

Agricultural Leadership: A National Portrait of Undergraduate Courses

D. Adam Cletzer¹, Rebecca L. Mott², Jon C. Simonsen³, John D. Tummons⁴, Jaelyn Y. Peckman⁵, and Kate Preston⁶

Abstract

Agricultural leadership coursework has sought to develop leadership skills in graduates of colleges of agriculture for decades. Yet, a national study of the scope and nature of undergraduate leadership coursework has not been conducted since 2003. The purpose of this study was to provide empirical data for discussion of the state of agricultural leadership education. A census of all programs represented by faculty in AAAE was conducted, and 227 courses were determined to exist, the most common types of courses were introduction to leadership, personal leadership, and team and group leadership. The most common leadership theories or concepts present in the 100 course syllabi analyzed were “traits and skills,” “ethics,” and “servant leadership.” More than 80 different textbooks were used.

Keywords: leadership education; agricultural leadership; ecological paradigm; leadership skills; industrial leadership paradigm

Author Note: D. Adam Cletzer  <https://orcid.org/0000-0002-6664-8454>

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Correspondence concerning this article should be addressed to D. Adam Cletzer, Division of Applied Social Sciences, 122 Gentry Hall, Columbia, MO 65211. Email: Cletzerd@umsystem.edu

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In the latter decades of the 20th century, there was an explosion of interest in leadership as a solution to societal problems (Rost, 1991; Western, 2019). Universities emphasized their role in preparing “tomorrow’s leaders” in mission statements and branding efforts, and a proliferation of undergraduate coursework ensued (Cress et al., 2001). Agricultural leadership was no exception. Weeks & Weeks (2020) describe agriculture leadership’s purpose as “to prepare future leaders to tackle societal issues related to food and agricultural sciences” — though, the target audience of agricultural leadership coursework has changed over time, and curriculum has evolved over the decades to meet students’ needs.

Initially, leadership education in agriculture emerged to supplement teacher preparation. Agricultural education’s earliest leadership courses were designed primarily to prepare future educators to

¹ D. Adam Cletzer is an Assistant Professor of Agricultural Education in the Division of Applied Social Sciences at the University of Missouri, 122 Gentry Hall, Columbia, MO 65211, cletzerd@umsystem.edu.

² Rebecca L. Mott is an Assistant Teaching Professor of Agricultural Education in the Division of Applied Social Sciences at the University of Missouri, 123 Gentry Hall, Columbia, MO 65211, mottr@umsystem.edu.

³ Jon C. Simonsen is an Associate Professor of Agricultural Education in the Division of Applied Social Sciences at the University of Missouri, 126 Gentry Hall, Columbia, MO 65211, simonsenj@umsystem.edu.

⁴ John D. Tummons is an Assistant Teaching Professor of Agricultural Education in the Division of Applied Social Sciences at the University of Missouri, 127 Gentry Hall, Columbia, MO 65211, tummonsj@umsystem.edu.

⁵ Jaelyn Y. Peckman is an Assistant Professor of Agricultural Education in the Division of Applied Social Sciences at the University of Missouri, 122 Gentry Hall, Columbia, MO 65211, peckmanj@umsystem.edu.

⁶ Kate Preston is a Research News Strategist at the College of Agriculture, Food & Natural Resources at the University of Missouri, 111 Eckles Hall, Columbia, MO 65211, kepreston@umsystem.edu

develop young leaders in the context of FFA (Simonsen & Birkenholz, 2010; Velez et al., 2014). Courses were practical and contextualized in the FFA chapter experience. They focused on officer development, public speaking, parliamentary procedure, and teamwork skills (Simonsen & Birkenholz, 2010; Weeks & Weeks, 2020).

Then, between 1965 and 1985, in a significant decline, less than half of agricultural education graduates took teaching jobs (Lawver et al., 2018). Programs responded by offering a non-teaching option for those students disinterested in teaching. In many programs, this option would eventually transform into agricultural leadership (Weeks & Weeks, 2020). In the 1990s, the rigor of agricultural leadership coursework began to increase as theoretical foundations from other disciplines were added to the existing skills development framework (Simonsen & Birkenholz, 2010). These new courses began to attract students from other majors and departments throughout the university (Simonsen & Birkenholz, 2010), and the number of leadership courses, minors, and certificates expanded to meet that demand (Brown & Fritz, 1994, 1998; Fritz, et al., 2003; Velez, et al., 2015). Gradually, focus shifted from preparing future educators to working directly with undergraduates throughout colleges of agriculture (COAs) to develop their own leadership skills (Velez et al., 2014). Osborn (2007) concluded, “Leadership education has a rich history in university-based academic programs in agriculture, and most departments of agricultural education have provided the bulk of this instruction for decades” (p. 12).

Agricultural leadership education remains important today. Among the skills and competencies most valued by employers of college graduates are those typically addressed in agricultural leadership undergraduate curricula, including the following: leadership, problem solving, team skills, communications, decision making, professionalism, and critical thinking (AACU, 2015; Crawford et al., 2011; NACE, 2019; Weeks & Weeks, 2020). Indeed, a 2020 report by the Association of Public & Land-Grant Universities (APLU) confirmed these skills continue to be critical to employers in the agriculture sector (Crawford & Fink, 2020a).

However, the same report (Crawford & Fink, 2020b) identified significant gaps between the levels to which graduates are prepared in certain key skills and the levels of importance employers place on those skills. Often, the skills employers report as being highly important in a new hire are precisely the skills graduates are not prepared with. The report highlights 11 key “importance-preparedness gaps,” several of which are leadership-related skills commonly addressed in agricultural leadership development efforts, including the following: (a) navigating change and ambiguity; (b) recognizing and dealing constructively with conflict; (c) realizing the effects of decisions; (d) building professional relationships; (e) identifying and analyzing problems; and (f) communicating accurately and concisely (Crawford & Fink, 2020b, 2020c).

These gaps are certainly related to the content leadership educators present in undergraduate leadership coursework and the manner in which they present it. However, long before the APLU report (Crawford et al., 2020b), there was criticism of agricultural leadership’s curricula. One long running criticism is the inconsistency of coursework offered, content within those courses, and the textbooks used — partly because no rationale or framework has been established to guide instructors (Brungardt, 1996; Morgan et al., 2013). A second concern is whether leadership development efforts have kept pace with a changing world and, therefore, the changing ways in which we do leadership (Allen et al., 1999; Cletzer & Kaufman, 2018; Rost, 1991, 1993, 1997; Rost & Barker, 2000; Western, 2019; Wielkiewicz & Stelzner, 2005, 2010). Leadership curriculum should be dynamic and continually adapting in order to remain relevant and prepare graduates for 21st century problems (Graham, 2001); some authors have expressed concern that leadership development efforts in university contexts have not kept pace (Rost & Barker, 2000; Townsend, 2002)

Agricultural leadership education should be regularly examining all facets of its curricula to promote the continued development of this growing academic field (Graham, 2001). Yet, there have been

few empirical studies of agricultural leadership courses and course content. More needs to be learned about available coursework, consistency, and content before meaningful and concerted efforts can be made to revise agricultural leadership's curricula for a changing world (Morgan et al., 2013). This study describes the current state of agricultural leadership education in terms of courses offered and content discussed within courses. By providing this description, we hope to foster discussion such that leadership curricula might continue to evolve to better prepare graduates of COAs for addressing 21st century problems.

Literature Review

During the past 30 years, only a few studies have described the state of agricultural leadership education and demarcated the curricular and programmatic shifts described above. Brown and Fritz (1994) first surveyed the scope of leadership in agricultural education, concluding 65% ($n=35$) of responding agricultural education departments offered a total of 80 leadership courses. Later, Fritz and Brown (1998) reprised their study, surveying 53 departments; 69% of respondents ($n=36$) reported offering 80 courses (56 undergraduate, 16 graduate, and eight cross-leveled) leadership courses. Their content analysis measured word frequency in course titles. They discovered the most common word in leadership course titles was "leadership," appearing in 73% ($n=59$) of course titles. Among course objectives, 21% ($n=25$) referenced leadership styles, and another 17% ($n=14$) addressed youth development. Not requiring a textbook was common, and the most-used textbooks were *The Leadership Challenge* (Kouzes & Posner, 1990) and *On Becoming a Leader* (Bennis, 1989), which were used in 9% ($n=7$) and 5% ($n=4$) courses, respectively. (Fritz and Brown (1998) incorrectly reported the latter text as "*Why Leaders Can't Lead* (Bennis, 1989)" but likely meant *On Becoming a Leader*, which was published by Bennis in 1989; *The Unconscious Conspiracy: Why Leaders Can't Lead* was published by Bennis in 1976 and was not included their references (p. 60).) Fritz et al. (2003) again surveyed all 92 agricultural education departments at the time, of which 68% ($n=28$) of respondents reported offering a total of 82 leadership courses (38 undergraduate, 32 graduate, and 10 cross-leveled). Once again, their content analysis focused on word frequency in course titles. "Leadership" appeared in 61% ($n=50$) of course titles. Finally, Velez et al. (2015), as part of a larger examination of the scope and impact of leadership education, found 68% ($n=38$) of responding institutions offered at least one leadership course.

While the aforementioned authors described what exists, other authors sought to describe what should exist. Morgan et al. (2013) conducted a Delphi study of 15 leadership experts who largely agreed on the common courses all undergraduate leadership programs should include, which were the following: (a) introduction to leadership theory and practice; (b) team building, working with groups and teams; (c) capstone course; (d) personal communication; (e) personal leadership development; (f) seminar of leadership in agriculture; (g) organizational leadership theory; and (h) leadership ethics. However, the same experts lamented "Agricultural leadership course offerings across the country show little consistency of courses offered, content within courses, or texts used"; furthermore, experts felt essential courses should be "established so programs of leadership may have a benchmark by which they may compare their curriculum" (Morgan et al., 2013, p. 144)

Larger Leadership Shifts and Implications for Education

Meanwhile, in the larger leadership literature, an important paradigm shift occurred with implications for leadership education, but which has garnered little attention in agricultural leadership. In the late 1990s, scholars began to change the way they understood and studied leadership. Early authors described the shift as an industrial (or mechanistic) paradigm being supplanted by an ecological (or postindustrial, or relational) paradigm (Allen et al., 1999; Rost, 1997; Western, 2010, 2019). Contained in that simple change in nomenclature is a Kuhnian shift, driven by new scientific insights and societal realities, that would alter leadership's philosophical underpinnings, root metaphors, research methodologies, and basic definitions (Cletzer & Kaufman, 2018; Western, 2019).

The industrial paradigm is typified by Northouse's (2021) definition of leadership as "a process whereby an individual influences a group of individuals to achieve a common goal" (p. 3). In this understanding, leadership is largely position based, individualistic, top-down, linear, and structural-functional (Allen et al., 1999; Mabey, 2013; Western, 2019). Leadership theories emerging from the dominant thinking of this era are emblematic of that understanding and include the following: servant leadership, transformational leadership, authentic leadership, traits approach, skills approach, behavioral approach, etc. (Northouse, 2021).

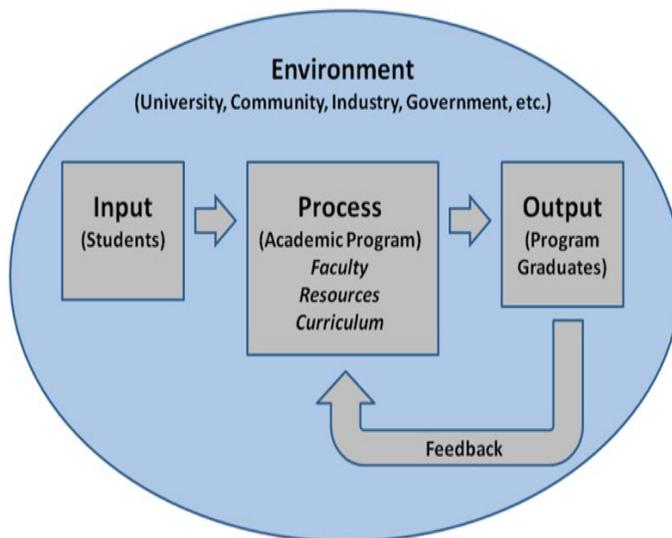
In contrast, one of the core beliefs of adherents of the ecological paradigm of leadership is that, in today's rapidly changing, increasingly complex, and interdependent world, our traditional models of leadership are simply outmatched by the dynamics of a 21st century, knowledge-driven society (Avolio et al., 2009). The traditional notion of leadership as "having a vision and aligning people with that vision is bankrupt..." (Heifetz & Laurie, 1997, p. 126). Relying on a few, elite positional leaders is "inadequate for dealing with the complexities of the modern world" (Wielkiewicz, 2000, p. 335). It is, essentially, an issue of bandwidth: the increasing pace of change and complexity of problems is such that placing the responsibility for leadership in the hands of a single leader, or even a small elite group of leaders, limits the adaptive capacity of an organization (Cletzer & Kaufman, 2018; Lichtenstein, et al., 2006; Uhl-Bien & Marion, 2009; Uhl-Bien et al., 2006). Such approaches leave us ill-equipped to meet today's complex challenges because they fail to leverage the collective intelligence, energy, and creativity of all actors in a system — a core tenet of the ecological paradigm of leadership — and in some cases foster learned helplessness and alienation (Wielkiewicz & Stelzner, 2005, 2010; Western, 2019). The complexity of new, adaptive challenges — along with the sheer speed of scientific, technological, and societal change — is simply too much to depend entirely on a small, upper-echelon of positional leaders to provide "the leadership" (Allen et al., 1999; Western, 2019). For this reason, the romantic notion of a heroic individual leader may no longer be sustainable in many contexts (Avolio et al., 2009; Western, 2019). Wielkiewicz (2000) warned of an "urgent need" to radically rethink leadership in a way that "matches the complexity of the systems to which organizations must respond" (p. 335). Leadership theories emerging from this understanding of leadership include the following: relational leadership model (Komives, et al., 2009), complexity leadership theory (Uhl-Bien & Marion, 2009), shared, distributed, or collective leadership (Jackson & Parry, 2011), and adaptive leadership (Heifetz et al., 2009).

Conceptual Framework

This study utilizes Finch and Crunkilton's (1999) program system model (PSM). The PSM (Figure 1) uses a systems approach to describe a simple feedback loop mechanism wherein academic programs use new information to revise the process by which they educate or train students. This study seeks to provide information to analyze and revise the curricula involved in the "process" portion of this model. By describing the nature of agricultural leadership coursework nationwide, faculty responsible for individual leadership programs will have data to compare their programs to national trends in terms of types of coursework offered and course content (e.g., theories and textbooks). Programs can then make meaningful changes to leadership coursework to better equip graduates.

Figure 1

Program Systems Model from Finch and Crunkilton (1999).

**Purpose and Research Question**

The National Research Agenda (Roberts et al., 2016) calls on researchers to conduct studies related to several priority areas. Research Priority 5, efficient and effective agricultural education programs, calls for “accurate and reliable data that describes the quality and impact of education programs...” (Roberts et al., 2016, p. 10). This includes educational programs to develop 21st century skills in graduates, such as leadership and teamwork (Crawford et al., 2020a). By describing the current state of agricultural leadership education, we can better assess if our coursework is preparing 21st century leaders. Therefore, the purpose of this study is to contribute to the national discussion about the future of agricultural leadership coursework by providing a useful portrait of leadership coursework through content analysis, and to discuss the relevance of this coursework in light of current leadership approaches common in the larger leadership literature. The following research questions guided this study:

1. What is the nature of undergraduate leadership coursework offered by AAEE institutions nationwide?
2. What are the most common textbooks and leadership theories/concepts appearing in undergraduate leadership coursework at AAEE institutions nationwide?

Methods**Research Design**

This study employed two methods to address its research questions. RQ1 employed a qualitative, relational content analysis (Krippendorff, 2004) while RQ2 employed a quantitative, conceptual content analysis (Krippendorff, 2004; White & Marsh, 2006).

Data Sources and Collection

This study was a census of the 99 agricultural education programs with faculty who are members in the American Association for Agricultural Education (AAEE). Though membership has certainly changed over the decades, this is how many of the studies detailed above defined their populations, and,

therefore, provides the best means for comparison (i.e., Brown & Fritz, 1994; Fritz & Brown, 1998). All research questions attempted to collect all available data from all programs with faculty members in AAAE.

Data for RQ1 included a census of all courses offered by programs represented in AAAE, and whose course titles or descriptions contained any of the following terms: (a) lead, (b) leader, (c) leadership, or (d) change. Course titles and descriptions were collected by systematically searching university course catalogues and departmental websites during spring 2020. Data contained in course titles and descriptions are best described as organizational messaging, according to Neuendorf's (2002) typology of texts commonly used in content analyses. Wang & Gao (2004) also describe "technical service websites," such as the course catalogues from which this data was gathered, as organizational messaging. After the initial data collection, the department heads of all 99 institutions were contacted via email to confirm or revise the list of courses believed to be offered at their institution. Of the 99 contacted, 67% ($n=63$) responded; 78% ($n=49$) of respondents confirmed and 22% ($n=14$) offered minor revisions. A total of 231 courses met the wording criteria and were analyzed.

Data for RQ2 were collected via a self-reported survey of AAAE member departments. Department heads at each institution were invited to participate via Qualtrics' email distribution feature using the Dillman et al. (2009) tailored design method. The communication requested department heads share the syllabi of courses they considered predominantly leadership coursework. Participants received an initial invitation and three follow-up reminders; ultimately, department heads were contacted via phone. Of the 99 institutions contacted, 27.3% ($n=27$) of institutions contributed a total of 100 syllabi (representing 44% of the 227 leadership courses later determined to exist), including all leadership courses from eight of the nine programs identified as "distinguished agricultural education programs" by Simonsen and Birkenholz (2011) that reported offering leadership coursework (one of the top 10 distinguished agricultural education programs does not offer leadership coursework).

Data Analysis

Data for RQ1 utilized qualitative, relational content analysis (Krippendorff, 2004); this is an inductive process in which open research questions guide the researchers to collect data and analyze for potential themes (White & Marsh, 2006). In a qualitative, relational content analysis, the purpose is to "capture the meanings, emphases, and themes of messages to understand the organization and process of how they are presented" (Altheide, 1996, p. 33). "Relational" simply indicates that researchers will examine the relationships between concepts in a text, rather than simply counting instances, as is the case in a more quantitative content analysis.. Researchers followed an iterative process of reviewing and scrutinizing the data for concepts and patterns of concept occurrence — first individually, then as a team. Krippendorff has dubbed this process of "recontextualizing, reinterpreting, and redefining the research until some satisfactory interpretation is reached" the "hermeneutic loop" (2004, pp. 87-88). This process, in which the researcher searches for emerging relationships and categories by continually refining a theory of patterns as new data is compared with old, is very similar to Glasser and Strauss' (1967) constant comparative method (White & Marsh, 2006). The team engaged in this analysis comprised five faculty members of Agricultural Education & Leadership at the University of Missouri. All five of the team members have experience in designing and delivering leadership coursework.

The initial step is to "chunk" information into sampling units, data collection units, and units of analysis (White & Marsh, 2006). In this study, the totality of leadership course titles and course descriptions collected constitute the sampling unit; the individual course title/course description combinations form the data collection units; and the individual course is the unit of analysis. Following chunking, researchers followed an iterative process of reviewing and scrutinizing the data for concepts and patterns of concept occurrence — first individually, then as a team — which, again, is similar to Glasser and Strauss' (1967) constant comparative method (White & Marsh, 2006). During the initial phase of analysis, each researcher examined the 231 course titles/descriptions on their own, deriving individual concepts (i.e., codes) and

patterns of concept occurrence (i.e., categories) through the means described above. During phase two, the team met to compare results. At the outset, we had 18 categories in common, which included 145 courses where at least four-fifths of the research team agreed upon the category in which a given course belonged (62% of total courses analyzed); this left 86 courses uncategorized.

During phase three, we continued, as a team, to analyze the remaining 86 courses and continue the hermeneutic loop. Each team member characterized the dominant focus of each course based on its title and description. Criteria for inclusion were identified and discussed, and the threshold for deciding to categorize a course was unanimity. New categories were created as new patterns came to light; occasionally, multiple categories were collapsed and renamed. Despite their inclusion of “leadership” in the title, four courses were removed from consideration during this phase of analysis, as the course description did not exhibit intent to meet leadership course objectives; in most cases, the course simply included the name of the department in its title, which happened to include the word leadership. In total, 24 categories were identified, including a final 227 courses. During the final phase, the research team examined the 24 categories for commonalities and arrived at seven emergent themes determined by the following criteria: (a) the scope of leadership courses’ content, or (b) the structure of the courses.

Meanwhile, data from RQ2 were analyzed using a quantitative, conceptual content analysis (Marsh & White, 2006). The purpose of this type of content analysis is to “make replicable and valid inferences from texts ...to the contexts of their use” (Krippendorff, 2004, p.19). Quantitative content analyses are deductive, relying on *a priori* propositions or existing research when analyzing content. RQ2 relies on existing leadership literature for determining common leadership theories and concepts which may appear in the 100 leadership syllabi under study. The “conceptual” in a quantitative, conceptual content analysis indicates that the researcher is simply seeking to determine the existence of concepts in a given text (Marsh & White, 2006). For RQ2, all of the 100 syllabi collected were analyzed using either Atlas.ti or manual scanning for common leadership theories and concepts. If a concept was determined to exist in a given syllabus, it was tabulated. The purpose of this analysis was not to determine how many times a given concept (e.g., transformational leadership theory) appears in a given syllabus, or even in all syllabi, but, rather, how many syllabi a given concept appears in. This provides the researcher a reasonable basis for making claims regarding which theories and concepts are being addressed in leadership coursework nationwide, but not necessarily the degree to which they are addressed.

Trustworthiness

The use of a research team for data analysis related to RQ1, in particular, contributed to this study’s credibility. The lead author kept an audit trail of the entire data analysis process to help promote dependability. The research team also examined their perceptions, assumptions, and values about leadership through journaling to provide the reflexivity that is needed for a transparent qualitative study (Lincoln & Guba, 1985).

Limitations

With regard to RQ1, content analysis, which includes the interpretation of text, is both subjective and reductive. It is subjective in that it relies on humans to make meaning of the use of the concept, and it is reductive in that its overall goal is to remove it from context and into successively higher levels of abstraction. In the case of RQ1, this makes categorization of courses difficult. Though categories were made to be mutually exclusive, many contained courses that could have reasonably been assigned to multiple categories. Since content analysis does not include working with human participants, it can also be challenging to describe the concept being investigated with the thick description that is a hallmark of other qualitative approaches. At a more basic level, the analyses for both research questions are dependent upon the explicitness and thoroughness of instructors’ course syllabi, and the degree to which their course descriptions are up to date in course catalogues.

Results

RQ1 - What is the nature of undergraduate leadership coursework offered by AAAE institutions nationwide?

Of the 99 institutions included, 70% ($n=69$) offered at least one leadership course. Number of courses offered ranged from 0 to 24, with a mean of 2.28 and a median of 4. Courses were predominately offered at the 2000 level. The total number of leadership courses offered nationwide was 227. Through content analysis, we categorized course titles/descriptions into 24 categories based on the dominant characteristics of the course (Table 1) in order to make meaningful and insightful assessment of the nature of courses offered in agricultural leadership education. An additional level of abstraction was added by grouping categories by seven themes. The first three themes related to the intended scope of impact of the courses' content, the latter to the courses' method.

Theme 1, Individual-level Focus, included categories of courses focused on the individual would-be leader, such as introductory courses designed to provide a survey of leadership theories, or personal leadership courses designed to help students discover their individual leadership strengths, styles, or values. Theme 2, Organizational-level Focus, included categories of courses designed to improve leadership processes in bounded systems, such as teams, organizations, and communities. Theme 3, Societal-level Focus, included categories of courses discussing how leadership broadly impacts societal issues, such as global leadership, social change, ethics, diversity, and culture.

The latter three themes were more disparate. Theme 4, Professional Focus, included courses intended to prepare students for leadership roles specifically as agriculture teachers or more broadly in the agriculture industry. Often, these courses focused on being a professional in the teaching profession, managing an educational program, or more general career success. Courses in Theme 5, Methodological Focus, which was the largest category, were defined by the structure of the course, rather than content or focus. For instance, the most common category was seminar/contemporary issues wherein topics discussed varied widely (or were not listed) but the format of a seminar was constant. Similarly, internships focusing on leadership were common, but these also did not often specify any particular content. Conversely, single theory focus-type courses were dedicated to a single leadership theory, most often Servant Leadership — a less common methodological approach. Finally, specialty program/specialty groups typically included elite leadership programs for college credit and state FFA officer classes. Theme 6, Developmental Focus, included categories of courses related to teaching students to develop, deliver, and manage leadership programming — typically nonformal educational programming and programming distinct from leadership in high school agriculture classes or FFA. A distinction was made between courses focusing exclusively on youth and those intended for broader applications. Finally, Theme 7, Uncategorizable (not depicted in table), included courses where the course description listed far too many diverse concepts or theories to determine a dominant focus.

Table 1

Organization of leadership courses by category and theme ($n=227$)

| Theme | Category | Number of Courses by Category | Number of Courses by Theme | % of Total |
|------------------------|-----------------------------------|-------------------------------|----------------------------|------------|
| Individual-level Focus | Introduction to Leadership Theory | 24 | 45 | 19.8% |
| | Personal Leadership Development | 21 | | |

Table 1*Organization of leadership courses by category and theme (n=227), continued...*

| | | | | |
|----------------------------|---|----|----|-------|
| Organizational-level Focus | Team and Group Leadership | 17 | 33 | 14.5% |
| | Organizational Leadership Development | 14 | | |
| | Leadership and Community Development | 2 | | |
| | | | | |
| Societal-level Focus | Change | 8 | 22 | 9.6% |
| | Diversity and Culture | 5 | | |
| | Global | 5 | | |
| | Ethics | 4 | | |
| Professional Focus | Ag Teacher Preparation | 15 | 33 | 14.5% |
| | Communications and Leadership | 7 | | |
| | Leadership for General Career | 6 | | |
| | General College/Career Success | 5 | | |
| Methodological Focus | Seminar/Contemporary Issues | 17 | 70 | 30.8% |
| | Internships | 13 | | |
| | Interdisciplinary/Humanities Approach | 10 | | |
| | Specialty Programs/Special Groups | 12 | | |
| | Individual Study | 7 | | |
| | Capstone | 6 | | |
| | Critical Leadership Studies | 3 | | |
| | Single Theory Focus | 2 | | |
| | | | | |
| Developmental Focus | Youth Leadership Development | 12 | 19 | 8.3% |
| | Program Development, Delivery, and Volunteer Management | 7 | | |

Note. An “Uncategorizable” theme, not listed here, was comprised of five courses, or 2.2% of total courses.

RQ2 - What are the most common textbooks and leadership theories/concepts appearing in undergraduate leadership coursework at AAAE institutions nationwide?

To address this question, we analyzed all 100 syllabi collected, or 44% of the 227 leadership courses discovered to exist while conducting this study. While our intent is not to generalize to the larger population of courses, with these 100 syllabi we can describe a substantial portion of the coursework offered nationwide and make some qualitative inferences about the state of agricultural leadership education. Among the 100 syllabi analyzed, the most common textbook was no textbook, with 39% ($n=39$) of syllabi not listing a textbook (possibly by omission); 28% ($n=28$) explicitly stated no textbook was required. Table 2 ranks the most commonly used textbooks. Please note that some courses require multiple textbooks; so, the percent column of Table 2 represents only the percent of syllabi that require that particular book. The most common book was Northouse’s *Introduction to Leadership: Concepts and Practice*, in one of its various editions. In addition to those listed in Table 2, 60 other titles appeared at least once in the 100 syllabi for a total of 80 textbooks or readings.

Table 2*Frequency of required textbooks or readings appearing in at least two syllabi (n=100)*

| Book or Reading | f | % |
|---|----------|----------|
| <i>Introduction to leadership: Concepts and practice.</i> (Northouse, 2019). | 17 | 17% |
| <i>Diffusion of innovations.</i> (Rodger, 2003) | 6 | 6% |
| <i>Strengths-based leadership.</i> (Rath & Conchie, 2008) | 6 | 6% |
| <i>Group dynamics for teams.</i> (Levi, 2020) | 4 | 4% |
| <i>The emotionally intelligent team.</i> (Hughes & Terrell, 2007) | 3 | 3% |
| <i>Adaption-Innovation in the context of diversity and change.</i> (Kirton, 2003) | 3 | 3% |
| <i>The student leadership challenge.</i> (Kouzes & Posner, 2018) | 3 | 3% |
| <i>The leadership challenge.</i> (Kouzes & Posner, 2017) | | |
| <i>Group dynamics and team interventions.</i> (Franz, 2012) | 3 | 3% |
| <i>Creating effective teams.</i> (Wheelan, 2014) | 3 | 3% |
| <i>Leading across differences.</i> (Hannum et al., 2010). | 3 | 3% |
| <i>Leadership on the line.</i> (Heifetz & Linsky, 2017) | 2 | 2% |
| <i>Creative approaches to problem solving.</i> (Isaksen et al., 2011) | 2 | 2% |
| <i>Education in action.</i> (Bull et al., 2011) | 2 | 2% |
| <i>Tribal leadership.</i> (Logan et al., 2011). | 2 | 2% |
| <i>Discovering the leader in you.</i> (King et al., 2011) | 2 | 2% |
| <i>Leadership: theory and practice.</i> (Northouse, 2021) | 2 | 2% |
| <i>40 Chances: finding hope in a hungry world.</i> (Buffet, 2014) | 2 | 2% |
| <i>The 7 habits of highly effective people.</i> (Covey, 2004) | 2 | 2% |
| <i>The practice of adaptive leadership.</i> (Heifetz et al., 2009) | 2 | 2% |
| <i>Real leadership</i> (Williams, 2005). | 2 | 2% |

Note. An additional 60 titles appeared at least once. Does not include “suggested” textbooks or readings. Some titles truncated. If multiple editions appeared, most recent edition cited.

Among the 100 syllabi analyzed using an *a priori* list of common leadership theories or concepts developed by the researchers, “leadership traits and skills” were the most common theory or concept, appearing in 27% ($n=27$) syllabi. These were reported together since they are frequently listed together in syllabi. Servant leadership was the most common discrete leadership theory/conceptual framework, appearing in just 12% ($n=21$) of courses. Table 3 is an exhaustive ranking of leadership theories determined to exist in the 100 syllabi analyzed. Please note that the percent column represents the percent of syllabi that mention that concept at least once.

Table 3*Frequency of theories or concepts present in leadership syllabi (n=100)*

| Leadership Theory or Concept | f | % |
|-------------------------------------|----------|----------|
| Leadership Traits and Skills | 27 | 27% |
| Ethics in Leadership | 21 | 21% |
| Servant Leadership | 12 | 12% |
| Authentic Leadership | 12 | 12% |
| Transformational Leadership | 11 | 11% |
| Leadership Styles | 9 | 9% |
| Situational Leadership | 8 | 8% |
| Adaptive Leadership* | 7 | 7% |
| Behavioral Approach | 6 | 6% |
| Path-Goal Theory | 6 | 6% |
| Psychodynamic Approach* | 4 | 4% |

Table 3

Frequency of theories or concepts present in leadership syllabi (n=100), continued...

| | | |
|-------------------------------------|---|----|
| Contingency Theory | 3 | 3% |
| Strengths-Based Leadership | 3 | 3% |
| Kirton's Adaption-Innovation Theory | 3 | 3% |
| Transactional Leadership | 2 | 2% |
| LMX Theory | 1 | 1% |

Note. "*" indicates theories situated in the ecological paradigm of leadership; all others are situated in the industrial paradigm.

Discussion

Several conclusions can be drawn from the results of this study. First, there are many more undergraduate leadership courses ($n=227$) than were discovered in the most comparable, most recent study ($n=38$) (Fritz et al., 2003). While there certainly has been an increase in courses offered in the intervening 18 years, this disparity is likely a byproduct of the inclusion criteria. For instance, respondents to Fritz and colleagues' (2003) may not have considered independent study, capstone courses, or internships to be proper leadership courses and, perhaps, did not report them. Similarly, this study's data collection method likely uncovered those courses offered by non-responders to Fritz et al. (2003), or, perhaps, uncovered courses on the course catalogues that are not actively offered. Regardless, both this study and Fritz et al. (2003) used the same population: institutions with faculty members in AAE. It is worth noting that the percent of responding institutions offering leadership courses remains similar: 70% in this study compared with 68% in Fritz et al., (2003).

Second, when examining the themes and categories of courses, there appears to be an interesting schism between courses intended for general consumption (i.e., Themes 1-3) and those intended to prepare future agriculture educators (i.e., Theme 4, Professional Focus; and Theme 6, Developmental Focus). Perhaps agricultural leadership did not make a *shift* toward directly preparing undergraduates for leadership, but rather *expanded* to that audience while simultaneously fulfilling its original mission. Alternatively, there could be a schism between a few, larger leadership programs primarily providing general consumption courses and more numerous, smaller leadership programs focusing on preparing future agricultural educators. Additionally, the courses identified as essential by experts in Morgan et al. (2013) appear to be the bulk of courses offered. Introduction to leadership, personal leadership, team leadership, organizational leadership, and seminar, which were suggested by the Delphi panel in Morgan et al. (2013), are five of the six largest categories of courses identified. It is worth noting that we did not use the Morgan et al. (2013) suggested courses as an *a priori* framework. These categories emerged unbidden during the data analysis process. Nonetheless, taken together, the eight essential types of courses recommended by Morgan and colleagues' (2013) Delphi panel account for 56% of all courses offered ($n=118$, including internships as capstone experiences, and deducting problems hours/independent studies). The implication is that, at least at the course level, perhaps agricultural leadership is not as inconsistent as feared. Many of the types of courses suggested by experts are, in fact, the most common types of courses offered, and a kind of standard progression of coursework has emerged organically among more robust leadership programs without heavy coordinating influence.

Third, when examining the leadership theories most prevalent in agricultural leadership coursework, as the experts in Morgan et al. (2013) Delphi study suspected, there does appear to be little consistency among course content. The most common concepts, "Leadership Traits and Skills" appear in only 27% ($n=27$) of courses. This number, however low, is likely due to the overrepresentation of "Individual-level Focus" courses, which constitute 19.8% ($n=45$) of all courses offered.

Perhaps more interesting, we find that, of the 16 leadership theories and concepts present in the course syllabi analyzed, 14 are best classified as originating in the industrial paradigm and focusing on the individual, positional, romantic hero leader and his or her skills, traits, competencies, or behaviors (Western, 2019). One is not a leadership theory at all (i.e., Kirton's Adaption-Innovation). Only Adaptive leadership and psychodynamic leadership theories spring from the ecological paradigm, and they are present in only 7%-11% of courses analyzed. Missing are collective, distributive, and shared leadership approaches; also missing is complexity leadership theory or any discussion of leadership as a systems phenomenon. While instructors may not list each and every leadership concept or theory covered, among those that are listed there exists a clear preference for industrial theories of leadership. The issue with this selection of leadership theories is, if agricultural leadership is for the purpose of preparing graduates to help solve complex, adaptive, 21st century problems that require leveraging the collective intelligence, energy, and creativity of all actors in a system, we are not serving students well by inculcating them with 20th century approaches to leadership that stress positional, individualistic, romantic hero leaders. The majority of leadership theories presented are simply mismatched with the way in which scholars theorize we should be working together to solve complex, interdependent problems (Allen et al, 1999; Heifetz & Laurie, 1997; Rost & Baker, 2000; Western, 2019).

Fourth, when examining common textbooks used in agricultural leadership coursework, we find little consistency, except that a plurality of leadership courses (39%) do not require a textbook or list any readings. With the exception of Northouse's *Introduction to Leadership: Concepts and Practice*, which is common to the prolific introductory/survey leadership courses, no single textbook received widespread use. Though, Kouzes & Posner's (2006) *The Leadership Challenge*, which was used in 9% of courses in Fritz and Brown's (1998) study, remains somewhat popular today.

The lack of a textbook should not be automatically construed as an indicator of lack of rigor. Many instructors prefer to expose students to a wide variety of authors and may not list all readings on their syllabi. Moreover, the vast majority of the 80 textbooks or readings included in the syllabi examined are what we would consider scholarly; only 10% ($n=8$) are best described as popular press (e.g., *The 7 Habits of Highly Effective People*, or *40 Chances*). Though, several of the textbooks are arguably not leadership textbooks (e.g., *Diffusion of Innovations*); several courses include context-specific books, such as books on education or poverty. This finding supports the assertion made by the experts in Morgan et al. (2013) that, in terms of content, leadership courses are inconsistent. In all, 80 textbooks or other readings were present in the syllabi. Some may defensibly view this lack of consistency as intellectual pluralism, and we are not necessarily advocating for coalescing around a set of textbooks; however, it is at least interesting that a set of go-to textbooks or favored authors have not emerged for the agricultural leadership discipline.

Leadership curriculum should be dynamic and continually adapting in order to remain relevant and prepare graduates for 21st century problems (Graham, 2001). The conceptual framework (Finch & Crunkilton, 1999) used in this study describes a simple feedback loop by which new data might alter the process by which graduates are prepared, including impact on curriculum. Our findings can be utilized to inform curricula in a kind of feedback process. First, the now-apparent dearth of modern ecological paradigm-rooted leadership theories in curricula could be addressed. Where the industrial paradigm's theories primarily guide a positional heroic leader's individual behaviors, the ecological paradigm's theories address navigating ever-increasing rates of change in an uncertain world, understanding the role of conflict in adaptation, and utilizing the collective intelligence of a system to address complex problems — all of which address several importance-preparedness gaps identified in Crawford and Fink (2020b, 2020c), which prompted this study. Second, faculty responsible for an expanding leadership program may make use of the emergent progression of coursework discovered in this study to guide their expansion or revision of coursework.

Conclusions and Recommendations

This study sought to provide a useful portrait of undergraduate leadership coursework through content analysis of descriptions of all courses offered by AAEE institutions, along with 100 course syllabi provided by respondents. This study found significantly more undergraduate leadership coursework existed than previously recorded — 227 courses, rather than 38 (Fritz et al., 2003). (For an examination of graduate level agricultural leadership coursework, see Muscato et al., 2021.) Courses were predominantly offered at the 2000 level. Analysis showed a schism between courses intended to prepare future agriculture teachers to provide leadership development in the agriculture classroom or FFA chapter and courses intended for general consumption in colleges of agriculture and beyond. Agricultural leadership courses featured primarily leadership theories and concepts originating from the industrial paradigm of leadership, which some scholars believe leave society ill prepared to address 21st century, complex, interdependent problems (Allen et al., 1999; Rost & Barker, 2000; Western, 2019). Lastly, most courses did not require a textbook or other readings in the syllabus. Among the 61 courses that did list a textbook, there were more than 80 titles used. The most common textbook was *Introduction to Leadership: Concepts and Practices* (Northouse, 2019), which appeared in 17% ($n=17$) of courses. Overall, the courses that are offered nationwide do, to some degree, adhere to the recommendations of experts in Morgan and colleagues' (2013) Delphi study, which proposed a standard set of courses. However, as those same experts expected, course content appears to remain largely inconsistent across courses.

Recommendations for teaching include fostering a national-level conversation about the current state of agricultural leadership education and, based on state-of-the-art leadership research, drafting guidelines for theories, concepts, and competencies to be addressed in the five most common leadership courses discovered to exist — thus impacting those courses that reach the broadest swath of students in colleges of agriculture. These guidelines may be helpful to new faculty charged with developing or revising a leadership course, and they may also be helpful to more experienced faculty for whom leadership is their secondary discipline. This effort may bring some consistency to our most common, general consumption courses while simultaneously modernizing the curricula. Another recommendation for teaching is for individual instructors to consider theories of leadership rooted in the ecological paradigm better suited to more complex and interconnected world we live in, particularly for those teaching courses in the organizational, societal, and developmental categories. Ecological types of theories are more difficult to teach precisely because they are not aimed at the individual and his or her skills, traits, behaviors, competencies, etc.; they view leadership as fundamentally a systems phenomenon and prepare leaders as actors in the system. These theories are critical to helping students understand the emergent process that is leadership and how best to use their individual skills, traits, competencies, and behaviors to engage with that process. Properties of a leader (i.e., skills, traits, competencies, etc.) do not constitute leadership. Leadership is a process with patterns of interaction among people which creates the social phenomenon of leadership, and those patterns change over time as humans adapt to a changing world. We must teach students to participate in these leadership processes.

Recommendations for research include a closer, qualitative analysis of syllabi, perhaps in distinguished leadership programs, which will certainly provide a more nuanced understanding of curricula than is capable with content analysis.

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