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**The Significance Agricultural Education**

 “Education is like a seed. It is not planted just so it can grow and be harvested. With hard work, education takes roots. It replenishes. It nurtures a lifelong love of learning. It is truly a gift that keeps on giving.”[[1]](#footnote-1) Secretary of Education Arne Duncan stated this in his address to the National FFA Convention in October 2010. Secretary Duncan has clearly recognized the impact of education in the lives of students. Similarly, agricultural education has made a profound impact in the lives of many present and past students, and will continue to impact students’ lives in the future. Agricultural education allows for students to explore the many facets of agriculture, leadership, and the economy. However, throughout history, agricultural education has encountered many large obstacles. Although many people argue agricultural education is outdated and no longer valuable in the evolving global economy, because of the deep roots agricultural education holds in American History, the practical application of content, and the social and economic benefits of the agriculture industry on the United States, agricultural education is valid and necessary for students today.

 In order to completely analyze the full impact of agricultural education on society, it is critical to understand and define agricultural education. Agricultural education is a form of education that emphasizes connections to leadership and production agriculture. Agricultural education courses, along with family and consumer science, industrial technology, and medical training courses, are considered to be vocational education courses. These types of courses share one common goal - to provide practical educational experiences and relate those experiences to a particular career area. Therefore, in agricultural education courses, students learn about the science of agriculture and relate their knowledge to a variety of careers in the field of agriculture. Common agricultural education courses include introductory animal science, plant science, natural resource science, biotechnology, and youth leadership courses. Some agricultural education departments partner with science departments and offer courses such as food chemistry, anatomy, environmental science, and ecology courses that are taught with an emphasis on both the scientific method and agriculture.

 Agricultural education courses are designed to teach students more about how the world around them works. Through agricultural education courses, students are introduced to the National FFA Organization by successfully planning and completing a Supervised Agricultural Experience (SAE) project. This project allows for students to demonstrate their knowledge of the agriculture industry in one of four ways: conducting an agriscience experiment, becoming employed, starting a business, or exploring all facets of agriculture in a research-based endeavor. Once a student develops his or her SAE program, they can develop connections with others in the community while developing leadership skills, technical skills, or more knowledge of about agriculture in general.

 The impact that agricultural education has had on the people of America is profound, even for those who were not involved in it during their time in school. When Secretary of Education Arne Duncan addressed the National FFA Convention in October 2010, he patronized all members for their dedication and efforts in the field of agriculture, even during their years in high school. But at the same time, he also recognized all agricultural educators for their hard work in their profession. “I am not going to kid you. I am a city kid. I grew up on the South Side of Chicago. I played a lot of playground ball. So as a big-city school superintendent, and now as the Secretary of Education, I've had to get schooled myself about agricultural education. I've loved that opportunity, and I'll tell you what I've learned. I've learned that agricultural education is central to the future of American prosperity. I learned that agricultural educators face unique challenges—but that they also can tap into unique strengths within their tight-knit communities. I learned that agricultural education is very much about the jobs of the future—and not a backwards-looking curriculum to preserve the past.”[[2]](#footnote-2) Even though he was not involved in agricultural education as a student, Secretary Duncan has noticed the impact of agricultural education in the lives of others.

 Now that value has been given to the meaning of agricultural education, the history of agricultural education can be interpreted contextually. Agricultural education courses began to be formulated between the years of 1825 and 1850, especially on a college-level.[[3]](#footnote-3) These courses were not necessarily popular, and very few institutions featured them. However, in 1862, the Morrill Land Grant College Act was passed, allowing for the further expansion of agricultural education at the college level.[[4]](#footnote-4) These introductory agriculture courses continued to grow in popularity, and by the 1890s, additional agricultural education courses began to be offered at a high school (or secondary) level.[[5]](#footnote-5) These two events can be considered the foundation of agricultural education in America’s education system, as they were the initial courses offered for all students.

 During the early 1900s, the agriculture industry in the south was booming with a variety of crops being harvested. Therefore, in 1906, Booker T. Washington began a program that can be considered “agricultural education on wheels.”[[6]](#footnote-6) Washington traveled throughout the southern states to advocate the importance of agriculture as an industry. He pioneered advocacy for agriculture by promoting it to nearly everyone he met by demonstrating his passion and experience in the area through his leadership abilities. He taught numerous young children about how to till the land and care for their animals and crops, and encouraged these children to seek new and innovative methods of bettering production agriculture. Washington is claimed to have sparked interest in the lives of many young agriculturalists, and he is still admired by many present-day agricultural education instructors for his innovative teaching ideas.

 A major event in the history of agricultural education was the Smith-Hughes Act, which was passed in 1917 by the United States Congress.[[7]](#footnote-7) This piece of legislation allowed for the official establishment of vocational education courses for students in junior high school and high school. This act not only provided official establishment and structure for agricultural education courses, but also, for vocational education courses in general. The purpose of the passage of this act was to encourage students to be preparing for specific careers while receiving their secondary education. At the time of its passage, of the twelve million people working in the agriculture industry, approximately one percent of these people had proper training.[[8]](#footnote-8) Additionally, another purpose of the passage of this act was to allow for students to begin to ponder on potential career choices and ideas for a longer period of time by taking a variety of hands-on learning courses. One limitation to this piece of legislation, however, was that “these classes started in small rural schools and only farm boys were allowed in the classes.”[[9]](#footnote-9) As time passed, however, agricultural education grew to a larger population of students who did not necessarily live in a rural environment.

 One of the key events in the history of American agricultural education is, of course, the founding of the FFA. Formerly known as the Future Farmers of America, the FFA has allowed for its students to become engaged in the field of agriculture since 1928. FFA began with a small group of thirty three local farm boys seeking to discuss farming techniques, but has grown to over five hundred thousand members nationally, making it the largest student-lead organization in the nation.[[10]](#footnote-10) FFA provides for leadership and career development opportunities for its members to prepare them for any field of work ranging from architecture to zoology.

 A final key event in agricultural education was the Vocational Education Act of 1963. The purpose of this act was to expand the parameters of vocational education curriculum.[[11]](#footnote-11) In terms of agricultural based courses, it meant that the new classes could be created that expand on farming techniques. Many new courses, after the passage of this act, emerged. These included floriculture, plant propagation, biotechnology, and leadership courses. Without the passage of this act, it is possible that current agricultural education students might be enrolled in courses solely relating to farming, meaning that enrollment would be decreased due to a lack of variety of courses. And eventually, by the 1970s, a wider variety of students were enrolled in agricultural education courses than just farm boys. The new target population included girls, students of different races, and students living in larger communities.[[12]](#footnote-12) These students were attracted to the updated curriculum that educated them about hunting regulations, the elements of floral design, agricultural mechanics, and much more.

 Despite its eventful history, agricultural education has faced many challenges and obstacles that are even present in agriculture classrooms today. Four primary obstacles have impacted the advancement of agricultural education in school districts across America. These hindrances include the common “agriculture is only about farming” stereotype, the lack of motivation to establish agricultural education programs, the lack of having agricultural education courses meet some key graduation requirements, and enrollment in agricultural education programs. In order to understand the full scope of agricultural education, it is necessary to comprehend these obstacles so it is possible to find potential solutions.

 It is common for many high school students, teachers, and administrators to believe that agriculture only relates to farming and producing food for all. This can, therefore, be considered an obstacle in which has caused some school districts to hesitate in offering agricultural education courses. Administrators may fail to see the true experiences that hands-on agriculture can impact the lives and futures of their students. This stereotype is difficult to overcome because the media and the history textbooks both portray agriculture as farming. Due to these biased portrayals of agriculture, some people may not realize that less than two percent of the American population, only 4.6 million people, live on a farm or a ranch.[[13]](#footnote-13) Often times, agriculture is rarely related to improving leadership, job interview skills, food safety, or understanding economics. Agriculture is so much more than farming and it is vital that this is communicated with everyone who does believe that present-day agricultural education is not purposeful due to having curriculum only relating to farming.

 Another obstacle of agricultural education has been establishing programs in schools around the nation. This has been a major problem, especially in many large cities or highly populated areas, as many schools in these types of areas are isolated from agriculture in rural or sparsely populated areas. It can be very gruesome and challenging to initiate an agricultural education program in a school singlehandedly, as money must be available to purchase equipment and pay for instructors, classroom space must be available, and the demand for agricultural education must be present within the school’s student body. Therefore, some districts do not have agricultural education programs because of at least one or more of the above reasons. A final reason why it has been very difficult to establish agricultural education programs in schools is due to the shortage of agricultural education teachers within the nation. After agricultural education programs are established in schools, the next major challenge that agricultural educators face is enrollment. In order for teachers to continue teaching their course content, they must have the minimum enrollment needed to stay at their current employment status. On the other hand, if a program grows large enough, more staff members may be added at the discretion of the school’s administration and budget. Agricultural education teachers must learn how to effectively recruit students to take their classes by providing a unique pallete of courses with enriched learning opportunities that attract all students, regardless of their background in agriculture, or lack thereof.

 A final challenge of agricultural education courses in each state across America is establishing curriculum. Some states, including Minnesota, allow for students to take approved agricultural economics courses to waive the current economics requirement necessary for graduation. These “partnerships” between courses can boost enrollment rates because students will then be motivated to take more agriculture classes if they can meet a specific graduation requirement without taking away from their general electives, which may include art or music. Another potential partnership could include a connection between the science and agriculture departments of a particular school. If students are required to take a general science elective in order to graduate, students may take animal science, plant science, or veterinary science in the school’s agriculture department in place of a different class they would take in the science department. These partnerships also have the potential to boost enrollment in a variety of science-driven agriculture classes. The obstacle that exists in this area is, however, that many curriculum designers fail to see the similarities between required courses and agriculture courses. They also may not recognize that agriculture classes can provide more context than similar courses that offered in other departments by providing hands-on and practical simulations that can be related back to students’ daily lives.

 These obstacles are clearly numerous in quantity and can be difficult to defeat. However, agricultural education programs that overcome these great obstacles are often times very successful. Agricultural education programs that are successfully established are able to provide students with a contextual learning experience which challenges students to ignite their potential in any industry. Agricultural education courses have many successes which include, but are not limited to, providing social success, providing economic stability, providing applicable curriculum content, and providing an introduction to the National FFA Organization.

 Agricultural education courses allow for students to improve their own social lives and the lives of others. These hands-on, practical courses allow for members to gain a value of service. Examples of service done in a common agriculture course include, but are not limited to, landscaping “run-down” areas in a community, hosting a food drive for those in need, and hosting events that recognize particular workers in schools who are not recognized as much as they should be, such as janitors and teachers. Agricultural education students can also improve their own social lives by connecting with students from other schools at field days and experiences at universities or agriculture businesses. Agricultural education programs truly impact the lives of both the individual student, and the community at large through participation in these service-based activities.

 Additionally, agricultural education courses improve the overall economy of America. Agriculture is the leading industry of America, currently employing over twenty-two million hard-working agriculturalists in over two hundred career areas.[[14]](#footnote-14) Therefore, educating students about the importance of agriculture while they are in high school or junior high school can allow them to be introduced to one of these multiple agriculture careers, and hopefully, allow for them to gain enough interest to pursue one.

 With a population that is exponentially growing, it is vital that our nation has enough workers in the agriculture industry, otherwise the economy may begin to regress over time. Thomas Robert Malthus discovered that as population increases exponentially, production only increases arithmetically (linearly).[[15]](#footnote-15) His findings prove the need for workers in the agriculture industry. If there are not enough agricultural workers, and the population continues to exponentially grow, products will become more scarce. The United States Secretary of Agriculture, Secretary Vilsack, stated in an interview "the economy of the country, the ability of farm families to survive, the capacity of this country to have a national security advantage because of our productivity, our less reliance on foreign oil and greater reliance on our own resources to produce energy, the capacity for us to have safe food and healthy people, and the ability to have a safe nation and a safe world — all tie to agriculture."[[16]](#footnote-16) Agriculture is in the food, the clothes, and the homes all people own, and all other industries emerge from the agriculture industry, therefore, there is good reason to teach agriculture to as many high school and junior high school students as possible.

In addition, in several agriculture courses, students are able to be educated on specific areas of agricultural economics. For example, in a companion animal science or pet ownership course, students would be able to learn about the economics of owning and caring for a pet. On the other hand, in a floriculture or floral design course, students can price arrangements by calculating the prices for the materials used and labor invested into the production. Students, therefore, can become educated about the economy regardless of the agriculture course’s curriculum layout.

 Agricultural education courses also allow for students to engage and interact with applicable curriculum tailored to their main interests and career areas. Agriculture curriculum is written in a way that allows for hands-on and unique learning experiences. For example, instead of reading an article about the supply and demand of corn, students can engage in an interactive simulation that requires critical thinking and strategizing.

 Finally, agricultural education courses provide an official introduction to the National FFA Organization and allow for students to gain leadership skills. In order to become an official FFA member, it is necessary that the member is enrolled in a minimum of one agriculture course during the school year. Within that agriculture course, teachers are encouraged to educate their students about the events that their local FFA chapter has planned and to describe to their students the great honor and privilege it is to wear the official “FFA Blue Jacket.” While wearing this jacket, students are able to develop “premier leadership, personal growth, and career success.”[[17]](#footnote-17) FFA can be considered one of the most significant successes of agricultural education in America because it has been growing so much, and so many students have had unforgettable experiences during their time in the blue jacket.

Although many people argue agricultural education is outdated and no longer valuable in the evolving global economy, because of the deep roots agricultural education holds in American History, the practical application of content, and the social and economic benefits of the agriculture industry on the United States, agricultural education is valid and necessary for students today. Agricultural education programs impact and shape the lives of over 800,000 students annually, and will continue to do so for many years.[[18]](#footnote-18) If students are introduced to agriculture during their secondary education, they will not only be more educated on the importance of agriculture, they will also be more educated consumers and citizens. Therefore, agricultural education should be an integral part to all students’ course load while pursuing their secondary education.

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