level textbook. He recommended that I work with Leo Knuti in authoring a new edition of *Profitable Soil Management* (Knuti, Williams, & Hide, 1979).

#### *Associate Professor Scenario*

One year after earning tenure and being promoted to associate professor at the UI with mentoring by Paul Hemp, I was invited to serve as a visiting professor to teach a summer short course at Iowa State University (ISU). At the end of the course, I was invited to apply for a vacant position that Harold Crawford eloquently described as a leadership and research position in the profession of agricultural education. Opportunities for professional growth included providing leadership for graduate education and conducting research under the auspices of the Agricultural Experiment Station. After a few months on the job, I was at the National FFA Convention with Clarence Bundy where he introduced me to some of his friends as his replacement at ISU. Knowing Professor Bundy's legacy, that was the best introduction I had ever had and perhaps the greatest challenge of my career.

My research program at ISU focused on SAE, building upon my dissertation (Williams, 1968). Willie Rawls assisted me with databases that fueled journal articles and paper presentations on SAE (Rawls &

Williams, 1979; Williams, 1978; Williams, 1979). We had needed consulting help from Richard Warren and Tony Netusil, statistics professors at ISU. I did not fully realize at that time that a research program can be a tool for planning a career and setting goals for preeminent scholarship (Williams, 1991b). I later learned by observing my colleagues in other disciplines that it may take a lifetime of research in a focused area to significantly impact practice.

I learned that graduate education and research go hand in hand. Graduate students working with a professor in a focused area of research not only provides a good mentoring environment for students, but also provides opportunities and recognition for the professor. For example, Gary Briers' dissertation enhanced my research program when his work on SAE was published as exemplary research in agricultural education (Briers & Williams, 1982).

#### *Professor Scenario*

The top rank in the professoriate brings with it obligations and rewards. Full professors are expected to be leaders and risk-takers in the profession. Interdisciplinary projects may be more amenable at this stage in one's career. It may even allow one to return to some personal life-long interests. For example, I had the opportunity to partner with the NRCS to help implement the conservation provisions of the 1985 Farm Bill (Williams & Weber, 1990). This initiative led NRCS to station Eldon Weber at ISU to assist with conservation educational endeavors, including the involvement of high school agricultural education programs, to help implement the Iowa Ground Water Protection Policy (Williams & Weber, 1991). These activities led to research and development initiatives in sustainable agriculture, providing direction for teaching agricultural practices that are economically sound, environmentally friendly, and socially acceptable (Williams, 2000, 2001a).

Leadership may be through scholarship in discovery, learning, or engagement. Success in one area frequently leads to opportunities in the others. For example, a focused research program in SAE resulted in me being asked by Bob Seefeldt and Ted

Amick to help provide leadership for the 1982 and 1984 national workshops on SAE.

Serving as president of the American Association for Agricultural Education (AAAE) resulted in me being asked by Larry Case to help plan and conduct the 1988 national workshop on integrating science into the agricultural education curriculum. Using a “train-the-trainer” approach, over 200 leaders in the agricultural education community from 43 states received hands-on experience with scientific dimensions of agriculture. The Walt Disney EPCOT Center in Orlando, Florida provided a setting where participants could dream about a new future for agricultural education (Williams & Pope, 1989). Considering the follow-up work by states, some believed this was the most important teacher update and curriculum reform initiative ever for the agricultural education profession. A big part of the success of that conference can be attributed to the partnership among organizations, including the U. S. Departments of Education and Agriculture, the National Council for Agricultural Education, the National FFA Organization, state departments of education, universities, industries, and local schools.

#### *Department Head Scenario*

The leader of an academic program is responsible for not only the present, but also the past and future of the unit. The leader is charged to build upon the past accomplishments of faculty and alumni, serve the present students, faculty, administrators, and other stakeholders, and to build for the future. Lee Kolmer compared the responsibility of a department head with that of a young person taking over a century family farm, wanting the business to prosper during their watch.

As a department head, my philosophy was to hire good people, help them get focused, provide them with the best work environment possible, help them become engaged in the profession, and then get out of their way. David Topel said that another reason for hiring good people and helping them grow professionally is that some day they may be your boss. Both Richard Carter and Robert Martin followed me as effective

leaders of the Agricultural Education and Studies Department at ISU, and they have both been good bosses.

#### *Associate Dean Scenario*

In the early 1990s, the Office of the Provost asked me to serve on a search committee for a new Dean of Education at ISU. In the process I volunteered to be the host for one of the finalists, allowing me to spend considerable time with the candidate. After Norene Daly accepted the position, I sent her a note of congratulations and visited with her occasionally during her first year in the deanship. At the end of her first year, she asked me to accept an assignment in the dean’s office. Little did I know that she had been closely observing the Agricultural Education and Studies Department since her arrival on campus. As I worked in the dean’s office, I used agricultural education principles and practices to serve as models for other disciplines in the scholarship of discovery, integration, application, and teaching (Boyer, 1990).

Other evidence that agricultural education does have transferable valuables can be found in the fact that 12 members of the 1999 agricultural education professoriate were serving as deans, one as vice president, and one as chancellor (Williams, 2001b). It is an honor when members of our profession are selected to serve at higher levels in the academy.

#### *Senior Faculty Scenario*

Faculty members know that they have arrived at the apex of their career when they are invited to a meeting of the senior faculty. I recall David McCracken telling me when this happened to him for the first time at The Ohio State University. I have received such invitations from my department, college, and university in recent years.

Being a senior faculty member brings opportunities to help in unique ways, and the university may even give you a special title, such as University Professor. Serving as a mentor for new assistant professors has provided me with a different frame for viewing the agricultural education profession and its environment. Working with graduate students renews my excitement for adding to the body of

knowledge through research and scholarship. And teaching undergraduates reminds me that we are in the business of making a difference in the lives of people. It is a special treat now when one of my students asks what my parents were like when they were in college? Of course, I can only remember the good things.

Global experiences may be more frequent in the later stages of a career, providing one with a broadened perspective on education, agriculture, and life. Hearing someone from Costa Rica or Nepal say, "We want agricultural education and FFA for our students just as you have in the United States," or "We want to develop youth and adult extension programs following the American model," makes me proud of the agricultural education profession.

Being a senior faculty member can also be a time for old dogs to learn new tricks. Wade Miller, Larry Trede, and Gaylan Scofield have challenged me with computer technology, and Richard Carter and Greg Miller have introduced me to distance education methodologies.

More time to enjoy the family should also be a priority for senior faculty. My daughter, Lori, asked, "Can we meet for dinner?" My son, Mark, asked, "Do you want to play golf this weekend?" My granddaughter, Amanda, asked, "Grandpa, will you make up some practice algebra problems for me?" My daughter-in-law, Jennifer, asked, "Do you have time for a walk in the park?" Sylva asked, "Should we have friends over to watch the ball game?" Taking time to say "yes" to these types of opportunities is important. Harold Crawford tells me to "take time to smell the roses," but I am not sure he always practices what he preaches.

### Summary

#### *Principles Applied*

These scenarios reveal several agricultural education principles at work. Many of them have been tested and proven to be effective in teaching and learning in agriculture, providing a foundation for practice, research, and new developments. Others are being tested or further developed. The agricultural education principles

embedded in the scenarios include the following (Readers can compare their lists with the one below.):

- Career awareness and exploration in and about agriculture
- Pride in agriculture
- Role models and mentors
- Involvement of family members
- Improvement in agricultural practices
- Needs and interests of students
- Entrepreneurship
- Experimentation
- Articulation
- Career preparation in agriculture
- Goal setting
- Professionally trained educators
- Systematic instruction
- Integration of classroom, SAE, and FFA learning
- Community-based education
- Citizenship
- Experiential learning
- Leadership development and practice
- Problem-based education
- Use of the scientific method
- Teamwork
- Use of research to guide practice
- Communication of principles, practices, and new ideas
- Professional development and growth
- Global dimensions
- Life-long learning
- Conservation of natural resources and the environment
- Use of sound science
- Scholarship
- Education for students with special needs
- Enhancement of the agricultural education discipline
- Curriculum reform
- Partnerships
- Discovery of new knowledge
- Interdisciplinary initiatives
- Transfer of knowledge
- Use of educational technologies

#### *Colleagues Who Helped*

Family characters in these scenarios provided direction, encouragement, and stability in my life. The colleagues

named provided learning opportunities, introduced new challenges, and offered support along my career pathway, leaving their footprints in the agricultural education profession. In both cases, the efforts of others on my behalf were timely and greatly appreciated. I hope readers were reminded of scenes, characters, and situations from their own lives and careers where agricultural education principles were applied. The colleagues named in the scenarios and their positions at the time cited follow (Readers should review their lists of people impacting their lives and careers.):

- Ray Agan – Professor of agricultural education at KSU
- Ted Amick – Staff member at the National FFA Center
- Kirby Barrick – Professor of agricultural education at The Ohio State University
- Gene Beach – Agricultural education teacher at Muskogee, OK
- Howard Bradley – Professor of agricultural education at KSU
- Gary Briers – Ph.D. student at ISU
- Clarence Bundy – Professor Emeritus of agricultural education at ISU
- Larry Case – Staff member at U.S. Department of Education
- Richard Carter – Head of agricultural education and studies at ISU
- Harold Crawford – Head of agricultural education at ISU
- Norene Daly – Dean of College of Education at ISU
- Arlan Etling – Student in agricultural education at Ensign, KS
- Terry Hamilton – Kansas farmer and former student at Ensign, KS
- Jasper Harl – Cotton County (OK) extension director
- Paul Hemp – Head of agricultural education at UI
- William (Bill) Hull – Professor of agricultural education at OSU
- Lee Kolmer – Dean of College of Agriculture at ISU

- Al Krebs – Professor of agricultural education at UI
- Leo Knuti – Professor Emeritus of agricultural education at Montana State University
- David McCracken – Professor of agricultural education at The Ohio State University
- Robert Martin – Head of agricultural education and studies at ISU
- Greg Miller – Associate professor of agricultural education and studies at ISU
- Wade Miller – Professor of agricultural education and studies at ISU
- Tony Netusil – Professor of educational research and evaluation at ISU
- Lloyd Phipps – Head of vocational and technical education at UI
- Robert Price – Head of agricultural education at OSU
- Wesley Rayner – Student in agricultural education at OSU
- Willie Rawls – Ph.D. student at ISU
- Bob Seefeldt – Staff member at the National FFA Center
- Gaylan Scofield – System support specialist at ISU
- David Topel, Dean of College of agriculture at ISU
- Hollie Thomas, Assistant professor of agricultural education at University of Illinois
- Larry Trede – Professor of agricultural education and studies at ISU
- J. Robert Warmbrod – Professor of agricultural education at The Ohio State University
- Richard Warren – Professor of statistics at ISU
- Eldon Weber – Staff member of the NRCS
- Chris White – Professor of agricultural education at OSU

### Conclusions

There is a popular poem entitled “Footprints in the Sand” (2000) that describes divine help one receives along life’s pathway. But people helping people is also essential. As I look in the rear view mirror at scenes of my life and career, I see single, double, and even multiple sets of

footprints along the way. When I see only one set of footprints, those were times when someone was carrying me -- a parent, a professor, or a colleague. Or perhaps I was helping someone at a crucial time in their life. When there are two sets of footprints, someone was showing me the way -- a county extension director, a mentor, or a superior. In other cases, maybe I was helping someone else -- a student, a teacher, an assistant professor, or a granddaughter. Some big undertakings, such as nationwide professional development of teachers and curriculum reform, required a team of people to get the job done, resulting in multiple footprints in the profession.

We can conclude that it is fine to step on others, but don't step too hard. Just as people have provided stepping stones for us in our lives and careers, we should do the same for others. The characters in the scenarios are some of the people who have provided stepping stones for me. And in many cases their footprints in the profession actualized agricultural education principles. I have found that sometimes one needs to lead and at other times it is best to follow; wisdom is to know the appropriate time for each. But, regardless of our role, there are principles to guide the way.

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