Journal of Agricultural Education, 58(1), 118-130.
https://doi.org/10.5032/jae.2017.01118

Identifying International Agricultural Concepts for Secondary Agricultural Education Curriculum

Nathan W. Conner,[1] Hailey Gates,[2] & Christopher T. Stripling[3]

Abstract

The globalization of the agriculture industry has created an emerging need for agricultural education in the United States to take a more globalized approach to prepare students for future careers in agriculture. The purpose of this study was to identify international agricultural concepts for secondary agricultural education curriculum. A Delphi study was used to obtain a general consensus by a panel of experts, and 24 overarching concepts were identified to incorporate into an internationalized secondary agricultural curriculum within the Agriculture, Food, and Natural Resources Career Cluster. The overarching concepts were placed into five categories including: (a) production, (b) business, (c) culture, (d) environment, and (e) global awareness. We recommend the 24 concepts be used by curriculum specialists to internationalize secondary curriculum for school based agricultural education (SBAE). Future research should investigate the utility of the concepts and best practices for teaching international content in SBAE.

Keywords*:* agricultural education; international; curriculum, secondary education

Introduction

According to the American Farm Bureau Federation (2015), more than 21 million Americans are involved in the food and fiber industry, making agriculture a critical industry in the United States and an important aspect of our nation's profile. However, agricultural production is not limited to the United States. International food products that fill the grocery store shelves serve as evidence of a more globalized society (Boyd, Felton, & Dooley, 2004). According to Clark, Flaherty, Wright, and McMillen (2009), "globalization of markets has led to more multinational enterprises, exponential growth in foreign trade, the creation of an increasingly diverse consumer base, and extended efforts at international marketing" (p. 173). For example, in 2010, the United States exported $115 billion of agricultural products, which was more than was imported into the United States (American Farm Bureau Federation, 2015). The globalization of our economy has resulted in one in six American jobs being directly tied to international trade, making global skills a top priority among employers and business professionals (Bruening & Shao, 2005).

The globalization of the agriculture industry has created an emerging need for agricultural education in the United States to take a more globalized approach to prepare students for future careers in agriculture (National Research Council, 2009). Agricultural professionals are continually competing in a global marketplace affected by public policy decisions worldwide (National Research Council, 2009). Furthermore, according to the National Research Council

[1] Nathan W. Conner is an Assistant Professor of Agricultural Education in the Department of Agricultural Leadership, Education and Communication at the University of Nebraska-Lincoln, 236 Filley Hall, Lincoln, NE, 68583-0947, nconner2@unl.edu

[2] Hailey Gates, was an undergraduate Agricultural Education students in the School of Agriculture at Tennessee Tech University, Oakley Hall, 715 Quadrangle, Cookeville, TN 38505, hrgates42@students.tntech.edu

[3] Christopher T. Stripling is an Assistant Professor in the Department of Agricultural Leadership, Education and Communications at the University of Tennessee, 320B Morgan Hall, 2621 Morgan Circle, Knoxville, TN 37996-4511, cstripling@utk.edu

(2009), the global agriculture industry of today is connected socially, culturally, politically, and economically in both simple and complex ways. Maidstone (1995) suggested globalization of curriculum needs to take place because of the emergence of a worldwide political economy, greater interdependency among nations, changes in international security, and demographic changes in society. Bruening and Shao (2005) described an internationalized curriculum as part of a process to prepare students to work in an increasingly interdependent world. The concept of a globalized agricultural curriculum for secondary agricultural education students would impact more than 800,000 students enrolled in agricultural education in the United States (National FFA Organization, 2016) and help prepare students for careers in agriculture.

To make this concept a reality, determination of what an international agricultural curriculum should encompass was needed. With most research on international agriculture curriculum pertaining to postsecondary education, this study would extend understanding as to what needs to be done to facilitate secondary students learning about agriculture on a global scale. The impact of this exposure would not only benefit the students who will one day be at the forefront of our country's internationalized community, but also the future of a globalized agricultural industry.

Conceptual Framework

A continuous struggle exists to determine the specific content that should be taught in schools in the United States (Grier, 2005; Kliebard, 1995). This may be due to the numerous decisions made when designing curriculum. Taba (1962) suggested an ordered approach to curriculum development should result in thoughtful and dynamic curriculum. With that in mind, Taba's seven steps of curriculum development were used as a framework to guide the selection and organization of content for the development of an internationalized secondary agricultural education curriculum. This study therefore sought to accomplish steps three and four of Taba's (1962) seven steps for curriculum development:

Step 1: Diagnosis of needs

Step 2: Formulation of objectives

Step 3: Selection of content

Step 4: Organization of content

Step 5: Selection of learning experiences

Step 6: Organization of learning experiences

Step 7: Determination of what to evaluate and of the ways and means of doing it. (p. 12)

According to Taba (1962), students have varying backgrounds and because the main objective of curriculum is learning, steps must be taken to "diagnose the gaps, deficiencies, and variations in these backgrounds" (p. 12) to achieve the highest level of knowledge attainment. The background of a demographic group may affect the level of achievement they obtain, and the diagnosis of the learners' needs assures curriculum is relevant to them (Taba, 1962). In addition, the formulation of objectives creates guidelines to keep curriculum on target by focusing on the most important information (Taba, 1962). This provides a platform for more efficient organization and allows information to be appropriately built on the learning objectives (Taba, 1962).

Selecting content is central in curriculum development and, therefore, "a rational method of going about it is a matter of great concern." (Taba, 1962, p. 263). Due to the vast amount of information that could be learned, the selection of content is a struggle because of the constraints on time and student ability (Taba, 1962); Moreover, the explosion of new knowledge makes content selection increasingly more difficult (Taba, 1962). Also, new technological advances, the pressure to build efficiency, and the extension of objectives in educational systems are large anxieties affecting the selection of content (Taba, 1962). To meet the demands placed on development, curriculum must stay up to date and "reflect the contemporary scientific knowledge" (Taba, 1962, p. 267). The content selected must be relevant to the world in which students live, while balancing "responsiveness to the demands of the immediate situation and achieving a thoughtful reality orientation to the basic needs of the culture" (Taba, 1962, p. 272). Content must be explained deeply enough to equate a usable knowledge level, yet shallow enough to not require too much time on one idea (Taba, 1962). Taba (1962) suggested balance can be achieved by carefully selecting content that has "the greatest applicability and the greatest power to transfer" (p. 276).

In line with the selection of content, the organization of content must be revered as a vital step in overall curriculum development (Taba, 1962). To make curriculum efficient, one must consider continuity, sequences in learning, learners' ability levels, and current knowledge of growth and development and learning (Taba, 1962). When a curriculum is seen as a process of learning as opposed to an exposition of content, different considerations must be uncovered (Taba, 1962). Leonard (as cited in Taba, 1962) described the process of organization as needing to answer the following: "What should determine the order of succession of materials of instruction, what follows what and why, and what is the most propitious time to acquire certain learning?" (p. 292). In addition to the aforementioned questions, Taba (1962) suggested one must consider how to translate the social heritage into experiences that are relevant to the learner. The organization of actual learning experiences should be granted the same level of importance as the organization of content and deserves "careful theoretical thought" (p. 292). Moreover, when the curriculum is thought of as a hypothesis to student learning, evaluating learning can be thought of as testing that hypothesis (Taba, 1962). Therefore, curriculum must be evaluated to ensure prior objectives are being met in the most efficient way (Taba, 1962).

Purpose

The purpose of this study was to identify international agriculture concepts for inclusion in secondary agricultural education curriculum. The objective of this study was to identify what overarching concepts should be included in the Agriculture, Food, and Natural Resources (AFNR) Career Cluster to internationalize the secondary agricultural education curriculum.

Methods and Procedure

A modified Delphi study was used to obtain a general consensus from a panel of experts. The methodology behind the Delphi method is based on the old adage that two heads are better than one (Dalkey 1969). The Delphi method has been frequently used in agricultural education research (Conner & Roberts, 2013; Lundry, Ramsey, Edwards, & Robinson, 2015; Meals & Washburn, 2015; Terry & Osborne, 2015). By surveying experts in the field, we were able to gain a better understanding of how international agriculture content should be presented within the AFNR career cluster.

To ensure qualified participants, the following criteria were used: (1) have at least three years of classroom experience as an agriculture teacher or extension agent; (2) be currently employed in agricultural education; and (3) have experience with international agriculture either

through (a) study abroad programs, (b) international development, (c) foreign exchange students, or (d) experiences with incorporating international agricultural practices into educational curriculum.

We purposefully selected one teacher educator, one secondary agriculture teacher, and one AFNR curriculum specialist who met our requirements and asked them to provide us with nominations of other professionals who met the selection criteria. According to Ludwig and Starr (2005), "the validity of a Delphi study depends not on the number of participants polled, but rather on the expertise of the panel who participate" (p. 316); therefore, we sought to identify and include individuals with relevant experience and expertise in international agriculture.

The use of the snowball sampling method (Goodman, 1961) provided 24 nominations from across the nation, 17 of whom agreed to participate in this study. The members of the panel spanned six states, including Tennessee, Alabama, Florida, Oklahoma, Texas, and Pennsylvania. The composition of the panel is provided in Table 1.

Table 1

Distribution of Occupations of Panel Members Who Agreed to Participate in the Delphi Study

Occupation	*n*
Agriculture Teacher Educators	10
Secondary Agriculture Teachers	4
Agriculture Education Curriculum Specialist	3
Total Panelists	17

A brief electronic mail message was sent to all participants on June 22, 2015 explaining the background of the study and an anticipated timeline for when rounds one through three would be administered. Each round lasted two weeks with a week for the researchers to review the feedback and prepare for the next round. We used the web-based research tool Qualtrics to collect and analyze data from each round as well as to electronically deliver a web-link to the questionnaires. Each round was used to deduce a general consensus based on our open-ended question introduced in round 1.

Round 1 featured the following question: "What overarching concepts should be included in the AFNR Career Cluster to internationalize the secondary agricultural curriculum?" We sent appropriate notices and follow up reminders according to Dillman, Smyth, and Christian's (2009) recommendations to encourage participation. Of the 17 panelists, 14 responded (82%) and provided 47 concepts. Using the thematic analysis approach (Bruan & Clarke 2006), these concepts were organized into five categories: (a) production, (b) business, (c) culture, (d) environment, and (e) global awareness.

Next, a survey instrument was developed from the round 1 concepts for the panelists to take during round 2. Using a five-point rating scale, participants ranked their level of agreement or disagreement for each concept identified in round 1. The rating choices used for this survey

included: 1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *strongly agree*. In addition to the five-point rating scale, participants were asked to reword any of the concepts or suggest additional concepts they believed should be identified but failed to make the concepts list. As in round 1, we sent notices and follow up reminders to encourage participation from the panel members (Dillman et al., 2009). Fourteen of the panelists participated in round 2.

After the completion of the second round, the results were analyzed to determine what concepts would be retained for round 3. For a concept to be retained, we determined *a priori* based on Conner, Roberts, and Harder (2013) that 80% of the participants must have selected either *agree* or *strongly agree*. In addition, we added six newly identified concepts to the list. The newly identified concepts were added to round 3, and the particpants had the opportunity to rate them to determine if they would be retained. As a result, 35 concepts advanced to round 3.

During round 3, the 35 concepts identified in round 2 were also rated using the same five-point agreement scale used in round 2. We determined *a priori* for round 3 that the agreement rate would also be 80% for overarching concepts to be recommended for inclusion in the AFNR Career Cluster to internationalize the secondary agricultural curriculum. As in round 1 and 2, we sent notices and follow up reminders to encourage participation from the panel members (Dillman, et al., 2009). Fourteen of the seventeen panelists provided feedback in round 3.

Findings

Round 1 and Round 2

An open-ended question was used to identify the concepts that should be incorporated into secondary agricultural curriculum. The initial question was "What overarching concepts should be included in the AFNR Career Cluster to internationalize the secondary agricultural education curriculum?" This question generated 47 responses from our panel of experts during round 1 (see Table 2).

Table 2

Concepts Identified for International Secondary Agricultural Education Curriculum (n = 14)

Concepts	Agree/Strongly Agree %
Production	
1. Land suitability and farming practices around the world	100.0
2. Challenges of food distribution	93.3
3. World agricultural commodity production	93.3
4. Global food systems and preferences	93.3
5. International food safety and security practices	93.3
6. Global GMO usage	93.3
7. Identify the varying degrees of mechanization in production agriculture	85.7
8. Introduction to crops not common in the US	71.4
9. Introduction to livestock not common in the US	64.3
10. Global land tenure systems	57.1

Table 2 (continued)

Concepts Identified for International Secondary Agricultural Education Curriculum (n = 14)

Concepts	Agree/Strongly Agree %
11. Overview of different farms around the world	57.1
12. Biotechnology use in agriculture	57.1
Business	
13. How free trade agreements impact US Agriculture	93.3
14. The effects of global land use and environmental policies	93.3
15. Impact of exports on the US Economy	85.7
16. Impact of imports on the US Economy	85.7
17. Bi-lateral trade agreements involving agriculture	85.7
18. Agriculture industry's global workforce effects supply and demand	85.7
19. The effects of global agricultural trade and market policies	85.7
20. Transportation systems for world trade	85.7
Culture	
21. Cultural effects on trade	93.3
22. Cultural effects on marketing	93.3
23. International career opportunities in agriculture	93.3
24. Differing views on GMOs	93.3
25. Overview of cultures in different countries	85.7
26. International agriculture organizations	85.7
27. International agricultural education programs	78.6
28. Food preferences in different countries	78.6
29. International extension programs	71.4
30. Differing views on animal rights and animal welfare	71.4
31. Cultural norms associated with specific countries	71.4
32. Overview of world languages	42.9
Environment	
33. Global role of water use in agriculture	100.0
34. Impact of world food demand on the environment	100.0
35. International resource management practices	100.0
36. How global climates impact food production	93.3
37. Global role of air quality in agriculture	78.6
38. Impacts of invasive species	78.6
39. Global deforestation	71.4
40. Soil science/composition in regions around the world	71.4
41. Soil classifications in regions around the world	64.3

Table 2 (continued)

Concepts Identified for International Secondary Agricultural Education Curriculum (n = 14)

Concepts	Agree/Strongly Agree %
Global Awareness	
42. Differences of developed and developing countries	100.0
43. Overview of world hunger	100.0
44. World geography	93.3
45. Identify the developing countries	85.7
46. Identify rural development practices	78.6
47. World history of agriculture	78.6

The responses from round 1 were rated by the panelists during round 2 (see Table 2) based on how much they agreed or disagreed with the inclusion of each concept in secondary agricultural education curriculum. Of the 47 concepts, 18 were removed because less than 80% of the panelists *agreed* or *strongly agreed*. The remaining 29 concepts were retained for round 3; along with six additional concepts. The concepts that were added were: (a) overview of food security in different countries; (b) overview of food safety in different countries; (c) overview of food production rates in different countries; (d) status of student leadership organization opportunities and development within each country; (e) students should take a cultural intelligence test; and (f) impact of political conflicts on the world market.

The concepts excluded were (a) introduction to livestock not common in the US ; (b) introduction to crops not common in the US; (c) global land tenure systems; (d) overview of different farms around the world; (e) biotechnology use in agriculture; (f) international agriculture education programs; (g) international extension programs; (h) overview of world languages; (i) differing views on animal rights and animal welfare; (j) food preferences in different countries; (k) culture norms associated with specific countries; (l) global role of air quality in agriculture; (m) global deforestation; (n) soil classifications in regions around the world; (o) soil science/composition in regions around the world; (p) impacts of invasive species; (q) world history of agriculture; and (r) identify rural development practices. Additionally, six concepts were added, making 35 concepts for round 3.

Round 3

In our final round, panelists were asked to rank how much they agreed or disagreed with the concepts. We determined *a priori* that an 80% agreement would be used to retain concepts from round 2 into round 3. The concept results are found in Table 3. The third and final round began with 35 concepts and resulted in 11 concepts being removed due to lack of consensus: (a) international food safety and security practices; (b) overview of food safety in different countries; (c) bi-lateral trade agreements involving agriculture; (d) the effects of global agricultural trade and market policies; (e) transportation systems for world trade; (f) international agriculture organizations; (g) status of student leadership organization opportunities and development within each country; (h) international resource management practices; (i) world geography; (j) identify the developing countries; and (k) students should take a cultural intelligence test. The reduction of

concepts left us with general consensus that 24 overarching concepts (see Table 4) should be included in the AFNR Career Cluster to internationalize the secondary agricultural education curriculum.

Table 3

Concepts Identified for International Secondary Agricultural Education (*n = 14)*

Concepts	Agree/Strongly Agree %
Production	
1. Challenges of food distribution	100.0
2. World agricultural commodity production	93.3
3. Land suitability and farming practices around the world	93.3
4. Identify the varying degrees of mechanization in production agriculture	93.3
5. Global food systems and preferences	85.7
6. Global GMO usage	85.7
7. Overview of food security in different countries	85.7
8. Overview of food production rates in different countries	85.7
9. International food safety and security practices	78.6
10. Overview of food safety in different countries	71.4
Business	
11. How free trade agreements impact US Agriculture	93.3
12. Impact of exports on the US Economy	85.7
13. Impact of imports on the US Economy	85.7
14. Agriculture industry's global workforce effects supply and demand	85.7
15. The effects of global land use and environmental policies	85.7
16. Impact of political conflicts on the world market	85.7
17. Bi-lateral trade agreements involving agriculture	78.6
18. The effects of global agricultural trade and market policies	78.6
19. Transportation systems for world trade	64.3
Culture	
20. International career opportunities in agriculture	100.0
21. Cultural effects on trade	93.3
22. Cultural effects on marketing	85.7
23. Overview of cultures in different countries	5.7
24. Differing views on GMOs	85.7
25. International agriculture organizations	78.6

Table 3 (continued)

Concepts Identified for International Secondary Agricultural Education (*n = 14)*

Concepts	Agree/Strongly Agree %
26. Status of student leadership organization opportunities and development within each country	50.0
27. Students should take a cultural intelligence test	42.9
Environment	
28. Global role of water use in agriculture	100.0
29. Impact of world food demand on the environment	100.0
30. How global climates impact food production	85.7
31. International resource management practices	78.6
Global Awareness	
32. Overview of world hunger	100.0
33. Differences of developed and developing countries	93.3
34. World geography	78.6
35. Identify the developing countries	78.6

Table 4

Concepts Retained for an International Secondary Agricultural Education Curriculum

	Concepts
Production	1. Challenges of food distribution
	2. World agricultural commodity production
	3. Land suitability and farming practices around the world
	4. Identify the varying degrees of mechanization in production agriculture
	5. Global food systems and preferences
	6. Global GMO usage
	7. Overview of food security in different countries
	8. Overview of food production rates in different countries
Business	
	9. How free trade agreements impact US Agriculture
	10. Impact of exports on the US Economy
	11. Impact of imports on the US Economy
	12. Agriculture industry's global workforce effects supply and demand
	13. The effects of global land use and environmental policies
	14. Impact of political conflicts on the world market

Table 4

Concepts Retained for an International Secondary Agricultural Education Curriculum

	Concepts
Culture	
	15. International career opportunities in agriculture
	16. Cultural effects on trade
	17. Cultural effects on marketing
	18. Overview of cultures in different countries
	19. Differing views on GMOs
Environment	
	20. Global role of water use in agriculture
	21. Impact of world food demand on the environment
	22. How global climates impact food production
Global Awareness	
	23. Overview of world hunger
	24. Differences of developed and developing countries

Conclusions & Implications

Agricultural education professionals reached consensus on 24 overarching concepts that curriculum developers should incorporate into an internationalized secondary agricultural education curriculum within the AFNR Career Cluster. The overarching concepts were placed into five categories which included (a) production, (b) business, (c) culture, (d) environment, and (e) global awareness. The emergent categories from this study echo the National Research Council's (2009) assertion that the agricultural industry has evolved with the global marketplace. Agricultural education professionals in this study seemed to recognize agricultural production, business, culture, and the environment overlap with one another and are important components of an internationalized curriculum. In addition, using agricultural education experts helped to identify content that should be incorporated into internationally infused agricultureal curriculum as well as the placement of content into specific categories. Content identification and content categorization efforts aligned with step three and step four of Taba's (1962) curriculum development framework.

Interestingly, the environmental concepts that were deemed critical, all used the word *global* or *world*. This finding shows how environmental challenges and issues are not isolated to a particular country, but rather a global challenge or issue. Maidstone (1995) also found the world was interconnected and there would be greater interdependency between nations. Similarly, the other four categories all reference global or world challenges or issues, which helps to further support the need for an internationalized secondary agricultural education curriculum (Bruening & Shao, 2005; National Research Council, 2009).

Recommendations for Practice

If secondary agricultural teachers are expected to integrate internationalized agricultural concepts into the AFNR curriculum, curriculum specialists should work with agriculture teacher educators and secondary teachers to develop AFNR curriculum. The curriculum must be teacher friendly and accomplishes steps five, six, and seven of Taba's (1962) framework for curriculum development. Based on the findings of this study, agricultural education curriculum specialists should use the identified categories for content selection and categorization. Within each category, the specific concepts identified in this study could be infused into the curriculum or turned into learning objectives that could be used to meet overarching learning outcomes. The panelists did not agree on all of the concepts that were initially developed based off of round 1 of this study. Because this study used experts within the field of agricultural education, we recommend agricultural education curriculum specialists focus on the concepts retained from round 3. The concepts that were not retained from this study may have value, but they may have been rejected due to the logistical time restraints associated with adding new material into an existing curriculum that may already be overloaded. This logic is in agreement with Taba (1962) who described the selection of content as a struggle because of the constraints on time.

In addition, the findings of this study could be used before agriculture curriculum specialist embed international agricultural concepts into the AFNR curriculum. We recommend secondary agricultural teachers interested in internationalizing one or all of their courses, use the findings from this study as a guide. Secondary agricultural teachers may want to begin slowly and use one course to integrate a few international agricultural concepts that were identified in this study. Once the secondary agricultural teacher feels more comfortable with the subject matter, we recommend he/she focus on further international agricultural integration. What is more, if a secondary agricultural teacher has an interest in teaching a full AFNR curriculum that is infused with international agricultural concepts, the teacher should contact the appropriate person in their State Department of Education and begin initial conversation on what it would take to develop a curriculum that educates students from an internationalized perspective.

Recommendations for Additional Research

This study provides initial insight into the international agricultural concepts that could be integrated into the AFNR curriculum. However, more research is needed to provide a solid foundation for internationalizing secondary agricultural education. Research questions that should be investigated are the following:

1. What type of learning methods are appropriate for an internationalized agricultural education curriculum?
2. What are student perception of the internationalized agricultural concepts identified in this study?
3. Are some of the international agricultural education concepts or categories more critical in the development of globally competent individuals for the AFNR sector?
4. Does exposure to an internationalized agricultural curriculum increase students' ability to successfully function in a globalized agricultural industry?

References

American Farm Bureau Federation. (2015). *Fast facts about agriculture.* Retrieved from: http://www.fb.org/newsroom/fastfacts/

Boyd, B. L., Felton, S. R., & Dooley, K. E. (2004). Providing virtual international experiences for undergraduates. *Journal of International Agricultural and Extension Education, 11*(3), 63-68.

Braun, V., & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Bruening, T., & Xiaorong, S. (2005). What should be included in an international agriculture undergraduate course? *Journal of International Agricultural and Extension Education, 12*(1), 47-54. doi: 10.5191/jiaee.2005.12105

Clark, I., Flaherty, T. B., Wright, N. D., & McMillen, R. M. (2009). Student intercultural proficiency from study-abroad programs. *Journal of Marketing Education, 31*(2), 173-181. doi:10.1177/0273475309335583

Conner, N., & Roberts, T. G. (2013). Competencies and experiences needed by pre-service agricultural educators to teach globalized curriculum: A modified Delphi study. *Journal of Agricultural Education*, *54*(1), 8-17. doi:10:5032/jae.2013.01008

Conner, N. W., Roberts, G. T., & Harder, A. (2013). Compentencies and experiences needed by entry level international agricultural development practitioners. *Journal of International Agricultural and Extension Education, 20*(1) 19-32.

Dalkey, N. D. (1969). *The Delphi method: An experimental study of group opinion*. Santa Monica, CA: The Rand Corp.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed mode surveys: The tailored design method.* (3rd ed.). Hoboken, NJ: Wiley.

Goodman, L. A. (1961). Snowball sampling. *The Annals of Mathematical Statistics, 32*(1), 148–170.

Grier, A. S. (2005). Integrating needs assessment into career and technical curriculum development. *Journal of Industrial Teacher Education, 42*(1), 59-66.

Kliebard, H. M. (1995). *The struggle for the American curriculum*. New York, NY: Routledge.

Ludwig, L., & Starr, S. (2005). Library as place: Results of a Delphi study. *Journal of the Medical Library Association, 93*(3), 315–326.

Lundry, J., Ramsey, J. W., Edwards, M. C. & Robinson, J. S. (2015). Benefits of career development events as perceived by school-based, agricultural education teachers. *Journal of Agricultural Education. 56*(1), 43-57. doi:10.5032/jae.2015.01043

Maidstone, P. (1995). *International literacy: A paradigm for change: A manual for internationalizing the curriculum*. Victoria, BC: Centre for Curriculum, Transfer and Technology.

Meals, A., & Washburn, S. (2015). Achieving next generation science standards through agricultural contexts: A Delphi study of outdoor education experts. *Journal of Agricultural Education, 56*(4), 1 - 16. doi:10.5032/jae.2015.04001

National FFA Organization. (2016) *The agricultural education mission*. Retrieved from https://www.ffa.org/about/agricultural-education

National Research Council. (2009). *Transforming agricultural education for a changing world.* Washington, DC: The National Academies Press.

Taba, H. (1962). *Curriculum development: Theory and practice.* New York, NY: Harcourt, Brace and World.

Terry, R. D., & Osborne, E. (2015). Fundamental dimensions and essential elements of exemplary local extension units. *Journal of Agricultural Education,* 56(2), 43-63. doi:10.5032/jae.2015.02043