Agricultural Educators Perceptions of the Standardization of Agricultural Education at the Course Level

By

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Abstract

As standardization of curriculum has become a leading national strategy in the common core subjects, a question has arisen within the agricultural community. Should agricultural education start standardizing its own curriculum? This question has become pertinent because of funding concerns, long-term viability questions, questions of validity of programs, and the need for agricultural literacy in mainstream education.

In this study, the researcher examined standardization within the national common core standards initiative. The researcher defined what the current Wisconsin agricultural education system was and what guidelines it abides by. The researcher outlined the importance of expanding agricultural literacy with the common core initiative.

To provide reference on the standardization of agricultural education at the course level, the researcher presented the results of a survey completed by 112 Wisconsin agricultural educators. The main questions the researcher asked 1) Should agricultural education be standardized at the course level? 2) If it was your choice, would you rather have agricultural education trend towards vocational education rather than a standardized agricultural course curriculum or should we maintain the system currently in place?

The results of the survey found that 55% agricultural educators surveyed did not want an agricultural curriculum standardized at the course level. The data suggests that 50% respondents wanted to maintain the current agricultural education system. Furthermore, it was determined that a vocational agricultural education curriculum was the least popular choice with only 17 % in favor of the shift to vocational.

In conclusion, this study states that agricultural education should not be standardized at the course level. The literature review and additional information provided by the surveyed suggested geographical curriculum as the main reason. One educator stated this “Wisconsin is very diverse in its agriculture and from north to south I believe that skills needed change depending on the location of where you are in the state. Who would determine in the state what is best for my students in my school system? (Appendix C)”.

Acknowledgments

I would like to thank all the agricultural educators who took the time to take this survey. In addition, I would like to thank Dr. James Graham and Dr. Timothy Buttles for their patience concerning the completion of this document.

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Chapter I: Introduction

Need for Study

Standardization is the predominant educational trend of the modern day. The law that made it mainstream was the No Child Left Behind Act (NCLB) of 2001 (No Child Left Behind Act, 2011). The act required that students from all states participate in standardized exams to measure a student's performance in alignment with his or her states' standards.

Since the passage of NCLB, the manner in which curriculum has been instructed in many classrooms has been affected. The visible changes of this act ranged from providing additional instruction to students in need to having set standards to assess a person's knowledge. Many states, such as Wisconsin, that have agreed to create their own accountability programs were granted a waiver to be freed from the requirements set by the NCLB Act (Beckett, 2012). Moreover, the act's predominant goal of closing the achievement gap between students was not met, although it still resonates within the Common Core Initiative (Background on Common Core, 2012).

Forty-Five states have joined the Common Core State Standards initiative to create a network of new educational guidelines that uphold the principle ideals behind the state common core initiative (Background on Common Core, 2012). The ideals associated with this initiative are mobility of instruction, college and career focus, student ownership, and consistency. In addition to joining the CCI (Common Core Initiative), Wisconsin has joined the Smarter Balanced Assessment Consortium (SBAC) (Smarter Balanced Assessment Consortium, 2012). By joining SBAC, Wisconsin joins a number

of other states in adopting standardized assessments at the formative and summative level.

In addition, SBAC serves as a consortium for educators to place curriculum and content resources to be used by educators in each member state (Smarter Balanced Assessment Consortium, 2012). Additionally, SBAC assessments may be used by states to apply for “Race to the Top” grant funding awards (Duncan, 2010).

As the norm, standardization utilizes the acts and initiatives previously mentioned. The non-common core areas such as agricultural education must consider the advantages and disadvantages of adopting some form of standardization. Laterally, a form of standardized assessment must play a pivotal role in the discussion when portraying the visual progress a student has achieved through the instruction he or she has received. Therefore, in order to initiate one of the many discussions that should take place on the topic of standardization of agricultural education, educators must be asked which type of system they would prefer.

This question not only affects the current K-12 agricultural educators in the state of Wisconsin but also those entering the profession. Those entering the profession may have a challenge developing curriculum their first year due to other factors such as classroom management and advising the FFA chapter (Myers, Dyer, & Washburn, 2005). A standardized course set may provide support to retain new agricultural teachers by reducing their workload in the curriculum development area that may be needed in new teaching positions.

Statement of the Problem

As the pressure to standardize curriculum and assessments increased, a serious discussion on whether agricultural education should embrace this trend has arisen. In Wisconsin, agricultural education curriculum is designed to meet the needs of the local geographic area in which the program is located. Whereas the National Agriculture, Food and Natural Resources Career Cluster Content Standards and Wisconsin Department of Instruction agricultural standards (Fortier, Albrecht, Grady, Gagnon, & Wendt, 1998) present optional guidelines for consistency of classroom curriculum at the state and national level.

Currently, the Wisconsin executive branch has approved the agriculture, food, and natural resource standards; however, the new standards are still too recent to have a broad impact on the curriculum being instructed. Even with the new Wisconsin agriculture, food, and natural resource education standards there is a lack of accountability within the agricultural education programs where federal funds are not being used.

The specific lack of accountability exists particularly at the local and state levels. At the local level, lesson and instruction plans may be required; however, no set assessment assures the plans are completed. Granted, progress has been made concerning the completion of certain educational goals with the implementation of the new teacher assessment programs such as the use of Student Learning Outcome measurements. However, the overall effectiveness of this example may vary by school districts based on implementation of the new program.

This variance may translate to lack of accountability at the state level. The learning objectives within the new Wisconsin agricultural, food, and natural resource

standards may hold the key for accountability at the state level. At the Federal level, Perkins funding has specific guidelines to where funding can be used within curriculum. These guidelines specifically translate to the what is taught question because a school may have financial limitations where a current course might not be renewed due to a lack of ability to provide funding for certain equipment repairs. An example is the guideline below.

> The purchase of equipment for a Program of Study is permissible when a CPA applicant is in the implementation and/or refinement stage. When the Program of Study is in the development stage, the purchase of equipment is not permissible. (Under some circumstances appropriate justification may allow limited equipment purchases prior to the implementation phase of the Program of Study.) (Wisconsin DPI ,2014, pg. 7)

An example of this is when purchasing equipment you can purchase something for a new class or topic but not repurchase an item under maintenance or replacement cost. The replacement or maintenance cost would be the schools responsibility.

Because of the accountability issue, problems concerning the viability and justification to maintain agricultural education programs throughout the state have been questioned. Additionally, with the current volatility of funding patterns at the local, state, and federal levels the importance of positive visibility is fundamental to a programs survival. Likewise, the strategic importance of having an agriculturally literate society may be beneficial when the nation's agricultural industry faces a food safety epidemic.

For example, when the 2009 Swine Flu or H1N1 disease outbreak occurred there was an $10.53 dollar drop in swine futures from the week of April 24th to May 1st (Petry, n.d.). This happened before it was found that the infection was only spreading to humans and not swine. It is likely that if there was a standardized agricultural curriculum in place which included food safety and zoonotic diseases for all individuals in the state of Wisconsin during their middle or high school years that the swine market in Wisconsin specifically may have been less affected by this pandemic.

Purpose of Study

In order to gain a broad perspective, information in the literature review was collected on standardized agricultural education and current educational initiatives to make comparisons about the similarities, strengths, and differences amid the current agricultural educational programs within the Wisconsin education system. The data collected from the agricultural educators' survey responses provide an additional view of the topic.

Objectives and Research Questions

The survey and other research associated were used to complete the following primary and secondary objectives.

Objectives

Primary:

1. Determine whether agricultural education should be standardized at the course level in the state of Wisconsin.

2. Utilize the expertise of agricultural educators surveyed to answer the research questions and first primary objective.

Research Questions:

1. What are the advantages and disadvantages of a standardized curriculum?

2. How does agricultural education in its present state apply to the ideals and guidelines set by the state common core initiative?

3. What impact, if any, does standardization have on the funding of a non-standardized program in comparison with a standardized program?

Definitions

No Child Left Behind Act of 2001- To close the achievement gap with accountability, flexibility, and choice, so that no child is left behind (No Child Left Behind Act, 2011).

Race to the Top- A program within the American Recovery and Reinvestment Act of 2009 that provides grants to schools who adopt changes to close the achievement gap and create educational innovations to improve the education of U.S. students (Executive Summary of Race to the Top, 2012).

Common Core State Standards Initiative- The Common Core State Standards provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them (Common Core State Standards Initiative, 2011).

Standardized Course Curriculum- An educational guideline in which an educator chooses which classes they teach during a given school year. A list of approved classes will be provided to the educator by the state department of instruction. Each class would have a standardized content base. For example, an animal science class would contain content about reproduction, breeds, genetics, and internal body systems.

In addition to a standardized content, each class would include standardized assessments. Assessment items such as quizzes, group projects, grading rubrics, and exams will be provided in coordination with content. Alternative assessment tools for those with special education requirements would be included in the content in accordance with a student's individual education program (IEP).After each class has been completed, the assessment information if released, would serve as an educational measurement tool of the students involved in the subject matter.

MyCAERT- Curriculum and instruction tool available to agricultural educators for educational purposes. Moreover, it provides assessments and content for instructional purposes, additional to video and written resources.

Assumptions

For the purpose of this study, the following assumptions are:

1. All survey respondents are agricultural educators.
2. All respondents will complete the questions asked honestly.

3. Participants personal views will be demonstrated due to the nature of the opinion survey.

Limitations

For the purpose of this study, the following are limitations:

1. Data collection does not include individual opinions from curriculum coordinators, Wisconsin DPI staff, parents, or administrators.

2. The use of pre-selected general class interest areas were used to limit the variance of class titles and names among agricultural educators.

3. Subjects responses limited to Wisconsin Agricultural Educators in the year 2012.

4. Respondents were limited to the DPI agricultural educators state directory in the year 2012 which may have excluded the ability to contact certain educators who were not posted on the list.

Chapter II: Review of Literature

What is Agricultural Education?

The National Association of Agricultural Educators defines agricultural education as the instruction of content centered on agriculture, food, and natural resources (What is Agricultural Education, 2008). Agricultural education can be viewed at all levels of primary and secondary education. At the primary level, agricultural education typically concentrates on the growth and nutrition of food. Largely, at the secondary level agricultural education is integrated into three components: classroom/laboratory experience, supervised agricultural experience, and the FFA.

The teacher, curriculum coordinator, and school administration at the local level primarily control the classroom and laboratory instruction. However, in some schools, classroom/laboratory instruction is affected by outside influences such as local advisory boards or curriculum groups. For instance, the Curriculum for Agricultural Science Education (CASE) council provided curriculum and assessment expertise to both Chippewa Falls and Fall Creek High Schools in the state of Wisconsin (Curriculum for Agricultural Science Education, 2012). The expertise includes but is not limited to end of the year assessments.

Similar to the flexibility offered in classroom curriculum, Supervised Agricultural Experiences (SAE's) provide an invaluable educational experience. The motto associated with SAE's is "learn by doing" (National FFA Organization, 2014). The four areas associated with the "learn by doing" motto are: entrepreneurship, placement, research and experimentation, and exploratory. For achievement in any of these SAE areas, a student

may receive educational credit and/or a possible award through the local, state, and national FFA organizations.

FFA, a base piece of agricultural education since its founding in 1928, offers programs and events centered on agricultural education training. In addition, the National FFA organization manages vital resources ranging from scholarships for agricultural education students to training seminars to improve student leadership skills. Paired with classroom instruction and SAE's, the FFA enhances the effectiveness of agricultural education programs.

Of no surprise, presently there are over 800,000 students across 50 states and 3 territories who receive some form of formal agricultural education (Agriculture, Food and Natural Resources, 2009). Although, this number is a fraction of the total number of students enrolled in the general education system it still demonstrates a resilient belief in agricultural education when less than 2% of U.S. citizens actually live on farms (Environmental Protection Agency, 2014).

What is Wisconsin Agricultural Education?

Wisconsin agricultural education represents a balanced approach to agricultural education by utilizing FFA, classroom instruction, and SAE's in an effective fashion. A changing trend of the new generation of agricultural students is their backgrounds. Unlike many agricultural students in the past whose background consisted of production agriculture, a number of the new students have non-traditional backgrounds (Pannoni, 2014).

In addition to the changes introduced by a new generation of agricultural educators, alterations to meet the needs of changing Wisconsin communities have been introduced. For example, the adoption of a horticulture class in an area that has transitioned from a primarily rural area to suburban area has become common. Other alterations include instruction in alternative energy, biotechnology, and aquaculture.

A substantial advantage agricultural education has gained in the state of Wisconsin is the ability to count agricultural classes as science credits for high school graduation requirements and University of Wisconsin admission requirements (Sauk Prairie FFA 2010 fact sheet, 2010). Wisconsin Act 114 constructed a pathway for agricultural classes, which meet certain criteria to be counted as a science credit (Fortier, et al., 1998). In 2010 there were over 120 agricultural courses approved as science credits in the state (Sauk Prairie FFA 2010 fact sheet, 2010).

Despite, the changing demographics and curriculum, no greater improvement has been made than in SAE projects in the state of Wisconsin. Results of experience and accomplishment from these activities are a result that cannot be remanufactured in a classroom atmosphere. However, in order to receive an award for an SAE a student involved in an agricultural education program must be a member of the FFA organization.

As of 2013, the Wisconsin FFA organization has 19,150 members (Wisconsin FFA, 2013). Available to its plethora of members, the Wisconsin FFA offers leadership programs, contests, rewards, and learning opportunities. Because of campaigns such as 100 % membership drives and chapter awards, the Wisconsin FFA remains strong.

Overall, the balance of classroom instruction, SAE's and the FFA offer students the opportunity in Wisconsin to receive a well-rounded educational experience; which, can be confirmed by the 44,000 students on average who take agricultural classes every year (Ourada, 2010). However, even with the number of agricultural education students in the classroom programs, in recent years there has been both a decline and addition of programs due to various reasons that should be contemplated and analyzed.

What Guidelines, If any, Do Agricultural Educators Utilize in the State of Wisconsin?

Two formal guidelines are available to Agricultural educators in the state of Wisconsin. They are the following: The Wisconsin Model Academic Standards for Agricultural Education and The National Agriculture, Food, and Natural Resources Career Clusters. An additional option that both Fall Creek and Chippewa Falls High School have begun implementing is the Curriculum for Agricultural Sciences Education (CASE).

The Wisconsin Model Academic Standards for Agricultural Education were created in 1998 (Fortier et al., 1998). A group of professional agricultural educators completed the formulation of the standards. The standards were divided into six individual groups. Within each of these groups, different expectations were paired with grade levels. The expectation of knowledge for each student was placed in 4-year blocks.

The different content areas attached to the standards were the following: Global Agricultural Systems, Technology/Information, Leadership, Agriscience/Production, Ecology/Environment, and Business Management and Marketing. Note that contained in

each of these areas are standards that are designed to be cross-curricular with other subjects. An example can be found in Appendix E.

Similar to the Wisconsin Model Academic Standard for Agricultural Education the Agriculture, Food, and Natural Resources Career Clusters follow the grade segments. The differences between the grade model use between the two standard tools is levels and grade benchmarks. Within the Wisconsin Model Academic Standards, the use of 4th, 8th, and 12th grades are benchmarks to what the students should have been completed by that grade (Fortier et al. 1998, pg. 13). Whereas the Agriculture, Food, and Natural Resources career clusters use Level 1, Level 2, and Level 3 which align with grades 9- 14th/ Beginnings of Postsecondary education (National Council for Agricultural Education, 2009).

The pathways associated with the National Agriculture Food and Natural Resource Career Cluster Standards are the: AFNR Life Knowledge and Cluster Skills Standards; Agribusiness Systems; Animal Systems; Biotechnology Systems; Environmental Service Systems; Food Products and Processing Systems; Natural Resource Systems; Plant Systems; and the Power, Structural, and Technical Systems (National Council for Agricultural Education, 2009). Within each of these standards, there are cross-curricular subjects that may be used to demonstrate knowledge. Within each pathway, there are the following items: content standards, performance elements, performance indicators, and measurements.

The CASE model is aligned with the national standards for agriculture, science, math, and English/language arts. The CASE model currently includes the following courses: Introduction to Agriculture Food, and Natural Resources; Principles of

Agricultural Science – Animal; Principles of Agricultural Science – Plant; Agriculture Technology and Systems; Animal and Plant Biotechnology; Food Science and Safety; Natural Resources and Environmental Sciences and Agricultural Sciences Research and Development (Curriculum for Agricultural Science Education, 2012). The assessments associated with the CASE model standards are the End-of-Course Exams and National Assessment exams. With completion and adherence to the standards set by CASE at the curriculum, professional development, and assessment level a certification will be given.

By utilizing any one of these resources, the Wisconsin agricultural educators may improve statewide agricultural education. Regardless of the benefits each of these standards could provide, under current law there is nothing to force agricultural educators to adopt any of the options mentioned. The question remains, do agricultural educators utilize these resources regardless under freedom of choice?

How is Agricultural Education Funded in the State of Wisconsin?

Agricultural education is funded five ways. The first avenue is the base of most funding for general education, which is by property taxes collected from the local community (Ourada, 2012). The second source of funding is from state aid (Ourada). The next level of funding comes from the Carl D. Perkins Act.

Through the Carl D. Perkins Act, funding is allocated through general distribution to states and through grants (Clancy, 2012). Grants can either be directly applied for by a representative from the school such as a teacher or by a state. The limitations retained by this grant determine what funding can be allocated for and what amount will be provided

to each applicant (Duncan, 2012). A common use for individual school grants are infrastructure and machinery upgrades.

The concerns for the first three options mentioned are the funding fluctuations. These are due to public opinion, budgetary concerns, and pure political stances. Since 2010, the Carl D. Perkins Act lost over 100 million of its funding (Association for Career and Technical Education, 2014). Due to this occurrence, two other funding resources have been utilized.

The fourth option is business or organization partnerships with groups like the FFA and Du Pont. These groups especially offer grants and funding to assist educators with anything from professional development training to equipment improvement (Hoardes, 2013). Additionally, the necessity for agricultural literate individuals are a top priority to a group like Farm Bureau whose livelihood somewhat depends on those individuals as future customers and employees.

The final option is utilizing fundraising tools online. For example, some websites offer educators an arena in which they can list what they need and individuals can donate those items. In addition, some companies offer a discount to teachers for educational materials. An example of a discount for educators is Barnes and Noble's 25% publishers discount.

What is the Common Core State Standards Initiative?

The Common Core State Standards Initiative (CCSI) is an effort led by the Governors Association and the Council of Chief State School Officers. Through this effort, the best practices are being offered to prepare students for post-secondary

education and employment. The common theme of these standards is that they are clear, concise, and straightforward (Background on Common Core, 2012).

The Common Core State Standards were divided into two categories, K-12 standards and college and career readiness standards until the college and career readiness standards were incorporated into the K-12 standards (Common Core State Standards Initiative, 2014). In June 2012, the state of Wisconsin joined 44 other states in supporting the CCSI. Additionally, as the remainders of the states join the initiative the content base will improve, because the CCSI is based off a combination of state practices and standards (Smarter Balanced Assessment, 2012).

Overall, the CCSI provides a rough outline for the completion and development of a national curriculum and assessment. In addition, it avoids the issues confronted by a standardized assessment under the NCLB Act of 2001, which had states compare their students' progress with that of their set standards. Therefore, the CCSI will provide a more accurate measurement of the knowledge base of the students in K-12 education today than in the past.

What is Smarter Balanced Assessment Consortium (SBAC)?

The SBAC is a consortium to provide assessment tools to determine if a student is college and career ready. Unlike most standardized exams, the SBAC utilizes both formative and summative assessments to rate a student's knowledge of content (Smarter Balanced Assessment, 2012). A major measure of SBAC's quality assessments is the fact the 28 states have already joined the consortium.

In order to maintain up to date assessment information SBAC utilizes computer-based exams (Smarter Balanced Assessment, 2012). The consortium also provides teachers with the opportunity to add both short and long constructed response questions in addition to the traditional multiple-choice questions (Smarter Balanced Assessment).

A significant benefit of SBAC is its ability to provide up to date information to parents, students, and administration on the efficiency of the instruction and assessments being provided. However, the primary purpose of SBAC is to utilize the data reciprocal for the Race to the Top programs and achievement grants (Smarter Balanced Assessment, 2012).

What is Race to the Top?

Race to the Top is a program established by the American Reinvestment and Recovery Act of 2009. The act signed into law was established to help reinstate Americas' role as the leader of college graduates by 2020 (Duncan, 2012). The program provides grant rewards to states whom demonstrate educational innovation, improved high school graduation rates, and closing achievement gaps. The total amount of the grant fund available at the beginning of the program was 4.35 billion (Duncan).

Chapter III: Methodology

The purpose of this study was to use expert instructional knowledge to provide an opinion on whether Wisconsin should adapt a standardized course curriculum for agricultural education courses. The experts surveyed in this study were Wisconsin K-12 agricultural educators (Appendix B).

The survey was designed to take less than 5 minutes to complete using two demographic questions. Also there were three opinion questions that are best classified as open ended question types. In addition, at the end of the survey was a place to leave any additional comments/ opinions that the agricultural educators wanted to add about the survey topic.

The survey for this thesis was completed after discussions with professors as well as fellow students. The survey was approved by the Institutional Review Board for the Protection of Human Subjects (IRB) once the following forms were completed: research review protocol cover sheet, description of the study, and human subjects protection review. In addition, approval of the advising professor was needed to authorize that the necessary corrections to the survey had been made in order to protect the surveyed population. After the necessary revisions to the survey had been made, the survey was distributed to 295 agricultural educators throughout the state of Wisconsin.

Each agricultural educator whom received the survey also has taken delivery of the soon-to-be discussed email. This email described what the survey was for and expressed gratitude to those who would consider completing it. Participants were directed electronically to Survey Monkey to complete the questionnaire.

Once completed, the survey data was recorded without an assigned identity. The information was collected and compiled by Survey Monkey. The survey remained available for 30 days, which allowed time for the completion of the survey by the target population.

In total, 295 emails were sent to survey agricultural educators throughout the state of Wisconsin. Of the total sent, 112 or 37% responded and completed the survey. Descriptive statistical techniques were used to analyze the data collected because the survey was of an opinion nature. Simple charts were developed from the data to be used in the results aspect of this study.

Only the minor issue of three returned emails occurred during the distribution of this survey. The issue occurred because of incorrect email address provided by the agricultural educator contact list. The survey any additional comments section resulted in an a multitude of opinion based answers as the question was intended to produce.

Chapter IV: Results

When the agricultural educators were asked “Do you believe agricultural education curriculum should be standardized at the course level?” the study found that 44.64 % answered yes it should where 55.36% stated that it should not be standardized

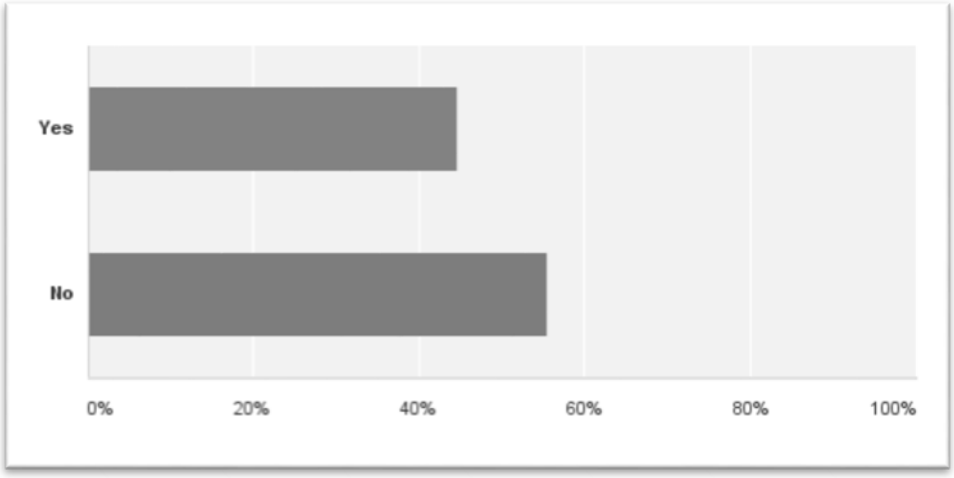

Figure 1. Bar graph displaying the results of the question “Do you believe agricultural education curriculum should be standardized at the course level?”. Survey question is seen above as wells as results.

The next question asked hypothetically “If a standardized agricultural course curriculum was mandated, which courses would you include in your program?” The survey found that 93% of respondents would choose the animal science course to include in their hypothetical program if a standardized course approach was selected. The second most popular selection to include was Plant Science at 89.62%. The other selections for the question are displayed in a graph and listed in text.

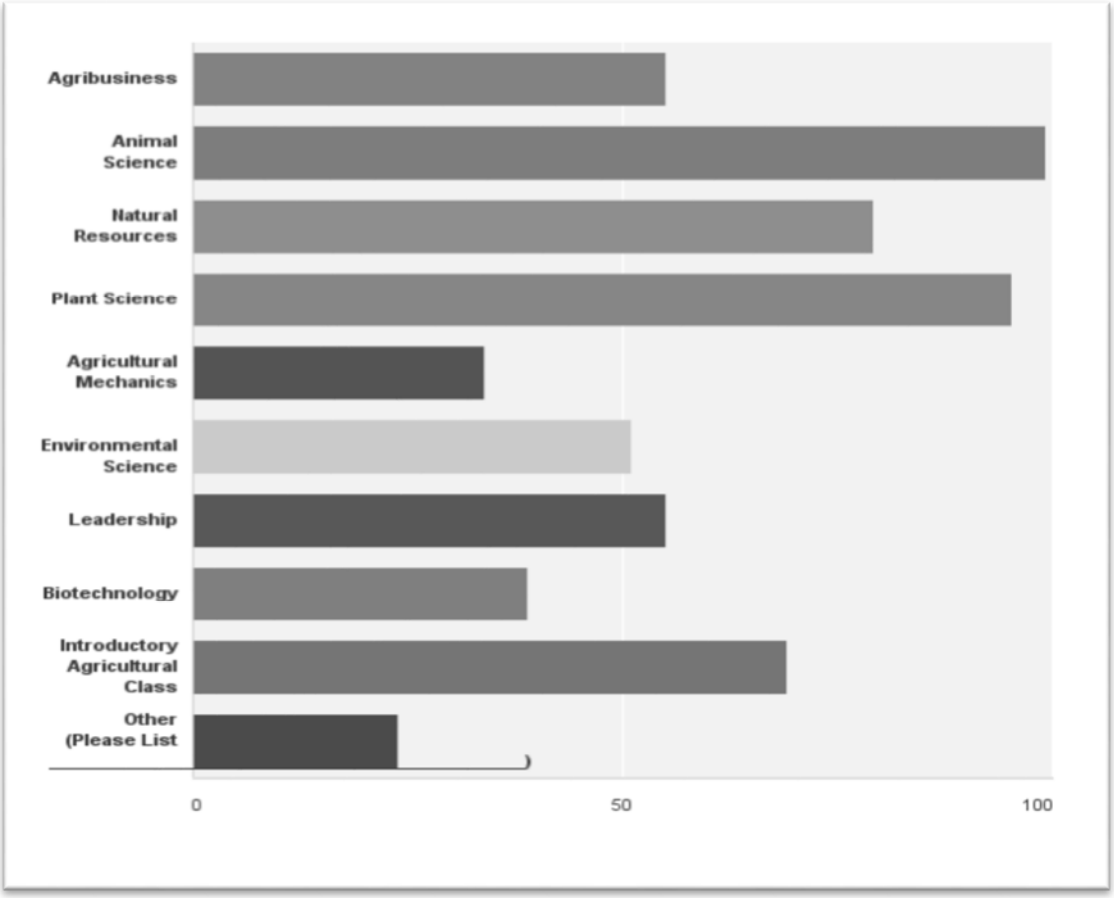

Figure 2. Bar graph displaying the results of survey question "If a standardized course curriculum was mandated, which courses would you include in your program?" .

The third question asked "Which time range best describes the number of years you have been teaching?" The largest group of respondents were in the (20+) year choice at a selection rate of 29.73%. The second largest group of respondents were in the (10-20) year range at a selection rate of 28.83%. The third largest group of respondents were in the (0-5) year range at a selection rate of 21.62%. The remaining range (5-10) years of service made up 19.82% of the respondents.

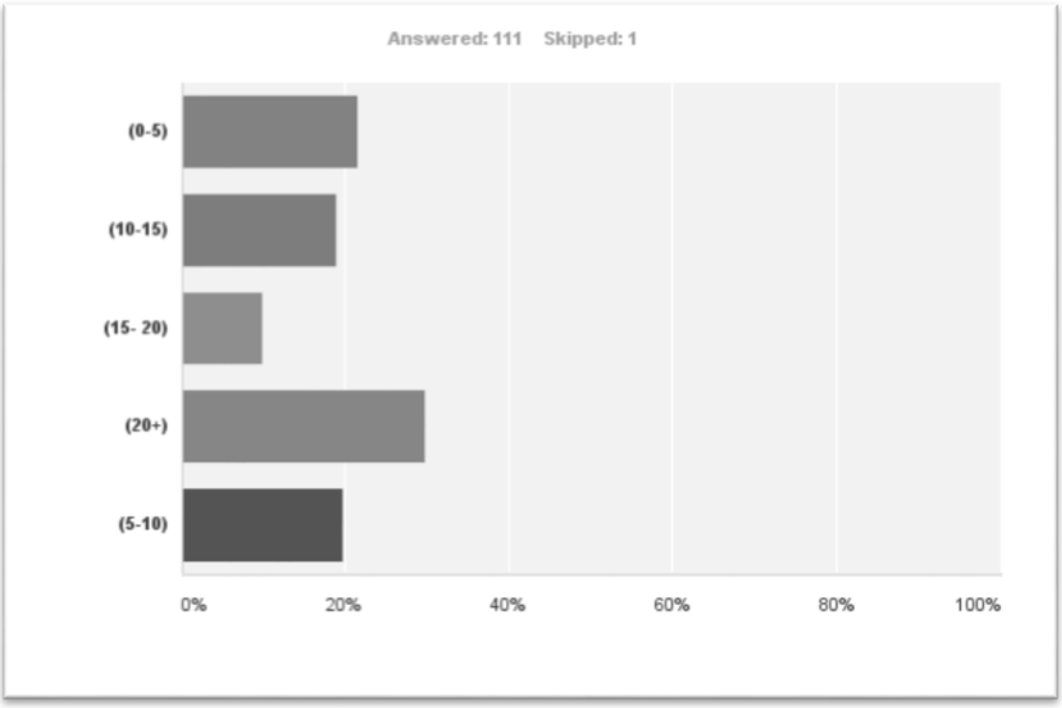

Figure 3. Bar graph displaying the results of survey question “Which time range best describes the number of years you have been teaching?”.

The fourth question asked “Which geographic region describes the community or communities in which you teach?” Of the respondents, 76.79% selected that they teach within a rural school. Within an urban community, there was a selection rate of 8.93% by the respondents. Those that taught within suburban communities made up 17.86% of the vote.

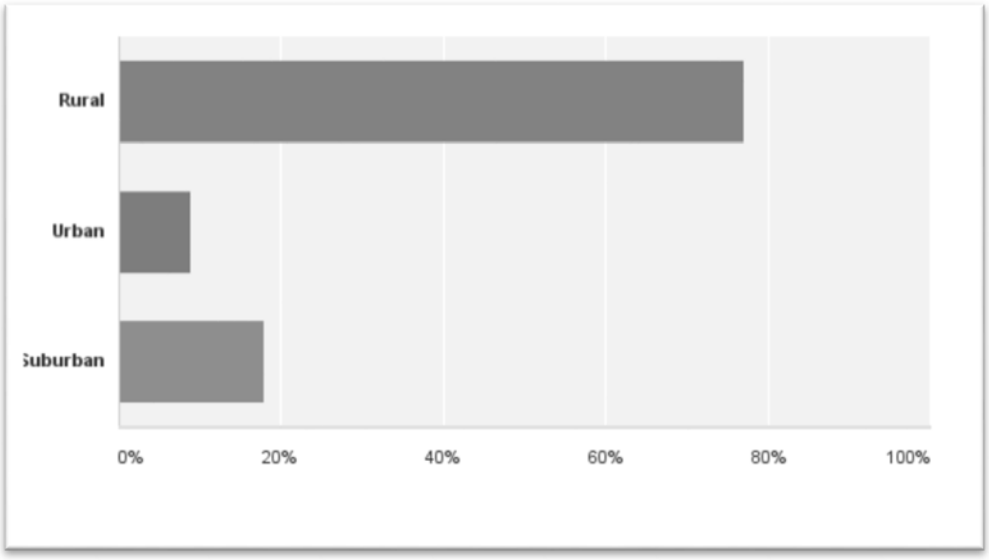

Figure 4. Bar graph displaying the results of survey question “Which geographic region describes the community or communities in which you teach?”.

In the fifth question, it was asked, “If it was your choice, would you rather have agricultural education trend towards vocational education rather than a standardized agricultural course curriculum or should we maintain the system currently in place?” Within the choice of a vocational agricultural education system there was a respondent selection rate of 17.27%. As to the current system, 50.91% selected it as the route they would like to maintain as the current trend. In addition, 31.82% of the respondents selected a standardized agricultural course curriculum.

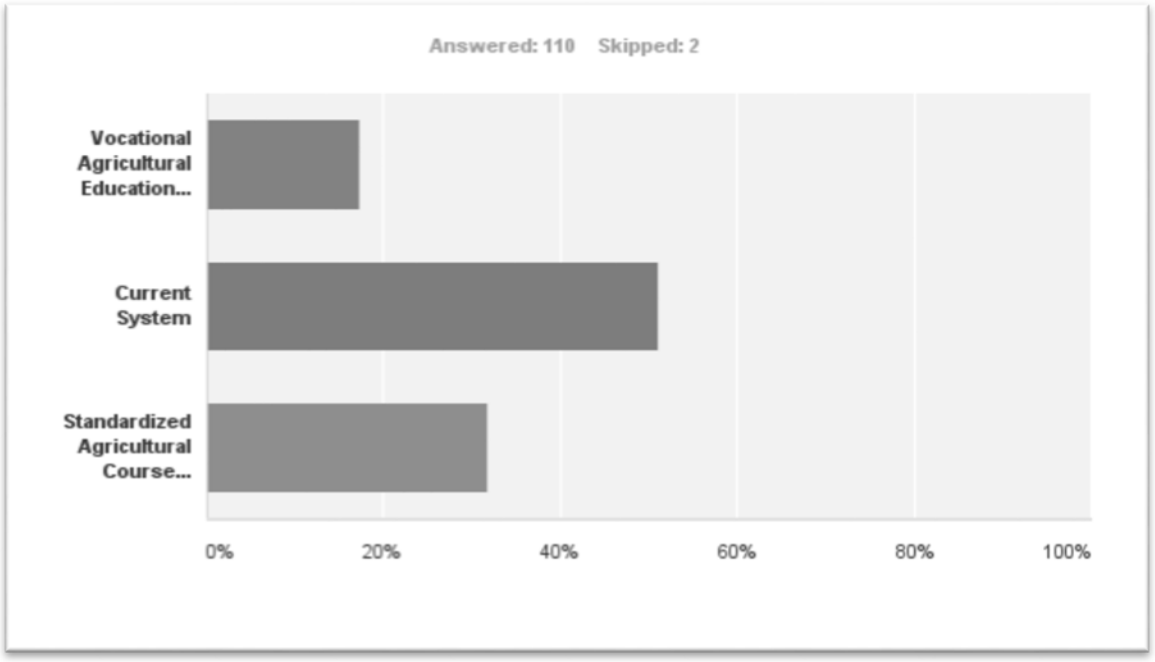

Figure 5. Bar graph displaying the results of survey question "If it was your choice, would you rather have agricultural education trend towards vocational education rather than a standardized agricultural course curriculum or should we maintain the system currently in place?".

In the final question "Do you have any other ideas or comments on agricultural curriculum?" was asked. The results of this survey included topics such as support for only certain classes be standardized, opposition for standardization due to geography, and support for standardization within a school program with multiple teachers (Appendix C, pgs. 39-41). An example of the geography concerns is in the diversity of Wisconsin agriculture and location within the state (Appendix C, Artifact 2, pg. 39). In reference to the theme that certain classes be standardized specifically looks at introductory or accredited classes (Appendix C, Artifact 2, pg. 40).

Chapter V: Conclusions, Recommendations, and Summary

Summary

The purpose of this research was to determine if agricultural education should be standardized at the course level. To accommodate the needs of this purpose, background research was gathered. This research was procured from a variety of resources to ensure the authenticity and viability of the study.

These resources included school curriculum, articles and reports from the United States Department of education, and independent journals and research on the subject of standardized curriculum. In the process of collecting research material, the following research questions served as the guiding compass:

1. What are the advantages and disadvantages of a standardized curriculum?
2. How does agricultural education in its present state apply to the ideals and guidelines set by the state common core initiative?
3. What impact, if any, does standardization have on the funding of a non-standardized program in comparison with a standardized program?
4. Is there a current form of assessment to measure whether a student has met the agricultural standards ordained by the Wisconsin DPI?

In the research process, each of the questions portrayed in the secondary objective section were answered.

While meeting the needs of each objective, four unknown objectives at the beginning of the study were fulfilled. These research questions at the beginning were the following:

1. What is CASE?

2. What are the resources offered by the MYCAERT program?

3. What is the effect of Race to the Top?

4. What is the Common Core Initiative?

In order to meet the unknown questions needs, research was initiated from primarily website sources. For the CASE and MyCAERT questions to be completed, the research was derived from the entities own website.

During the process, each content area was analyzed and specific information was recorded regarding curriculum. As to the Race to the Top and Common Core Initiative, the United States Department of Education and news resources were utilized.

Once the secondary and unknown objectives had been completed the main objective of deciding "Should agricultural education be standardized at the course level?" could begin. The survey tool, Survey Monkey was used to collect the data. To complete the main objective, a survey was sent to 295 K-12 agricultural educators in the state of Wisconsin. A response amount of 112 or 37% was received. This was a 7% higher response rate than expected.

This reasoning for sending this survey to agricultural educators was to get honest feedback on the route agricultural education should take. In particular, interest in these educators' was taken because of the amount of freedom granted in curriculum content and design that is not found in the common core subjects. In addition, they have an unbridled insight in what local community and business needs are.

Although the agricultural educators were surveyed, and are the primary resource used to determine the recommendations at the end of this paper, there are limitations to what advice they have offered. There was an almost even split with teaching experience;

however, those with 30+ years' experience do make up 30 % of the response rate. This may lead to a bias on the part of the instructor.

Conclusion

The majority (55.4%) of the respondents believed that agricultural education should not be standardized at the course level. This majority increases to 68.2 % opposed to vs. 31.8% for, when you divide the direction into three different pathways (Vocational agricultural education system, current system, or a standardized system). On the last question of the survey one educator stated "WAY OVER DUE!!! We all work our tails off to build our curriculum and lessons--Why don't we ALL come up with the BEST curriculum WITH Lesson Plans and what to use and what labs to do and HOW to do them and put them on the Web CD's so we ALL can use them!! California did this 25 years ago" (Appendix C, Artifact 11, pg.41). As you have read this provided stated support for pooling curriculum resources because of the work involved in developing curriculum.

The realization of this study is not alarming as much as it is enlightening. Because there is a striking similarity between the courses chosen by educators if they had to have standardized courses and those course offered by curriculum programs such as CASE and MyCAERT. These similarities are highlighted in the choice of Plant Science and Animal Science courses in survey. These same courses are offered in the MyCAERT curriculum program (MyCAERT, n. d.).

Overall, this study had a conclusive answer that agricultural education should not be standardized. The responses of this survey validate the statement in not one but two

different questions. However, the research in this paper indicates the need to assess the practicality of implementing standardization in agricultural education because of its momentum and funding differences in the common core subjects regardless of the opinion of the agricultural educators.

Recommendations

There are five recommendations to discuss. These recommendations are not for a particular school or individual but for general discussion on the future of agricultural education. In addition, these recommendations are the opinion of the researcher who is seeking his Master's Degree in Agricultural Education so a bias may be expressed.

The first recommendation is to not to mandate standardization. The majority of teachers responded that agricultural education should not be standardized at the course. However, 45% were in favor of standardization at the course level. Described earlier the pooling of resources for courses may be beneficial especially for new educators whom Myers, Dyer, and Washburn (2005) stated had challenges with curriculum development in their first year.

The second recommendation concerns the question of funding agricultural education as it pertains to standardization. A question that should have been added to the study is "Where do you get your funding?" This should have been an open-ended question where the surveyed could have described their finance system.

The third recommendation is to assess the security and longevity aspects of agricultural education programs across the state of Wisconsin. To do this in the study a question pertaining to the consistency of class sizes as well as number of classes taught.

Further study of standardization of MyCAERT and CASE educational programs is needed. An opportunity through MyCAERT and CASE exist to provide validity of agricultural courses through standardized end of course assessments and easy public access to classroom curriculum content. In addition, these programs may provide a stepping-stone to a buffet style agricultural education system, where courses are chosen by the instructor but the company provides the content.

The fifth and most important recommendation is to complete a public affairs assessment of agricultural education programs. This study would include assessing how much of their program content is available for student, parent, and community viewing online. In addition, this study should include an assessment of the public's view toward agricultural education and knowledge of the content included.

The sixth recommendation concerns the process of evaluating the non-response rate of the study. The researcher set an acceptable response rate of 30% or higher. The researcher selected this response rate of past surveys and articles have read with similar response rates (Nulty, 2008). The issue with nonresponse rate is whether the researcher assembled a sample that represents the K-12 agricultural educators as a whole. If the study was redone the researcher would send out another set of emails to raise the response rate to include a greater number of agricultural educators.

By completing these five recommendations, a better understanding of the current agricultural education system may be provided. Each of these recommendations pertains to research and would be costly to execute. However, if carried out, these recommendations may lead to an opportunity to demonstrate the importance of

agricultural education and provide the validity to maintain current programs and create new ones.

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Appendix A, Survey Email sent to Agricultural Educators

Dear (Educator Name),

I am a master's student at the University of Wisconsin River Falls researching whether agricultural education should be standardized at the course level for my thesis. I am asking you to participate in this survey because of your expertise in agricultural education. This survey has been approved by Human Subjects Institutional Review Board.

This survey is voluntary and anonymous. If you are willing to participate in this study, the link provided will take you to the survey. If not, disregard this email and thank you for your consideration. If you have any concerns or questions, I can be contacted by email at keith.becker@my.uwrf.edu or by phone at (715) 225-1018.

Kind Regards,

Keith Becker

Link: http://www.surveymonkey.com/s/K2MDTX3

Appendix B Survey

Curriculum Survey

Definition of Standardized Course Curriculum

A standardized course curriculum is defined as an educational guideline in which an educator chooses which classes they teach during a given school year. A list of approved classes will be provided to the educator by the state department of instruction. Each class would have a standardized content base. For example, an animal science class would contain content about reproduction, breeds, genetics, and internal body systems.
In addition to a standardized content, each class will include standardized assessments Assessment items such as quizzes, group projects, grading rubrics, and exams will be provided in coordination with content. Alternative assessment tools for those with special education requirements would be included in the content in accordance with a student's individual IEP.
After each class has been completed, the assessment information if released, would serve as an educational measurement tool of the students involved in the subject matter.

1. Do you believe agricultural education curriculum should be standardized at the course level?

- [ ] Do you believe agricultural education curriculum should be standardized at the course level? Yes
- [ ] No

2. If a standardized agricultural course curriculum was mandated, which courses would you include in your program?

- [ ] If a standardized agricultural course curriculum was mandated, which courses would you include in your program? Agribusiness
- [ ] Animal Science
- [ ] Natural Resources
- [ ] Plant Science
- [ ] Agricultural Mechanics
- [ ] Environmental Science
- [ ] Leadership
- [ ] Biotechnology
- [ ] Introductory Agricultural Class
- [ ] Other (Please List _____)

3. Which time range best describes the number of years you have been teaching?

- [ ] Which time range best describes the number of years you have been teaching? (0-5)
- [ ] (5-10)

(10-15)

(15- 20)

(20+)

4. Which geographic region describes the community or communities in which you teach?

Which geographic region describes the community or communities in which you teach? Rural

Urban

Suburban

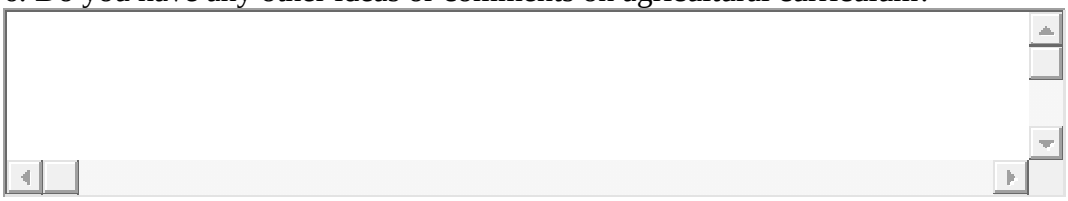
5. If it was your choice, would you rather have agricultural education trend towards vocational education rather than a standardized agricultural course curriculum or should we maintain the system currently in place?

If it was your choice, would you rather have agricultural education trend towards vocational education rather than a standardized agricultural course curriculum or should we maintain the system currently in place? Vocational Agricultural Education System

Current System

Standardized Agricultural Course Curriculum

6. Do you have any other ideas or comments on agricultural curriculum?



Do you have any other ideas or comments on agricultural curriculum?

Appendix C: Instructors Statements surrounding Standardization

(Artifact 1)

5/30/2012 3:49 PM View respondent's answers
The problem with standardized curriculum is that we all live in different parts of the state and agriculture topics are different around the state. Northern Wisconsin actually has trees and more opportunities to study wildlife than we do in the southern part of the state. In the south, our growing season and crops are a little different than they are in the northern part of the state. The way I teach and the topics I cover are going to be different than those covered by a teacher in Rhinelander.

(Artifact 2)

5/30/2012 10:47 AM View respondent's answers

Wisconsin is very diverse in its agriculture and from north to south I believe that skills needed change depending on the location of where you are in the state. I also believe that we as educators have our strengths and weaknesses and I believe we need to teach to our strengths and continue to work on the areas that we teach that we are not as skilled at. Who would determine in the state what is best for my students in my school system?

(Artifact 3)

5/30/2012 8:36 AM View respondent's answers

While a standardized curriculum would ensure that all programs are delivering quality agricultural education, flexibility still needs to be maintained to allow certain parts of the state or programs to teach to the topics that more directly affect the students in their geographic location.

(Artifact 4)

5/30/2012 7:54 AM View respondent's answers

There needs to be some flexibility in designing curriculum to meet the local needs. The amount of emphasis placed on certain topics in a course cannot be taken into account if you are rigid in your timeline for a course. It is hard enough to sell the ideas of education to a group that isn't the most motivated to do things that they don't want to do. You are often trying to sell ice cubes to Eskimos.

(Artifact 5)

5/30/2012 6:43 AM View respondent's answers

We currently have State Standards. School districts often require us to identify the standards we teach in our classes. The curriculum should be be developed by the instructor to reflect their areas of expertise, teaching styles, and they should take into consideration the the community they teach in. And if the instructor feels vocational skills should be taught to students, they can still teach the same concepts and state standards as the non-vocational class, it is just delivered in a diffefent way. We already have programs available through various comapnies, and universities. there is also "mycart" with lessons, evaluation tools, and standards. If the instructor wants/needs other sources from which to teach there are many available. Granted, If a school has more than one instructor is teaching the same course: i.e. two teachers, each teaching Animal Science, there should be a curriculum that both follow and teach. We do not need another person/governmental agency telling us what to do and reinventing the wheel.... again!

(Artifact 6)

5/29/2012 9:27 PM View respondent's answers

Curriculum shouldbe disigned at the local level to meet local needs.

(Artifact 7)

5/29/2012 5:37 PM View respondent's answers

It would be so wrong to standardize the ag ed program. Different parts of the state have different educational opportunities as well as needs. Additionally, I do not have a shop, so today the school would not build it to meet a standard. I would also worry that if we are teaching things that not part of our local communities that the program might just get cut. I think some standardization would be good, but totally.

(Artifact 8)

5/29/2012 3:26 PM View respondent's answers

Standardization is nice, but every ag program is different in every community. It would be hard to had one centralized curriculum.

(Artifact 9)

5/29/2012 3:09 PM View respondent's answers

Certain classes should definitely be beneficial to students if they were standardized. Others need to be catered more to the area of WI or student/teacher interest. It would be best to standardize the basic entry level classes.

(Artifact 10)

5/29/2012 3:03 PM View respondent's answers

Ag ed is regional. The content here along the coast of lake superior is forestry and fisheries and fruit production. A standardized approach would not fit.

(Artifact 11)

5/30/2012 7:50 AM View respondent's answers

WAY OVER DUE!!! We all work our tails off to build our curriculum and lessons--Why don't we ALL come up with the BEST curriculum WITH Lesson Plans and what to use and what labs to do and HOW to do them and put them on the Web CD's so we ALL can use them!! California did this 25 years ago. The experts tell us to Localize our curriculum but this is a Global Agriculture now anyway--lets teach it like that!! The localization parts can be infused by individual instructors.

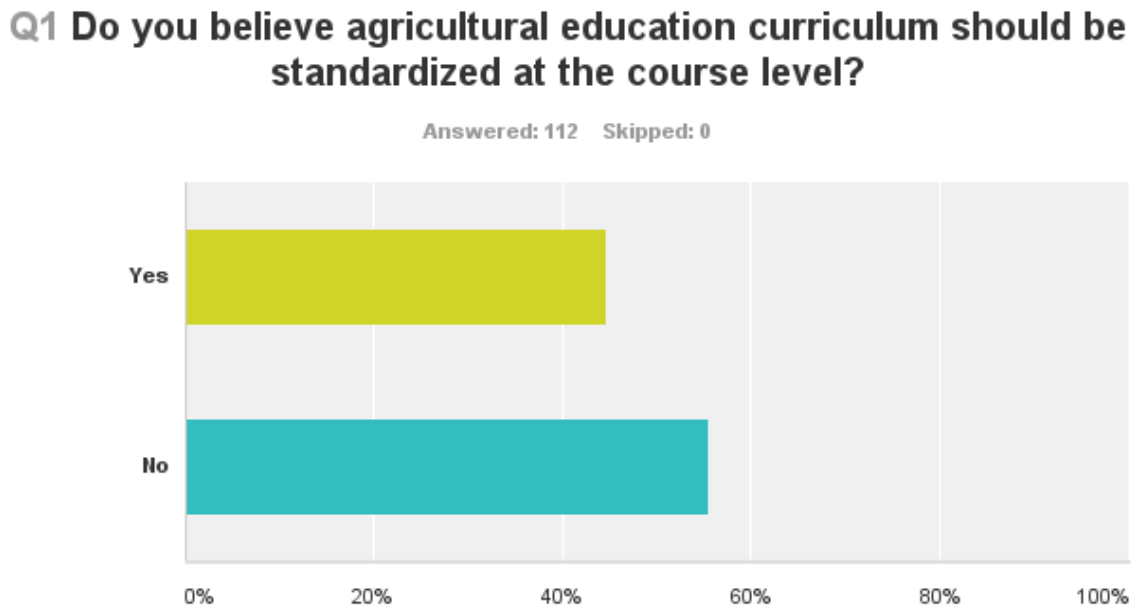
(Artifact 12)

5/30/2012 3:03 PM View respondent's answers

Just to provide resources for teachers to use in the classroom that are free or inexpensive.

Appendix D: Results of Survey

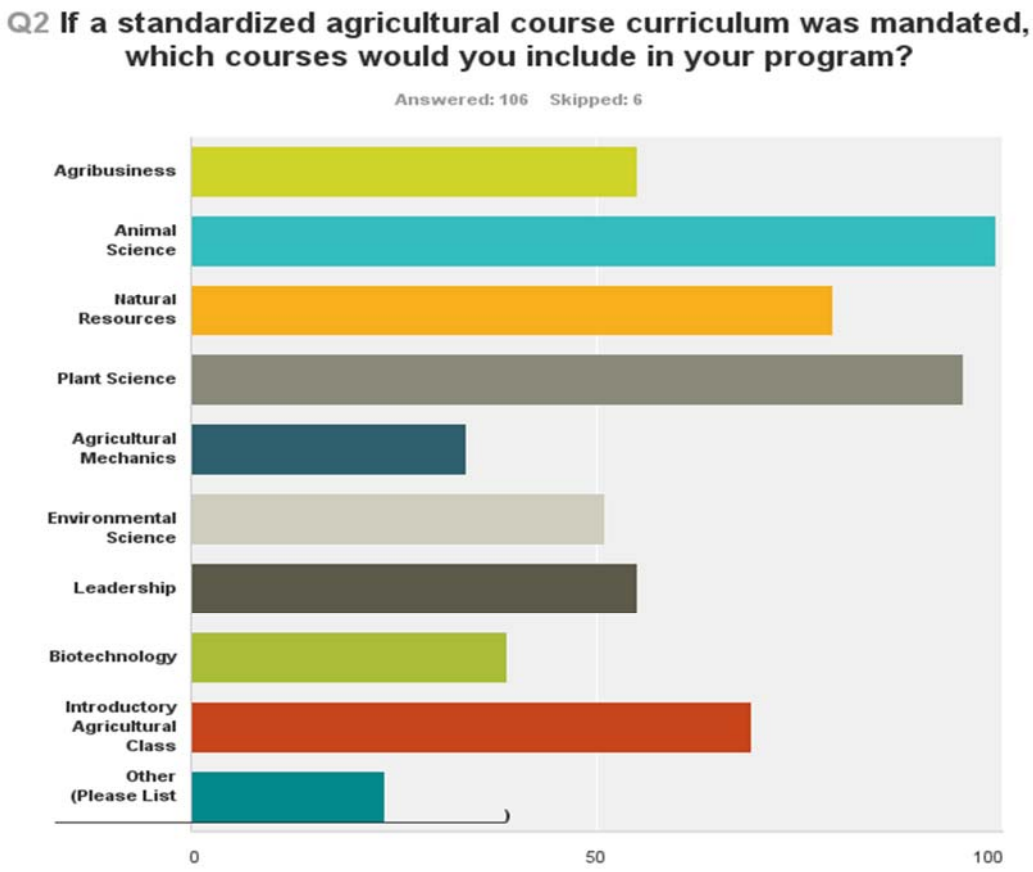
Figure 1



Answer Choices	Responses
Yes	44.64%
	50
No	55.36%
	62

Total Respondents: 112

Figure 2



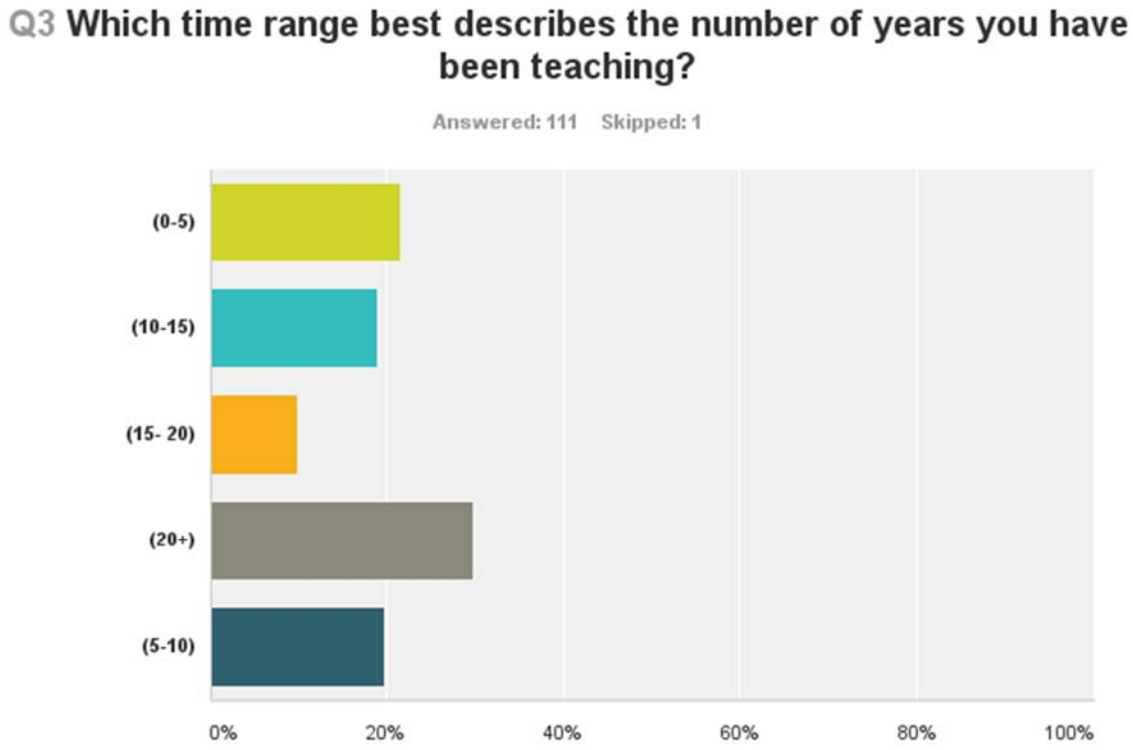
Answer Choices	Responses
Agribusiness	51.89% 55
Animal Science	93.40% 99
Natural Resources	74.53% 79
Plant Science	89.62% 95
Agricultural Mechanics	32.08% 34
Environmental Science	48.11% 51
Leadership	51.89%

Answer Choices	Responses
	55
Biotechnology	36.79% 39
Introductory Agricultural Class	65.09% 69
Other (Please List _____)	22.64% 24

Total Respondents: 106

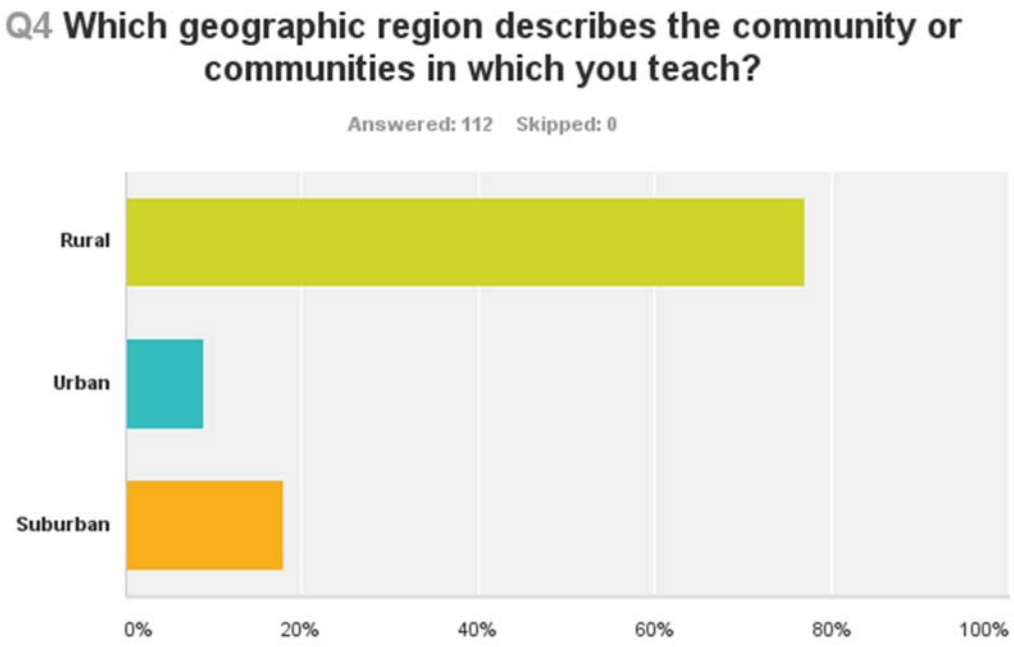
Answer Choices	Responses

Figure 3



Answer Choices	Responses
(0-5)	21.62% 24
(10-15)	18.92% 21
(15- 20)	9.91% 11
(20+)	29.73% 33
(5-10)	19.82% 22
Total	111

Figure 4



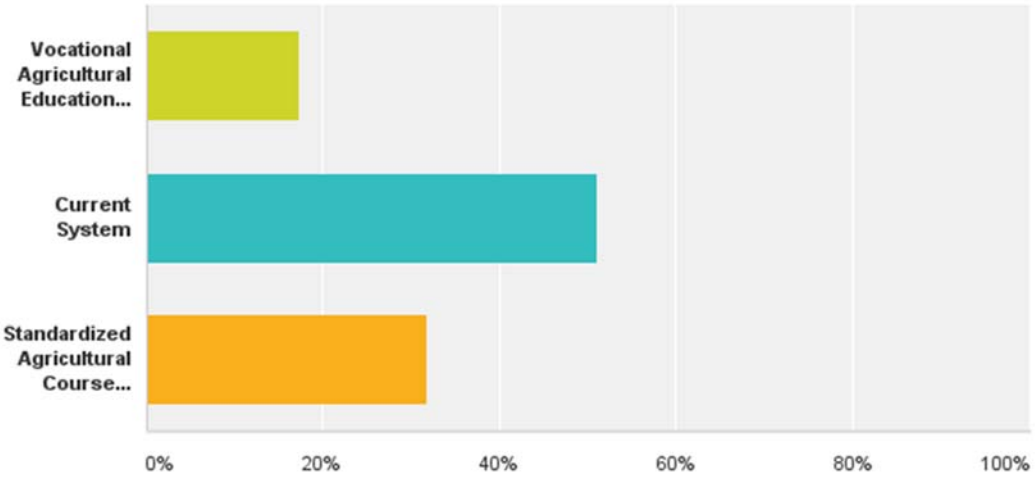
Answer Choices	Responses
Rural	76.79% 86
Urban	8.93% 10
Suburban	17.86% 20

Total Respondents: 112

Figure 5

Q5 If it was your choice, would you rather have agricultural education trend towards vocational education rather than a standardized agricultural course curriculum or should we maintain the system currently in place?

Answered: 110 Skipped: 2



Answer Choices	Responses
Vocational Agricultural Education System	17.27% 19
Current System	50.91% 56
Standardized Agricultural Course Curriculum	31.82% 35
Total	110

Appendix E: Analysis Tables

Question #1 Analysis

Table 1

Question #2: If a standardized agricultural course curriculum was mandated, which courses would you include in your program?

	Agribusiness	Animal Science	Natural Resources	Plant Science	Agricultural Mechanics	Environmental Science	Leadership	Biotechnology	Introductory Agricultural Class	Other (Please List _____)	Total Respondents
Q1: Yes	56.00% 28	98% 49	74% 37	92% 46	34% 17	50% 25	50% 25	38% 19	64% 32	22% 11	50
Q1: No	48.21% 27	89.29% 50	75% 42	87.50% 49	30.36% 17	46.43% 26	53.57% 30	35.71% 20	66.07% 37	23.21% 13	56
Total Respondents	55	99	79	95	34	51	55	39	69	24	106

Table 2

Question #3: Which time range best describes the number of years you have been teaching?

	(0-5)	(5-10)	(10-15)	(15- 20)	(20+)	Total
Q1: Yes	16% 8	6% 3	18% 9	12% 6	48% 24	50
Q1: No	26.23% 16	31.15% 19	19.67% 12	8.20% 5	14.75% 9	61

Total Respondents	24	22	21	11	33	111

Table 3

Question: #4: Which geographic region describes the community or communities in which you teach?

	Rural	**Urban**	**Suburban**	**Total Respondents**
Q1: Yes	74% 37	8% 4	22% 11	 50
Q1: No	79.03% 49	9.68% 6	14.52% 9	 62
Total Respondents	86	10	20	112

Table 4

Question #5: If it was your choice, would you rather have agricultural education trend towards vocational education rather than a standardized agricultural course curriculum or should we maintain the system currently in place?

	Vocational Agricultural Education System	**Current System**	**Standardized Agricultural Course Curriculum**	**Total**
Q1: Yes	16.67% 8	10.42% 5	72.92% 35	 48
Q1: No	17.74% 11	82.26% 51	0% 0	 62
Total Respondents	19	56	35	110

Appendix F: Wisconsin's Model Academic Standards Example

A. GLOBAL AGRICULTURAL SYSTEMS

Content Standard

Students will learn about the role of food, fiber, and natural resource systems in their lives and the lives of others around the world.

Rationale:

Knowledge of global agricultural systems and the natural resources required to produce food and fiber used in daily life leads students to understand the relationship between production and sustainability. Understanding food and fiber production, distribution, and consumption at local, national, and international levels allows students to comprehend the complex interdependence that exists within agriculture.

PERFORMANCE STANDARDS

By the end of grade 4 students will:

A.4.1 Understand how products made from plants and animals are made available for use by people (see SC B.4.1; SS D.4.3, A.4.5)

• explain how food is transported

• describe ways that people get food—grow their own, farmers' market, grocery stores, catalogues, etc.

• know which foods from their diet are produced in Wisconsin and which must be imported from other states and nations

• identify careers related to production and distribution of food to a local community