

The Historical Development of Agricultural Magnet Schools in the Alamo City

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ABSTRACT

This historical study focused on agricultural science magnet programs in Bexar County, TX. The agricultural magnet school is a relatively new program model that is increasing in popularity. The focus of this study was on the changes that have taken place within these programs and how they have become successful through the agricultural science magnet program model. Some factors that are shared by these programs include the offering of multiple agricultural science classes, including animal science, horticulture, aquaculture, and agricultural mechanics. All schools had animal project centers and livestock supervised agriculture experience (SAE) programs. Each school employs an interview application and interview process to enter the program. Most students were found to be from an urban area with little or no agriculture background. Educators cited increased public perceptions and school board support as a catalyst to the program’s success. Future agricultural science programs may benefit from such school models as they establish their own successful programs.

KEYWORDS: agricultural education, magnet schools

INTRODUCTION

Agricultural education is a program that is continuously growing, evolving, and changing to meet the needs of students and the diverse communities that it serves. Since its inception, agricultural science programs have benefited students through career preparation, leadership training, and academic success (National 2009). Many changes have come to current agricultural science programs through changing student demographics, educational requirements, budgetary concerns, and the increase of urban school settings. An understanding of what has led to the success of different program models can aid leaders in agricultural education to help school districts plan ahead for the future of their programs.

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A unique educational model that has developed within agricultural education is the agricultural science magnet program. Since that this is a fairly new program model, there has not been an abundant amount of research into the subject. An agricultural magnet program allows a district to focus its resources, often into a single school. Consolidating programs into a single, large program can provide students with a multifaceted agricultural science program. Through this structure, school districts can allow any student who has an interest in the agricultural science program to benefit from everything it has to offer.

A magnet school is defined by the areas in which its focus is derived (Costello 1981). It is accessible to students outside a normal attendance zone and serves a role in voluntary desegregation within a district (Wang, Herman and Dockterman 2017). The idea of a magnet school was to attract and enroll students based on shared interest, such as agriculture (Blank and Archibald 1983). The first magnet schools were designed in the early 1970s. In 1982, a third of the largest urban districts had magnet schools (Blank 1989). Urban agricultural science curriculum can encompass courses such as aquaculture, natural resources, floriculture, and companion animals, to name a few (National Research Council 1988).

Purpose and Objectives. The purpose of this study was to document the development, growth, and change of urban agricultural science magnet programs in Bexar County and reflect upon their impact on agricultural education program models. Specific objectives of this study were:

1. Identify major events and factors that contributed to the specific program development and success of the San Antonio ISD, North East ISD, and Northside ISD agricultural science magnet programs.
2. Describe characteristics of the three specific urban agricultural magnet programs.
3. Investigate the evolution of agricultural magnet programs in Bexar County.

MATERIALS AND METHODS

Historical research methods outlined by Borg and Gall (1983) were used to meet the objectives of this study. A preliminary bibliographical source was created, consisting of primary and secondary sources. The objectives for this study guided the literature search, data collection, and analysis of data. Whenever possible, primary sources were used (Ary et al. 1996). Primary sources included personal communication with eyewitnesses, scrapbooks, and various news articles. Secondary sources included educational articles, historical Internet databases, and library resources. All teachers gave permission to use their comments and names within the presentation of this research project. Research was also collected at the Institute of Texan Cultures, Northside Independent School District Historical Museum, Northeast Independent School District Historical Museum, and FFA chapter scrapbooks.

All references were subjected to both internal and external criticism. Every effort has been made by the researcher to include and document every possible resource so that readers may further build upon these findings. Lincoln and Guba (1985) posit that trustworthiness of a research study involves the establishment of credibility, transferability, dependability, and conformability. Credibility was established through triangulation (the use of multiple sources) and member checks. The transferability was established through thick description. An inquiry audit by a member of the Editorial Committee for the *American Educational History Journal* confirmed dependability and conformability.

RESULTS

Bexar County, Texas was established on December 20, 1836, and encompassed almost the entire western portion of the Republic of Texas. Between 1880 and 1920, the number of farms grew from 1,136 to 3,205 (The Handbook of Texas 2010). In 1920, Bexar County was predominantly rural with more than 800,000 acres of farmland. Between 1910 and 1930, cotton, which had previously been grown only on small quantities, became one of the county's most important cash crops. In the late 1940s, more than half of the county's agricultural receipts came from livestock and livestock products. By 1980, agriculture production had lessened, and Bexar County became a major site of electronics and biotechnology companies. According to the 1940 census, the county had a population of 333,176; in 1960, it had reached 687,151. In 1980, it was 988,800, and in 1990, it topped the one million mark for the first time. Within the 1.185 million residents in the county in 1990, the urban areas were made up of 935,933 people and many of the remainder lived in the surrounding suburbs (Handbook of Texas 2010). The 2000 census listed a population of 1,392,331 residents in Bexar County (US Census Bureau 2000). The 2010 census listed 1,714,733 people living in Bexar County.

San Antonio Independent School District (SAISD) Agricultural Science Magnet Program - Burbank High School. Laws enacted in 1854 by the state legislature provided for the foundation of local school districts and helped to make public education a reality in Texas (Eby 1925). Education in Texas suffered during the Civil War and the Reconstruction which followed. Efforts were made to improve the status of public education during the latter part of the 19th century, and the growth and development of Texas' public schools increased with the coming of the 20th century (White 1969). Though despised at the time, the system that Texas leaders established offered the promise of free education to all children and was among the most comprehensive and efficient of its era (Garrett 1994). Local taxation for rural schools increased in the 20th century, and small rural schools began consolidating into school districts. In 1915, Texas passed a compulsory attendance law and in 1918, the legislature approved the use of free textbooks in public schools (Northside 2009). In the early 1900s, Bexar County was still primarily a rural area, and many of the school districts in the Northwestern part of the county consisted of just one school. This situation would persist with little change for the first half of the 20th century (Hodnett 1935).

SAISD bought the land that would become Luther Burbank Vocational School in 1906 (SAISD 2009). The high school was named after Luther Burbank (1849-1926), a famous California horticulturist who introduced more than 800 varieties of fruits, vegetables, nuts, grains, and ornamental flowers. It consisted of 90 acres originally owned by Captain Finis Foster Collins of Texas, at the site of an artesian well. The school was built in 1937 with the focus of providing agriculture classes. It cost \$250,000 and its first occupant was a red mule named Luther. The first principal of the high school was a former building trades teacher from Lanier High School named Terrell F. Gates. He served as principal of Burbank for its first 34 years. The school utilized 75 acres of the land for a student farm (Vocationalist 1938). More than 60 acres of the farm were used for cultivation with the rest utilized for animal production and vegetable plots. By 1940, Burbank Vocational School had the largest FFA program in Texas with over 100 members under the leadership of David Rusmical and Seal Brand (Vocationalist 1941). In 1940 the school began its swine breeding program with the Poland China and Duroc breeds. In 1952,

Burbank High School took part in the Texas endeavor to send swine to Korea to aid in providing livestock for the start of agriculture education programs in that nation (Cepica et al. 1988). In 1957, the school was nationally recognized for its outstanding Duroc swine herd, shipping pigs to every state in the US and Mexico. Throughout the 1950s and early 1960s, swine registered by the Burbank Student Farm were considered some of the top livestock in the nation under agriculture science teachers Mr. Charles Vickery and Homer Martin (Personal Communication, Charle Vickery August 2010).

In 1965, the student farm was reduced to 50 acres in size because of school growth (a new auditorium and cafeteria were needed) and increased growth of the city around Burbank (Vocationalist 1966). By 1971, Burbank Vocational School had an enrollment of over 2,000 students and offered 16 different vocational programs (SAISD 2009). At this time, San Antonio was experiencing growth and change, which affected the school (Bexar County 2009). Originally, the school was predominantly Anglo with a mostly rural student population. By the early 1970s, under agriculture science teacher Charles Vickery, the school was 15% Caucasian and 80% Hispanic with a student population over 2,000; most of whom were urban students. In 1974, the farm was again reduced in size to accommodate a new parking lot and an addition to the main campus (Personal Communication, Joey Tomlinson August 2010). Also at this time, the new barns were constructed on campus and a greenhouse was built. The greenhouse was constructed to aid in teaching horticulture and to attract more female students to the program (Vocationalist 1980). By the 1980s, SAISD had a total of three agriculture programs at Highlands High School and Thomas Jefferson High School with the largest still residing at Luther Burbank High School under agriculture teachers Donald Rogers and Steve Chumbley, a former Burbank FFA chapter president. The fall of 1985 brought with it a change in the school's name with the removal of the words "Vocational" from its title (Personal Communication, Donald Rodgers, August 2010). During this time, the demographics of the school shifted to 90% Hispanic with almost all of the student population coming from an urban setting. The teachers fought administrative and district pressure to reduce the school farm size for more athletic fields. School board members were moved by the teachers' dedication to the students and successes of students in community livestock shows (Tomlinson 2010).

In 1990, the agriculture department had a student demographic of 99% Hispanic and 90% low economic status students with all of the student body residing in an urban area. This same year, the district hired former Burbank agriculture student Gerard Silva to join Donald Rogers. In 1997, the district reduced the size of the school farm to eight acres to make room for the SAISD Sports Complex, which would serve the district as a main facility for hosting of athletic events (Rogers August 8th, 2010). The agriculture program shifted focus from farming to other employment opportunities in agricultural science, including metal fabrication, agriculture power, horticulture, and animal science. The program remained active at livestock shows, contests, and in the community for the next several years. In 2004, the Luther Burbank agriculture program became part of a joint effort between The National FFA Organization and Toyota Motor Company to promote diversity in agriculture education and to recruit students who have not traditionally participated in the FFA. The grant through Toyota provided opportunities to students' travel to events like national and state conventions, the Washington Leadership Conference (WLC) and other leadership events (Personal Communication, Gerard Silva August 8th, 2010). The grant also provided for financial assistance to the program for instructional materials. This program helped breathe new life into the program and helped increase the program size.

With this increase in size and the retirement of Mr. Rogers in 2005, Burbank hired a new teacher, the son of a former Burbank agriculture teacher and student.

The program began to get more attention from administration and the community with its successes in livestock shows, leadership events, student recruitment, and community service. Also during 2005, all other agricultural science programs in the district were closed and Burbank became the agriculture magnet school for SAISD. The agriculture teachers helped set up a parent booster club and FFA alumni for the chapter. The program also initiated an interview process for those students who wanted to be part of the agricultural science program. In 2006, the teachers worked to receive a scholarship grant worth \$20,000 for students who planned on majoring in agriculture at a Texas university. The purpose of this grant was to provide opportunities for students who otherwise would not attend college. The next year the grant was extended to \$30,000 (SALE 2007).

In 2008, the school board approved the building of a \$2.8 million addition to the agricultural science facility (Silva August 8th, 2010). This included a new greenhouse, aquaculture lab, farrowing house, metal fabrication lab and equipment, classroom additions, and technology enhancements within the existing facility. The program currently remains a two-teacher department with over 200 students in agricultural science classes. The school still has a successful swine breeding program, providing competitive animals to students at a low cost. In the fall of 2010, SAISD passed a \$515 million bond which included renovations to the livestock pens and show facility at Burbank High School. One reason that the agricultural science program was included in this bond was public reaction to a dog attack that left two student projects dead and another 16 wounded. "This brought the program into the public's eye" (Silva August 7, 2010).

The teachers at Burbank noted that the key to recent successes of their program was due to community support and strong connections with the school board, especially former school board president Doug Sellers (Silva August 8, 2010). The hands-on learning opportunities within the agriculture science program have helped to keep the number a high number of students enrolled in agriculture. The opportunity for students to come to Burbank specifically because of the agriculture program helped ensure quality students. According to Silva, "Every one of our students is from an urban home. Being able to offer this program to any student within our district, wherever their attendance zone is, has allowed our program to flourish." With the evolution of San Antonio and Burbank, the focus of the agriculture program had to shift, but the mission of serving every student remained the same.

Northside Independent School District (NISD) Agricultural Science Magnet Program, Sandra Day O'Connor High School. The Northside Consolidated School District was established in 1949 through the consolidation of 11 rural schools consisting of 823 students. Those schools were Leon Springs, Los Reyes, Helotes, Locke Hill, Leon Valley, San Antonio Heights, Lockhart, Mackey, Clifton, Hoffman, and Culebra (Northside 2009). Construction of Northside High School began the following year (The Horn 1951). The school featured multiple vocational programs, including agriculture. The agriculture facilities included a wood and metal shop, classrooms, and a 10-acre student farm. The program was started by Marvin Phianto and added a second teacher in 1952, Mr. Bill Spanegal (The Horn 1952). In 1955, Northside Consolidated became Northside Independent School District with an enrollment of over 1,600 students. By the end of the 1960s, Northside enrolled over 20,000 students and had opened 12 new elementary schools, two new middle schools, and two new high schools (NISD 2008).

In 1960, Northside High School became John Marshall High School and the district opened Oliver Wendell Holmes High School in 1964 (Personal Communication, Charlie Vickery July 1, 2010). In 1968, the agriculture program at Marshall reduced in size to a four-acre facility to make room for campus additions. At this time the program added a greenhouse and livestock pens to serve the shift in the focus from farming to general agriculture. It was also this year that agriculture teacher Bill Spanegal moved to the position of district vocational director. He was replaced by Mr. Charles Vickery, former Burbank High School agriculture teacher (Vickery 2010). Joey Tomlinson was hired in 1970 and replaced Bob Keaton, who moved into a school administrative position (Personal Communication, Joey Tomlinson July 10, 2010). Mr. Tomlinson helped lead Marshall as first team to ever win the newly established national FFA Floriculture Contest. They continued to win that contest for the next three years (Cepica et al. 1988). The program was increasing in size with over 120 members, and the program needed its own livestock show in which the FFA and 4-H could compete in. The John Marshall FFA advisors, students, and parents came together in 1972 to start their own livestock show. With land lent by the Gerlach family and mostly donated materials, the John Marshall FFA built barns and a show facility to start the John Marshall Livestock Show (Vickery July 1, 2010). The first livestock auction of champions was held in 1974 with total sale receipts of \$43,750 and the school hired agricultural science teacher John Vasbinder. The livestock show would serve as a staple of the agricultural science program and aided in school recognition and student recruitment. Vasbinder left in 1976 to teach at Luther Burbank High School. The year 1980 saw the school livestock show reach an auction total of more than \$100,000 for the first time (Steven Chumbley July 1, 2010).

By 1979, Northside was named the fastest growing district in Texas with an enrollment of over 30,000 (NISD 2009). The agriculture program had grown in size to four teachers with over 350 students in the FFA program. At this time, agriculture teachers Joey Tomlinson and Butch Keaton left Marshall to start the program at Oliver Wendell Holmes High School and was replaced by Steve Chumbley. Charles Vickery, founder of the Marshall Livestock Show, retired in 1984. John Vasbinder rejoined the staff at Marshall, giving the program two teachers. This same year, the John Marshall Livestock Show was renamed the Gerlach Livestock Show in memoriam of the family who donated the land.

By 1990, the program had grown to a three-teacher department by rehiring Joey Tomlinson. Marshall had over 300 students in agriculture with Holmes having over 100 as well. The demographics of this once rural district had changed with 60% of students being Anglo and 30% Hispanic (NISD 2009). The area around John Marshall High School and Holmes was an urban environment. The district began making plans for a new high school which would serve as its agricultural science magnet school. Tomlinson, who moved back to John Marshall from Holmes, Vasbinder, and Chumbley designed what would be the new agricultural science center. Northside consolidated the programs at Marshall and Holmes to Sandra Day O'Connor High School, making it the agricultural science magnet program for the district in 1998. O'Connor began with a \$7.5 million facility that included four classrooms, two agriculture mechanics labs, over 200 livestock pens, and a greenhouse. The facilities were dedicated to former Marshall agricultural science teacher Vickery. With four teachers, the agricultural science program served over 500 students in its first year.

The agricultural science program became the largest in Texas in 2000 with six teachers and over 700 students in agriculture classes. The school itself had 2,700 students with a total district enrollment of over 63,000 (Prowler 2000). The FFA chapter was also the largest in the state with 560 members. The program began an interview process for

student to enter the agriculture program, who could come from anywhere within the district to O'Connor if they had an interest in agriculture, a good academic record, and no discipline problems. The year 2000 brought Sandra Day O'Connor's first graduating class and a grant through the San Antonio Livestock Exposition for two \$10,000 scholarships for students majoring in agriculture at a Texas Institution. Because of student success with this grant, it was extended to three scholarships in 2005 and then raised to \$16,000 for each scholarship in 2009. In total, this grant has provided over \$300,000 in scholarships for students from the O'Connor FFA program (Personal Communication, Bonnie Bridges May 15, 2010).

The program was extremely successful at state and national level events, including multiple state-winning FFA teams in Horse Judging and Parliamentary Procedure under Mr. Roger Welch. "From it beginning the O'Connor FFA established an attitude of success among its members" (Personal Communication, Rodger Welch July 5, 2010). In 2003, Steve Chumbley became program director for the agriculture department, no longer teaching classes, but supervising student discipline, program budget, teacher schedules, and overseeing the district livestock show board of directors. The program also started the Agriculture Science Fair, hosting elementary and middle school students for two days. This program focused on giving lessons on agriculture and its impact on a student's daily life. By 2008, the program had six teachers and over 650 students in agricultural classes with an FFA membership exceeding 550 students. Sandra Day O'Connor High School also saw the building of two new barns, adding over 200 more livestock pens and a 20,000 square ft. multipurpose center totaling \$2.2 million in building costs (Personal Communication John Folks, August 1, 2010).

The Gerlach Livestock Show has been a continual success and become self-sufficient with no public funds being used. The FFA booster club bought the land from the Gerlach family in 2008, ensuring the continuation of the livestock show. Even through the economic downturn, the show receipts have gone up with the 2018 auction grossing more than \$1 million. The auction has grossed over \$12.5 million dollars since the show started. Today the O'Connor agricultural science program serves mostly urban students with a demographic makeup of 55% Hispanic and 40% Caucasian (NISD 2010). Most students come from middle class families with little agriculture background.

Interviews with former and current teachers at Sandra Day O'Connor demonstrate that there were multiple factors that led to the success of the magnet program. Interviewees noted that one of the key items in the program's success was having administrative and school board support for the program. Former FFA members serving as community leaders had a strong influence in the consolidation of the agriculture program (Personal Communication, Michael Tondre, August 1, 2010). The hiring of hard-working, experienced teachers was indicated as aiding in the program's successful development. The program dealt with the changing diversity of students and parents with shifts in focus from production farming to generalized agriculture to most recently a more science-integrated curriculum and focused approach. Participation in the agricultural science fair was noted as an excellent tool to help prepare students for college and career success (Tomlinson 2010).

North East Independent School District (NEISD) Agricultural Science Magnet Program, Madison High School. NEISD was established in 1960 with the consolidation of several small school districts along the Bexar County line. James Madison High School was built in 1976 with a focus on integrating vocational programs with core curriculum.

The agricultural business program began with 75 students in agriculture classes and an FFA membership of 35 under teacher Roger Welch. Welch was one of the first Texas agriculture teachers to teach agricultural business classes and refer to the program as an agricultural science program (Personal Communication, John Mack, August 7th, 2010). In mid-1984, the push for semester-long agriculture courses under Texas Education Agency Director of Agriculture Education Jay Eudy helped the agriculture program blossom (Cepica et al. 1988).

During the 1980s, the program went through multiple teachers and the curriculum focus changed from agricultural business to animal science. The FFA program focus moved from leadership events to livestock expositions. The surrounding area of the school began to grow exponentially, and the school population went from a majority of rural students to a majority of urban students with little or no background in agriculture. By 1990, the program's focus was on horticulture and animal science classes with two teachers and a little over 150 students. The lead teacher, John Mack, decided that the focus of the program needed to change to meet with changing interest and demographics of the students. The program centered on urban agriculture literacy as its main focus. The teachers began offering master gardener certifications to students and became active in the FFA science fair. This new program direction helped recruit students and in 1999 Madison became the agricultural science magnet program for NEISD after neighboring NISD made a similar move (Mack 2010).

In 2001, James Madison High School had five teachers and an FFA chapter membership of over 400 members making it the fourth largest in the state (Mack 2010). John Mack became program director in charge of student discipline, program budget, and teacher schedules. The following year NEISD school board members proposed a \$600 million bond that included new agricultural science classrooms, greenhouse, livestock project center, and aquaculture tanks. This bond failed, but the designs were in place for the next bond. In 2005, a student's lamb was killed at the Madison High School project center. The lack of security for the center brought the program into the community's mind. That same year, a former student donated \$100,000 to the agriculture program. This increased publicity encouraged school board members to include the agricultural science magnet program into the next bond, which came in 2007 at \$550 million, with \$24.5 million going to construction of the new agriculture facility (Mack 2010). By the time the 2007 bond passed, the agriculture department had seven teachers and over 700 students in their program with an FFA membership exceeding 500.

Construction began on the new agriculture science facility in 2008, which includes over 150 livestock pens, fully equipped biology labs, a new agricultural engineering lab, two outdoor aquaculture ponds, greenhouse, livestock arena and a multipurpose center. The program also received a scholarship from the San Antonio Livestock Exposition (SALE), providing scholarships to FFA members attending a Texas university and majoring in agriculture. The program began an interview process for students wishing to be admitted to the agricultural science magnet program. Guidelines for admittance included a review of student grades, discipline records and a demonstrated student interest in the agriculture program.

Today, the Madison Agriculture Program is made up of urban students who are from middle class families with a demographic makeup of 45% Anglo and 45% Hispanic (NEISD 2010). Their educational focus is on urban agricultural literacy and science-based applications in agriculture. Future plans include becoming a 10-teacher department including a faculty member who will teach biology along with agricultural science courses.

The focus on the program will be preparing students for urban agriculture-based careers and enhancing principles taught in core curriculum classes. Since 2010 through the SALE scholarship, Madison FFA students have received over \$180,000 toward college (Mack 2011). The James Madison FFA program started its own local livestock show during the 2012 school year. Table 1 provides a snapshot comparison of the different urban agricultural magnet schools in Bexar County.

Table 1. Comparison of Bexar County Agricultural Science Magnet Programs

| Characteristic | Agricultural Science Magnet Program | | |
|---|-------------------------------------|---------------|---------------|
| | North East ISD | Northside ISD | SAISD |
| No. of Teachers | 8 | 6 | 2 |
| No. of Students in Agricultural Science Classes | 620 | 580 | 203 |
| On Site Livestock Project Center | Yes | Yes | Yes |
| Green House | Yes | Yes | Yes |
| Aquaculture Laboratory | Yes | No | Yes |
| Facility Cost | \$24.5 Million | \$10 million | \$2.8 Million |
| Science Credit in Courses | Yes | Yes | No |
| No. of FFA members | 455 | 450 | 69 |

CONCLUSION AND DISCUSSION

The results of this study are valuable as a starting point to consider the value agriculture magnet programs have in supporting urban students. The researcher found the development of these agricultural magnet programs have come about from the consolidation of several agriculture programs. Program models like this have evolved because of the increased need for space and the benefit of consolidating facilities to one site. These districts benefited financially by focusing CTE funds to one school and one diverse program. This helped to free up limited space within the district for the building of new schools and other district buildings, which would not have been available if the district had to supply classrooms and facilities for multiple agriculture programs.

These urban programs shifted focus from farming to general agriculture, to most recently more life science, engineering, and nontraditional focuses like aquaculture. The idea of preparing students for careers in agriculture and supporting core curriculum classes is a shared idea of these urban programs. The researcher found that all the programs had articulation agreements with local community colleges in veterinary technology and agricultural mechanics courses for dual credit options. The programs have been able hold on to their original production agriculture roots with strong SAE and livestock programs.

Major events that helped the development of these programs included school or program closings, the construction of new facilities and in some cases tragedy or other events that brought the programs into the community’s attention. The loss of animals because of inefficient facility security at Madison and Burbank reflects this statement. The support of district superintendents and school board members who were former FFA members at Northside and SAISD was another factor that led to program improvement. Many of the teachers interviewed supported these statements.

Each program had an application process students went through to be part of the agricultural science program. All programs used grade point averages and discipline records to make admittance decisions. All three of the agricultural magnet programs also

used personal interviews with prospective students and parents to gauge interest in the agriculture program as part of their admittance procedures.

The researcher found that all programs have animal project centers and that livestock projects play a large role in SAE activities and for supplemental instruction. All programs had greenhouses along with outdoor gardens and offered courses that focused on horticulture and floral design. Each program offers courses in agricultural mechanics and agriculture power systems and has use of an agricultural mechanics laboratory. They all have students who participate in the FFA science fair, and each program has received grants for student scholarships. The urban agricultural science magnet schools studied were made up of mostly students who are of Hispanic and Anglo ethnicity. The students come from lower- and middle-class families and most do not have any prior experience with agriculture. This reflects a growing trend in high school agricultural science students.

The researcher believes that emerging urban agricultural science programs can learn from the development of these programs and use models like the agricultural science magnet school to meet the needs of their students and district goals. The researcher felt that it is important to learn more about the development of the agricultural science magnet school model. School leaders can use the lessons learned from these innovative programs as they develop their own programs to meet the need of changing students and communities. Taking a look at the history of programs is vital to the success of any program and is an important part of our future.

REFERENCES

- Ary D, Jacobs LC, Razavieh A. 1996. *Introduction to research*. New York, NY: Harcourt Brace College Publishers.
- Blank R. 1989. Educational effects of magnet schools national center on effective secondary schools. Wisconsin Center for Education Research, Univ. of Wisconsin, 1000 Bascom Mall, Madison, WI.
- Blank R, Archibald D. 1983. The clearing house. *J Educ Strategies, Issues and Ideas* 66(2):81-86.
- Borg WR, Gall MD. 1983. *Educational research*. 4th ed. New York, NY: Longman.
- Brand B. 2009. *High school career academies: a 40-year proven model for improving college and career readiness*. Washington, DC: American Youth Policy Forum.
- Cepica M, Dillingham J, Eggenberger L, Stockton J. 1988. *The history of agricultural education in Texas*. Lubbock, TX: The Texas Tech University Press.
- Costello L. 1981. How a vocational school overcame disadvantages of location: turning a troubled school around. *The Education Digest* 15(1):23-26.
- Doerfert DL (Ed.). 2011. *National research agenda: American association for agricultural education's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.
- Eby F. 1925. *The development of education in Texas*. New York: Macmillan.
- Garrett AW. 1994. Curriculum history's connection to the present: necessary lessons for informed practice and theory. *J Curriculum and Supervision* 9(4):390-395.
- Harlin J, Weeks B. 2001. A comparison of traditional and nontraditional student's reasons for enrolling in an agricultural education course. *J South Ag Educ Research* 51(1):280-285.
- Hodnett VC. 1935. *History of rural education in Texas*, Master Thesis. Dept. of Education, Univ. of Texas, 2225 Speedway, Austin, TX.

- Lincoln YS, Guba EG. 1985. *Naturalistic inquiry*. Washington, DC: Sage.
- National Council for Agricultural Education. 1999. *The National Strategic Plan and Action Agenda for Agricultural Education; Reinventing agricultural education for the year 2020*. Alexandria, VA
- National FFA Organization. 2009. *Official FFA manual*. Indianapolis, IN.
- National Research Council. 1988. *Understanding agriculture: new directions for education*. Washington, DC: The National Academies Press.
- North East Independent School District. 2010. *District fast facts brochure*, San Antonio, TX: NEISD Central Office. Retrieved from www.neisd.net
- Northside Independent School District. 2008. *History*. Retrieved July 10, 2010 from www.nisd.net/history
- Northside Independent School District. 2009. *History*. Retrieved July 10, 2010 from www.nisd.net/history
- Northside Independent School District. 2010. *History*. Retrieved July 10, 2010 from www.nisd.net/history
- Northside School Openings. 2009. Retrieved July 10, 2010 from www.nisd.net/openings.
- San Antonio Independent School District. 2009. *Stats and figures*. Retrieved July 10, 2010 from www.saisd.net/communications
- San Antonio Livestock Exposition. 2007. *SALE scholarships*. Retrieved July 10, 2010 <http://www.sarodeo.com/gallery/sale-scholarships-livestock>
- Sutphin D. 1990. *Urban agricultural education opportunities, future directions and implications for the profession*. *The Agricultural Education Magazine* 63(4):6-8.
- Texas State Historical Association. 2010. *The handbook of Texas*. Retrieved July 10, 2010 from <https://tshaonline.org/handbook/online/articles/vtt06>
- The Horn Staff. 1951. *The Horn; Northside High School Yearbook* pg. 3, San Antonio, TX: NISD.
- The Horn Staff. 1952. *The Horn; Northside High School Yearbook* pg. 12, San Antonio, TX: NISD.
- The Prowler 2000. *Sandra Day O'Connor Yearbook*, pg. 28. Helotes, Tx: NISD
- The Vocationalist Staff. 1938. *The Vocationalist: Year in Review* pg. 26, San Antonio TX: SAISD.
- The Vocationalist Staff. 1941. *The Vocationalist: Year in Review* pg. 25, San Antonio, TX: SAISD.
- The Vocationalist Staff. 1966. *The Vocationalist: Year in Review* pg. 25, San Antonio, TX: SAISD.
- The Vocationalist Staff. 1980. *The Vocationalist: Year in Review* pg. 24, San Antonio, TX: SAISD.
- United States Census Bureau. 2000. *Bexar County. Quick Facts*. Retrieved from <http://quickfacts.census.gov/qfd/states/48/48029.html>
- Wang J, Herman J, Dockterman D. 2017. *A research synthesis of magnet school effect on student outcomes: Beyond descriptive studies*. *J School Choice* 12(2). doi.org/10.1080/15582159.2018
- White MA. 1969. *History of Education in Texas, 1860-1884*. Master Thesis, School of Education, Baylor Univ., One Bear Place 97304, Waco, TX.