

**Understanding Writing Expectations and Self-Efficacy  
in the Cooperative Extension Service**

by

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A dissertation submitted to the Graduate Faculty of  
Auburn University in partial fulfillment of the  
requirements for the Degree of  
Doctor of Philosophy

Auburn, Alabama  
May 4, 2024

Keywords: agriculture, competencies, written communication, Alabama Cooperative Extension System, agricultural education, agricultural communication

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## Abstract

Communication, specifically written communication, is typically identified as a top competency for Extension agents (Benge et al., 2011; Cooper et al., 2001; Harder & Narine, 2019). However, the competencies within written communication have not been explored or clarified within these studies. As such, this study aims to better define what specific writing competencies are necessary to be an effective writer as an Extension agent, determine what specific types of writing exist in Extension, and assess the writing self-efficacy of Extension agents in Alabama (Bandura, 1997). This study consists of two parts: the first part uses a Delphi method, and the second part uses a quantitative survey method. In the Delphi panel, State Extension directors and other Extension leadership identified seven genres of writing in Extension and the necessary competencies within them. These experts considered each form of writing separately and showed that they considered the contextual differences between each and changed their expectations in response (Flower, 1994). In the second part of the study, Extension agents were asked to consider which genres of writing they engage in; participating agents reported that they engage in several forms of writing. Internal communications and social media were among the highest reported genres of writing that agents produce content for. Extension agents in Alabama also assessed themselves and shared their perceived effectiveness in each relevant writing genre and the competencies within that genre. Agents perceive themselves to be very effective in their writing within every genre of writing that was identified. Social media was reported as a form of writing that the majority of agents engage in, and it was also the writing genre that received the lowest average of effectiveness. Alabama Extension agents might benefit from more training that focuses specifically on writing for social media.

## Acknowledgements

Garrett Hancock, you are my partner, my best friend, my hype man, and my voice of reason. Thank you for your positivity and patience; you gently talked me off of many cliffs this entire process (thank you for making me put my dissertation materials on OneDrive). Eevee and I are so happy to live life with you!

To my committee chair, Dr. McKibben, thank you for your willingness to work with me and try new things. You helped me see that there are opportunities to research writing in agriculture, and I'm grateful for your encouragement and support. Rock on!

To my committee members and other mentors and contributors in this process: Dr. Clemons, Dr. Lindner, Dr. Chapman, Dr. Cletzer, and Dr. Barlow, thank you for joining me in this endeavor and providing needed guidance and feedback on my work! Thank you as well to the state Extension directors and Alabama Extension agents who participated in my studies and provided insight on writing in Extension.

Dr. Moore, thank you for agreeing to mentor me these past few years; you have been so incredibly uplifting and offered unwavering support to me from day one. I still want to work in the same department, or even college, as you someday! We'll make it happen.

To my parents, in-laws, and grandparents: Thank you for your cheers and your belief in Garrett and me. Your encouragement is absolutely a huge part of what got us through our crazy idea to move to Alabama, get our doctorates, AND have a baby!

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## List of Abbreviations

|       |  |
|-------|--|
| AAAE  | American Association for Agricultural Education        |
| ACES  | Alabama Cooperative Extension Service                  |
| AFNR  | Agriculture, Forest, and Natural Resources             |
| ALEC  | Agricultural Leadership, Education, and Communications |
| ASRED | Association of Southern Region Extension Directors     |
| MWSP  | Media Writing Self-Perception                          |
| NCW   | National Commission on Writing                         |
| NAEP  | National Assessment of Educational Progress            |
| SBAE  | School-Based Agricultural Education                    |

## CHAPTER I

### INTRODUCTION

In 1975, *Newsweek* published an article that rattled its readership (Sheils). “Why Johnny Can’t Write” detailed out what *Newsweek* considered to be the nationwide epidemic of poor writing performance and illiteracy of U.S. high school and college graduates. Sheils asserts, “if your children are attending college, the chances are that when they graduate they will be unable to write ordinary, expository English with any real degree of structure and lucidity,” and ends the opening paragraph with: “Willy-nilly, the U.S. educational system is spawning a generation of illiterates” (p. 1). This article represents a snapshot of people who do not *understand* writing, much less writing instruction, and how they view writing as a whole rather than in context. Of course, the person who wrote the article knows “how to write,” and the content of their own writing is valid in the sense that they are entitled to their own opinion, but there are several concepts presented that are problematic. For example, in an academic response to the article, appropriately titled “Why *Newsweek* Can’t Tell Us Why Johnny Can’t Write,” Elgin (1976) lists out the truths and myths presented in the article.

For the most part, Elgin contends with and corrects what she asserts are misquotes or even made-up quotes from a contemporary philologist, Mario Pei, because Sheils centers their argument on the thought that some academicians believe that “colloquial, slangy, even illiterate” language activities are more important than writing, which Sheils says are a “secondary, unimportant activity” (p. 1). From that as a base, Sheils runs with the notion that educators are not concerned with what good writing looks like anymore, denying “students the opportunity to master standard English because their teachers refuse to teach it” (p. 3). The refusal that Sheils refers to here was in response to the acceptance of linguistic diversity in the school system,

which recognizes that while Standard English is good to have for contexts that need it, it should not serve as the measure of what “good” writing is. Elgin provides a more research-backed approach to what good writing means, emphasizing that there are many different types of writing and forms of language that “make more sense” or are recognized as accepted or just simply work better in certain sociocultural contexts. She also contends with the use of “good” as a qualifier, stating, “you cannot make *moral* judgements about the way people talk and write” (p. 31). Elgin ends her article with a grievance that there was no way to fully explain everything wrong with Sheils (1975) article, making note that five other articles would need to be published in order to fully explain and define all of the concepts, theories, and studies that were misrepresented in the original text.

To be clear, this dissertation aims to use both aforementioned articles as representations of miscommunication and misunderstanding between the general public and academic schools of thought towards writing, writing instruction, and more specifically, the more specifically writing in the context of communicating agriculture. This disagreement and conversation about what constitutes as acceptable or contextual writing and how to measure it lends itself to a more in-depth discussion about how writing is perceived. Sheils (1975) news article serves as an early marker for mass media thoughts about writing skills; this “Johnny Can’t Write” mentality is still present in media news outlets today, and fingers are pointed in many directions.

In 2017, Goldstein (2017) wrote an article for the *New York Times* titled, “Why Kids Can’t Write,” which laments how the 2010 implementation of Common Core Standards (with emphasis on writing) did not help with writing skill performance levels. She attributes part of the problem to English teachers’ education, stating that poor writing instruction training and lack of proper preparation was the cause. She also laments the use of process writing, an approach to

writing that utilizes free-writing activities and focuses less on the mechanical aspects of writing such as grammar, naming this approach to writing as a possible reason as well. Ultimately, Goldstein calls for a return to traditional grammar instruction and better teacher training, resting on the assumption that mechanics and fundamentals will solve the writing problem. While there is no known direct academic response to this pop press article, process writing is recognized as a technique that can increase writing confidence and self-efficacy, particularly with English Language Learners (Alharthi, 2021; Bulut, 2017; Park, 2020). As such, Goldstein (2017) offers the public perspective that “good” writing consists of less process writing and is reached through the correct use of grammar; this perspective is consistent with other online articles and opinion posts (Rotherham, 2016; Wexler, 2015).

### **Writing Skill Levels in the U.S.**

In 2003, the National Commission on Writing (NCW) asserted that there needed to be a “writing revolution” through the reworking of education standards and writing policies. They noted that writing is becoming one of the risks in American education, claiming that “basic writing itself is not the issue; the problem is that most students cannot write with the skill expected of them today” (p. 16). They argued that primary, secondary, and post-secondary writing instructors should focus on more writing time, appropriate assessments, and better use of learning technology in order for students to leave the classroom with appropriate skills to utilize in the workforce. The NCW refer to the results of the 1998 National Assessment of Educational Progress (NAEP) to justify their argument; the test revealed that only 27% of 8th graders and 22% of 12th graders can write past the “basic” level. The assessment scores students at a basic, proficient, or advanced; basic is “partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade”; proficient is “competency over...subject-matter

knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter”; and advanced is “superior performance” (National Assessment Governing Board, 2010, p. 13).

The NAEP issued the results of their latest writing assessment in 2011; they found that 80% of students in 8th and 12th grade scored at or above the “basic” level, with 27 % of students from both grades scoring at the “proficient” level. NAEP assessed students again in 2017, but the report for that assessment has not been released due to scores being potentially affected by a switch in modes for the assessment (Wexler, 2015). As such, there has not been a recent study produced by the NAEP otherwise, and it seems as though there will not be another national writing assessment until 2030, even though other subjects, such as reading, are assessed every two years (Wexler, 2015).

The results from the 2022 SAT illuminate a bit more; students averaged 529 out of 800 in the evidence-based reading and writing section (National Center for Education Statistics, 2023). College Board clarify the context for this average by providing the benchmark values on their website. They state that anywhere between 480-800 meets or exceeds the benchmark and that students who score within that range have a “75% chance of earning at least a C in first-semester, credit-bearing college courses in history, literature, social sciences, or writing classes” (College Board, n.d.). There used to be an optional SAT Essay in addition to the SAT, but this was discontinued in 2021 in an effort to make the test more streamlined, and they claim that the reading and writing multiple-choice portion of the test can measure writing skills. While the SAT is more focused on college-readiness rather than workforce preparedness, it still offers insight on how high schoolers are faring in their writing skills before graduation.

Through these national assessments, it can be concluded that the majority of school-age Americans can at least write at the basic level, but more businesses would prefer their applicants and employees to perform at a higher level (Hickman & Stoica, 2023; Kleckner & Butz, 2020; NAEP, 2004; Schartel Dunn & Lane, 2019). Writing is a fundamental way to communicate; an employee's writing ability will heavily affect how they convey information and meaning and whether the reader will understand what they are saying (Doheny, 2020). In a research report, Deane et al. (2008) asserted "A skilled writer can confront a staggering hierarchy of problems, including how to generate and organize task-relevant ideas; phrase grammatically correct sentences that flow; use correct punctuation and spelling; and tailor ideas, tone, and wording to the desired audience" (p. 3). The highest attribute that employers seek on a candidate's resume is written communication skills (National Association of Colleges and Employers, 2019). A study in 2006 found that employers separately rated high school graduates and two- and four-year college graduates as "deficient" in written communications (The Conference Board). Kleckner and Marshall (2023) determined that 34% of the employers surveyed were dissatisfied with their employee's ability to write clearly and precisely.

While it seems as though most Americans' writing skills are not dismally low, most employees are not performing at the level that is expected of them (Hart Research Associates, 2013; Stevens, 2005). This underperformance could be due to their previous primary and secondary writing instruction (Kelly & Gaytan, 2020), which can sometimes result in a writing anxiety that can also affect performance and self-perceptions (Daly & Miller, 1975; Busse et al. 2023). With the state of writing skills in America, coupled with occasional doomsday articles produced by mass media outlets, this "Johnny Can't Write" mentality may have pervaded itself into the subconscious of employees whose job includes writing tasks. Employers may be calling

for better writing skills in their industries, but “better” or “effective” may have different definitions in different contexts, particularly in different industries.

### **Writing and Writers in an Agriculture**

Writing is, in many ways, implicit or even rote. One may not notice when they are employing the use of writing to communicate thoughts, such as through instant messaging, emails, or social media. Even though they engage in writing every day, people may not consider themselves to be writers. When asked, would agricultural scientists or even agricultural engineers consider themselves writers? Would most agricultural communicators consider themselves writers? Perhaps they would, perhaps not. Yet, there are several types of writing produced in agricultural contexts, such as informational bulletins, research reports, grants, academic articles, press releases, and advertisements, among others (Adams et al., 2005; Duke, 2020). In addition to that, writing is a skill that is needed in the agricultural industry by more than just those whose role is to communicate (Chaikovska, 2023; Erickson et al., 2018).

As a result of their review and evaluation of writing theories, Leggette et al. (2015) noted that “writing has not been investigated in all contexts related to agriculture” (p. 13). More specifically, they concluded that writing theories needed to be incorporated into further writing research within agricultural communications, encouraging a more grounded examination of “the relationship between text production and cognitive processes” (p. 13). As such, this study is motivated by the desire to better understand how agricultural professionals, such as those employed by the Cooperative Extension Service, view writing as a part of their job, whether parts of writing are more important than the other. Understanding expectations and how importance is viewed will illuminate another use of writing within agriculture, providing an avenue for more informed professional development and day-to-day performance.

## **Cooperative Extension Service (Extension)**

Extension practitioners contribute to a nationwide endeavor: increased education and communication about agriculture, primarily through the translation of current agricultural research (National Institute of Food and Agriculture, n.d.). The endeavor is worthwhile, as farmers are in need of new improvements and knowledge to respond to agricultural challenges, and the general public is mostly removed from agriculture, despite being directly or indirectly impacted by it (Rotz & Fraser, 2015). The translation of scientific information can happen through various communication channels, such as website content, social media, newspapers, radios, television, and conversations (Carroll et al., 2022; Lamm et al., 2016). Extension's primary audience was originally farmers, and Extension personnel sought to deliver new agricultural knowledge and improvements to farmers to be considered for implementation (Edge et al., 2017). However, Extension experienced a shift in audience to include the general public as well; this occurred in response to several factors, like agricultural issues affecting the general public, increased consumer interest in agricultural production, fluctuating perspectives towards the agricultural industry (Dale et al., 2017; McLeod-Morin et al., 2020). As a result, Extension broadened their audience to both agriculturalists and non-agriculturalists in order to fully engage with their mission and help both audiences make informed decisions (Fox et al., 2017).

### **Statement of the Problem**

“Strong interpersonal communication skills” or “effective communicator” can typically be found in job position announcements for Extension agents. In fact, several competency studies within Extension have found that communication, and more specifically, written communication skills, are top competencies necessary to be an effective Extension agent (Benge et al., 2011; Conner et al., 2013; Cooper et al., 2001; Elliott-Engel et al., 2021; Harder & Narine,

2019; Stone & Coppernoll, 2004). Understandably, these studies were seeking “big picture” competencies to report and do not necessarily have the room or the parameters to also explore the smaller skills that make up the bigger competencies. However, in order to better understand these competencies, create professional development geared towards them, or implement new models/techniques, they need to be better understood and broken down. For instance, there have been more specialized competency studies on leadership (Harder & Narine, 2019), intercultural competence (Diaz et al., 2023), and social marketing (Warner et al., 2016). As of 2023, I found no competency studies that describe the skills needed to excel in written communication within the Extension context, which provokes the following questions: do Extension agents know and understand the writing competency expectations for their profession? How often do agents write? What types of writing do Extension agents engage in, and do they feel confident in their writing skills? What professional developments or training are needed, and should they be intentionally structured for early-career agents, specialization-specific areas, specialists and agents combined or separate, etc.?

Without clarification, those entering the Extension workforce may have unrealistic or uninformed expectations of what types of writing they will produce, in addition to what level of writing performance is expected of them on a daily or weekly basis. Furthermore, if an Extension professional does not consider themselves to be a particularly strong or effective writer, coupled with the demand or expectation to write, their writing self-efficacy or confidence could suffer.

If it is expected of Extension professions to possess particular writing competencies, but there is not a shared understanding of what those writing competencies are, then the miscommunication can contribute to ineffective writing, counterintuitive practices, and perceived low performance. Instead, if expectations on writing competencies are made clear, then

Extension professionals can self-examine their own skills and assess their own performance. Additionally, it is helpful for Extension leadership to see if there is a shared understanding between themselves and their employees so that they can make better sense of employee writing performance and suggest more specialized professional development to target specific writing competencies.

### **Theoretical Framework**

This study is guided by Bandura's (1986) social cognitive and (1997) self-efficacy theories and Flower's (1994) social cognitive theory of writing. All three theories provide an understanding of how humans can shape their own perceptions of themselves and how they perform, in addition to how outside forces or an environment can affect that perception and performance.

#### *Bandura's (1986) Social Cognitive & (1997) Self-Efficacy Theories*

Social cognitive theory posits that learning can happen through many influencing factors, such as personal, behavioral, and environmental (Bandura, 1986). Bandura argues that humans are active, cognitive agents in their environment and learn from interacting, observing, and imitating rather than just passively doing. In this way, humans learn socially and gain knowledge in social contexts as well. A component that exists as a link between these personal, behavioral, and environmental forces is self-efficacy, or one's belief in their ability to do something effectively or complete an action (Bandura, 1997). Self-efficacy can be heavily influenced by self-beliefs or beliefs in how people perceive themselves. For example, someone may be skilled in writing, but if they do not consider themselves to be skilled, then their completion of tasks and overall effectiveness can be affected. In that case, even though self-doubts affect performance, they still do not affect capability. As a result, Bandura (1997) notes that for someone to be

effective in a task, they need to have both a solid efficacy belief and skills to be able to perform well. Bandura's (1986) social cognitive and (1997) self-efficacy theories have been used to frame multiple studies conducted in agricultural education; these studies have particularly focused on the self-efficacy of teachers (Sheehan & Moore, 2019; Barry & Easterly, 2021) and undergraduate students (Granberry et al., 2022; McKibben et al., 2023).

There is an organizational functioning facet of the self-efficacy theory which proposes that personal conceptions of an occupation, particularly regarding a skill, can be correctly or incorrectly based and therefore affect how a person approaches that occupation. Bandura (1997) states that "assessment of efficacy for basic skill domains provides useful information for career guidance and training" (p. 424). In other words, assessing the self-efficacy of employees can lead to better informed administrators and more specialized skill training with master-oriented instruction; knowing the self-efficacies of Extension agents can help in building programs that focus on cognitive-restructuring to help bolster agents' self-efficacy. The data collected from this study will hopefully be useful for Extension administrators and professional development facilitators to determine what future training on written communication should focus on.

#### *Flower's (1994) Social Cognitive Theory of Writing*

The social cognitive theory of writing (Flower, 1994) is one of the main recognized theories of writing (Leggette et al., 2015). The theory suggests that when writers perform literate acts (such as writing), they write a text influenced by internal and external factors (Flower, 1994). In this theory, the writer may compose a text a certain way due to contextual, situational reasons or according to established conventions like genres—socially-constructed parameters. However, the writer also takes into account their own beliefs, knowledge, and context and then processes these elements too when they construct and communicate meaning through writing.

Flowers particularly argued for “negotiated meaning” from writers, pushing back on the theory that writers have no real control in discourses that have been in conversation for decades.

Instead, she asserts that writers are agents who can learn from determining and analyzing the social forces and attitudes that guide shared thoughts, internalizing these influences, reflecting on their own beliefs and desires, and finding a way to negotiate a new meaning. This negotiation produces a new constructed meaning that not only shows a self-awareness of conflict with previous thoughts but also provides new or reimagined information. Ultimately, in this theory, the writer no longer exists as a content mill or just a translator of information but as an active participant in the sharing of knowledge and construction of meaning.

#### *Integration of Both Social Cognitive Theories*

Extension agents are charged with being the intermediary or translator between agricultural research conducted at land-grant institutions and the public, which are comprised of both agriculturalists and non-agriculturalists. According to Flower’s (1994) social cognitive theory of writing, agents who write should take into account the context in which they are writing, the previous discourse on the subject, the genre and its constraints or guidelines, the attitudes or feelings of their audience, and their own personal motivations and understanding.

While Bandura’s works are not mentioned in Flower’s research, this study asserts that self-efficacy and self-beliefs would fall under the category of a person’s internal motivations and understanding. Within these frameworks, we suggest that Extension agents should not consider themselves to be simply translators and processors of information but active agents of change in the bigger discourse of agriculture and agricultural education. Similarly, Extension agents should take into account their various methods of written communication and seek to analyze the

sociocultural differences between each genre or type of writing that they engage in, as that will affect how they negotiate meaning and communicate knowledge to various audiences.

### **Purpose and Objectives**

This study aims to better define what types of writing exist in Extension and what specific writing competencies are necessary to be an effective writer as an Extension agent. Insight into Extension agents' perceptions and efficacy regarding their writing will provide a foundation through which further writing efficacy studies can be conducted within Extension. This study will also inform Extension administrators what professional development training is needed regarding written communication.

The following objectives guided the study:

1. Determine the writing competencies Extension directors consider necessary for Extension agents.
2. Determine the genres of writing in which Extension agents in Alabama participate.
3. Describe how Alabama Extension agents' rank their perceived effectiveness of the writing competencies determined by Extension directors.
4. Evaluate perceived effectiveness to determine potential areas of need in agent training regarding written communication in Alabama.

### **Significance of Study**

Previous studies on writing within Extension focus mainly on strategies for collaboration or techniques in reaching specific audiences, such as framing or using plain language (Gordon, 2003; Miller, 2001). The uniqueness of this study is that it looks at a list of the types of writing that Extension agents engage in. As such, this study can be considered foundational, as it provides a list of what writing competencies are considered necessary in Extension, and it can be

a basis on which more studies regarding writing competencies or writing efficacy in Extension can be conducted. This study also contributes to the investigation of other types of writing within agriculture, which Leggette et al. (2015) noted was needed, and can be replicated in other agricultural industries as well. In addition, a writing theory (Flowers, 1994) is used to guide this study; the use of a writing theory within agricultural communication writing research has been recommended by previous studies (Banwart & Qu, 2023; Leggette et al., 2015).

As competency studies in Extension have mentioned written communication as a more important competency, establishing the more specific skills within writing is a natural step in determining how to help Extension employees reach this expected, more general competency (Elliott-Engel et al., 2021; Harder & Narine, 2019; Leggette et al., 2015; Stone et al., 2004). The results of this study provide a further understanding of what “written communication skills” entails, enriching previous competency studies and providing a more applicable understanding of writing expectations for Extension agents. Performance evaluations, professional developments, and even supervisor-employee conversations will benefit from a clearer understanding of what effective writing means in Extension.

### **Limitations**

Only the southern state Extension directors were invited and participated in this study, so the data cannot be generalized to a national level. Extension agents in the state of Alabama participated in the second, descriptive part of the study, so the results of that portion cannot be generalized beyond Alabama Cooperative Extension Service (ACES). Extension agent emails were manually collected through the use of the ACES’ online directory, but the information and emails listed there may not have been recently updated, which could have affected response rate, sample frame, and accuracy.

## **Assumptions**

- State Extension directors are aware of what their Extension agents write within their professional responsibilities.
- State Extension directors' expectations of their employees are appropriate and relevant.
- Alabama Extension agents will be truthful about what competencies they consider themselves to be effective in.

## **Definition of Terms**

**Competency** – Knowledge, skill, and ability combined that contribute to effectively perform a job or task (Cooper & Graham, 2010; Harder & Narine, 2019).

**Extension professionals** – All employees within Extension, including those who are in administration.

**Extension agents** – Regional or county-based agents; not Extension specialists or administrators.

**Genre** – Within writing, genres are identified categories of writing that house texts that share context, patterns, style, purpose, and other characteristics that overlap enough to be distinguishable from others (Kindenberg, 2021). However, what defines a genre changes as social contexts change, and genres can represent social circumstances (Bazerman, 2015).

**Literacy** – The ability to recognize and understand words, understand the context and purpose, and apply the meaning to one's own life (National Assessment of Adult Literacy, 2003).

**Skill** – Ability to complete a task or performance well (Leal et al., 2020).

**Style** – A form of writing that can change meaning and convey different interpretations based on the chosen form (Ray, 2015).

**Readability** – The level of ease in comprehending a text, usually dependent on the style of the writing, vocabulary used, and the prior knowledge of the reader (Klare, 1963).

**Writer** – Unless the writing profession is specified, this paper will refer to everyone who writes as a writer (as being a writer can be a role, even if it is not *the* role).

## **Summary**

Writing is an important skill in the workplace, and writing is included in the competencies necessary to be an effective employee within the Cooperative Extension System. Using the framework of self-efficacy and social cognitive theories from Bandura (1986) and Flower (1994), this study seeks to determine the particular writing competencies necessary for Extension agents to be effective, the writing self-efficacy of Extension agents in Alabama, and what genres of writing Extension in which agents typically engage. To complete objective one, a Delphi study was conducted, which asked experts in Extension administration to share their expectations towards the writing competencies of their employees. To complete the remaining objectives, a survey was conducted towards Alabama Extension agents to determine how the agents view their own effectiveness in writing, leading to more informed professional development recommendations.

## CHAPTER II

### LITERATURE REVIEW

#### **Agricultural Education**

In this paper, the term “agricultural education” will be used as the umbrella term for the advancement in knowledge of agriculture—and will not be used to refer to any particular facet within it (i.e. school-based agricultural education). The distinctions between the types of agricultural education that are practiced today are necessary for the field, as they strengthen each subdiscipline individually and the discipline as a whole (Harder et al., 2021). Even though this study is based in and motivated by agricultural communication research, the findings in this study will contribute to agricultural education overall (Lindner et al., 2020).

Agricultural education has not always been so clearly defined as it is today. The need for advancements and more farmers in agriculture has been prevalent since early America; this need was met by various educational societies who conducted research and disseminated it amongst various audiences (True, 1929). The Morrill Act of 1862 resulted in land-grant institutions, who could provide the study of agriculture to their courses, allowing for the opportunity for a more formal education of agriculture (Barrick, 1989). Even then, there was discourse on whether only land-grant schools or other universities could participate in the preparation of agricultural educators (Herren & Hillison, 1996). In 1917, the Smith-Hughes Act established vocational agriculture as a recognizable term, and agriculture classes were set up in high schools as a result (Wirth, 1972). Along with all of these advancements, the Cooperative Extension System was also growing and becoming a recognized entity.

The Smith Lever Act of 1914 solidified the creation of Extension, with its purpose to provide “vital, practical information to agricultural producers, small business owners, consumers,

families, and young people” (National Institute of Food and Agriculture, n.d.). Extension acts as another branch of the land-grant institutions, with their mission to spread information of new advancements in agriculture to all audiences through non-formal education.

As of 2020, the American Association for Agricultural Education (AAAE) recognizes that there are four facets within agricultural education as a field: agricultural communications, agricultural leadership, extension education, and school-based agricultural education. These facets have not always been recognized, and there are still discussions on whether some should remain in agricultural education or become their own field (Harder et al., 2021). However, they have been recognized and referred to enough for university-level agricultural education programs to have ALEC departments (agricultural leadership, education, and communications), or some other form of it, to indicate almost all of these specializations.

Additionally, each facet contributes to agricultural education’s research values: (1) advancing public knowledge of Agriculture, Forest, and Natural Resources (AFNR) systems; (2) enhancing environmental health; (3) ensuring diversity, equity, inclusion, and belonging; (4) examining social dynamics in human and life sciences; (5) fostering healthy living; (6) implementing programming for international development initiatives; (7) increasing prosperity through innovation in AFNR systems; (8) nurturing positive youth development through AFNR systems, and (9) promoting personal responsibility and safety in AFNR systems (AAAE, 2023). While agricultural leadership and communications do not have the same established academic history as school-based agricultural education (SBAE) and Extension, they have always been there within them, with only recently having been officially recognized as their own focuses within the agricultural education discipline (Cartmell & Evans, 2013). Having agricultural

education defined by these four specializations strengthens the field entirely, allowing for more people to be engaged and educated in agriculture as the discipline advances (Harder et al., 2021).

### **Agricultural Communication**

Agricultural communication is the “exchange of information about the agricultural and natural resources industries through effective and efficient media, such as newspapers, magazines, television, radio, and the web, to reach appropriate audiences” (Lundy et al., 2022, para 7). In other words, agricultural communication focuses on the two-way interaction between people who are sharing knowledge and learning about agriculture. While SBAE and Extension primarily use formal and nonformal education, agricultural communication uses informal education to interact with and engage people in agriculture (Mars & Ball, 2016). In informal learning, there can be objectives, but the learning most likely happens as an unforeseen result of an experience, discussion, or self-study in daily life (Knowles, 1950).

#### *History of Agricultural Communication*

Early agricultural communication was primarily oral (Lundy et al., 2022). Farmers discussed methods and practices with one another through conversation for the betterment of local agriculture (Boone et al., 2000). In the colonial period of America, some methods of agricultural communication were also through personal or professional documents, such as Hariot’s report on local natural resources in Virginia (Hariot, 1588). His personal account of the food production, indigenous agricultural practices, and other ethnographic findings related to agriculture was re-printed and used as a way to inform British investors for continued funding and simultaneously encourage citizens to consider becoming a colonist in America (Hariot, 1588).

After America was established as a country, journals and newspapers became another widely-used medium of agricultural communication, such as *The Farmer's Almanac* and the *American Farmer*, which aided in sharing agricultural knowledge across larger regions of America (Lundy et al., 2022). While these agricultural texts would focus on sharing already established local or regional best practices in farming, they would also contain new agricultural research from experiment stations to be adopted by farmers as well (Lundy et al., 2022). National dissemination of information became easier as radio, television, and the Internet emerged as mediums of communication and systems of storing and sharing information, and the target audience of agricultural communication changed from just agriculturalists to non-agriculturalists as well (Irani & Doerfert, 2013).

As an academic discipline, agricultural communication started out officially under the term “agricultural journalism,” existing in specialized courses or as a result of a combination of agriculture and journalism classes (Tucker et al., 2003). In their historical review, Cartmell & Evans (2013) found that the first established department of agricultural communication was in 1908 at the University of Wisconsin. In 1991, Doerfert and Cepica determined that there were 30 undergraduate agricultural communications programs in America. These programs have evolved over the decades, with several now offering minors and graduate degrees. In a national study on the characteristics of agricultural communication programs, Miller et al. (2015) discovered that there were 48 established undergraduate agricultural programs in America, with Texas Tech University, University of Florida, Oklahoma State University, and Texas A&M University as the top-ranked four agricultural communication programs. Every program who participated in Miller et al.'s study reported that they anticipated an increase in growth over the next five years,

indicating that many agricultural communication programs would continue to build their student size and gain more enrollments.

### *Agricultural Communication Graduate Skills Needed*

Present-day agricultural communications programs, depending on the number of faculty and students, offer courses that cover written communication, graphic design, photography, public relations, marketing, professional materials for job applications, risk and crisis communications, and issues in agriculture (Cannon et al., 2016). Program courses have been built and modified in response to industry expectations and needs; over time, several studies have been published in agricultural communication research that examine the skills and competencies needed from agricultural communication graduates (Doerfert & Miller, 2006). For example, Morgan (2010) found that employers in agricultural communication preferred graduates who could perform many tasks within a communications project rather than one specialization, but specific competencies such as grammar, spelling, punctuation, and writing effectively were the most agreed-upon by employers.

In 2013, Morgan and Rucker conducted a Delphi study with an expert panel consisting of graduate students and faculty from multiple agricultural communications programs in the nation. Their survey for Round 1 consisted of several demographic questions and one open-ended question, “What competencies are needed for agricultural communication bachelor of science graduates?” (p. 5). Using the constant comparative method (Glaser & Strauss, 1967), they based the survey for Round 2 off of the 144 statements that were gathered from Round 1, asking participants to determine and indicate their level of agreement with each statement through a five-point Likert-type scale. Morgan and Rucker decided that statements with an agreement of 80% or higher would move on to Round 3; as a result, 98 statements continued to the Round 3

survey, which asked for further consensus. Ultimately, after Round 3, 79 statements were collected as a result of the Delphi, and the research team categorized the findings into competencies within core areas: Agriculture, Communication, and General Education. The competencies (and statements) with the highest consensus in each category were, respectively: development of personal skills (including writing and speaking correctly and clearly), reporting (organizing information clearly), and miscellaneous (ability to communicate in writing). According to the Delphi members in this study, writing was considered to be among the utmost important competencies for future agricultural communicators to have.

Wyss and Cletzer's study (2023) is the most recent published research on what skills are preferred by agricultural communications employers and practitioners. They conducted an explanatory sequential mixed methods study (Creswell & Plano Clark, 2017) which used four phases to combine quantitative and qualitative research questions and analysis to better understand the collected data as a whole. Their target population consisted of agricultural communication industry workers in Missouri; thus, while their findings cannot be extrapolated and applied to the entire nation, they do provide important regional insight into what agricultural communication practitioners are expecting from graduates. Wyss and Cletzer used a survey questionnaire to collect the quantitative data, which asked employers to rate the importance of 64 communication-related skills on a five-point Likert-type scale, compiled from previous studies. Writing skills were determined to be the top ranked skills in importance, specifically being able to "write clearly; organize facts into a coherent message; use proper punctuation; write concisely; grammar and spelling; and editing" (p. 9). After the survey, some of the respondents also participated in the qualitative part of the study, which was conducted through focus groups. As a result of the focus groups, the findings from the quantitative part were confirmed again,

especially in regards to writing, which was identified as a foundational skill. Other findings from this study added more context to the consensus on the importance of writing; practitioners noted that agricultural communication is a field with continuous advancements in technologies and media, making it difficult for higher education classes to keep up with the times and prepare graduates for the exact technologies or software they will use. Since the participants view writing as a foundational skill, especially one that will persist through this dynamic environment, they place high emphasis on it, along with the ability to adapt and learn as they move forward in their careers.

Corder & Irlbeck (2018) conducted a review of the existing literature from publications, conference materials, dissertations, and theses to determine the consensus from all research on what skills are expected from agricultural communication graduates. Among the 17 articles they found, with publication dates ranging from 1993 to 2014, the researchers found that writing was the most important skill among all of the literature collected. Leal et al. (2020) found that agricultural communication graduates, communication industry professionals, and agricultural communication faculty members identified “communicate in written form” and “clear & concise writing” as the top two most important technical skills in agricultural communication. These highlighted studies are consistent with other studies that identified necessary agricultural communication skills (Irlbeck & Akers, 2009; Sprecker & Rudd, 1998). Thus, a common thread among both agricultural communication faculty and professionals is the importance stressed on the ability to write. In other words, writing is a highly important and necessary skill to communicate agriculture effectively.

### *Previous Writing Studies in Agricultural Communication*

Academic research within agricultural communication that specifically focuses on writing is relatively recent. Holli Leggette is a notable researcher in this field, due to multiple publications. Most of these writing studies conducted research in an agricultural communication classroom with post-secondary, U.S. based agricultural communication students as their target population (Ahrens et al., 2016; Banwart & Qu, 2023; Leggette et al., 2015; Leggette et al., 2024; Rockers & Rumble, 2023), non-agricultural communication students (Fischer & Meyers, 2017; Leggette & Homeyer, 2015), or a mix of both (Fischer et al., 2017; Lawson et al., 2021; Leggette et al., 2016; Cletzer et al., 2022). Other studies (Parrella et al., 2021; Ruth & Emmert, 2019) did not conduct research in an agricultural communication classroom; instead, the entire college of agriculture student body was surveyed about writing. Common themes within these nine writing studies are: self-perceptions of writing ability, writing apprehension, self-efficacy, and writing identity, with some that combined more than one focus. Writing apprehension is not within the scope of this study, and while it may be a sequential avenue for future research, this literature review will focus on the topics that are relevant to this research, such as self-efficacy and self-perceptions.

Lawson et al. (2021) measured writing apprehension in their study, but they also measured writing self-efficacy and writing self-perceptions. They focused specifically on media writing, and they surveyed students in an agricultural communications class at Texas Tech University that were agricultural communication majors and non-agricultural communication majors. They used the Media Writing Self-Perception Scale (MWSP) from Lingwall and Kuehn (2013) as their instrument to assess students' self-perceptions; they asked students to take the instrument and the beginning and end of the class to compare the scores. The MWSP instrument

consists of 50 Likert-type questions that ultimately gather insight on five areas of perception: elaborative/surface, reflective/revisionist, self-efficacy, writing apprehension, and social media/professional. As a part of the study, students were able to view the two scores from the assessment and reflect on it; they were then asked to answer four questions that surveyed what factors may have influenced the change in score, what their reaction was, what area of writing they find the most exciting, and what improvements could be made as a writer. The combination of quantitative with qualitative added a more well-rounded approach to the study, and it provided further insight into the mind of the writer and their process. Ultimately, the research team found that writing self-efficacy increased over the semester, and students named writing practice and writing feedback as positive influences in their overall confidence. Students also recognized mechanics and style as well as the writing process to be areas of improvement.

Parella et al. (2021) also used the MWSP scale in their study, which sought to determine the relationship between digital media use and media writing ability within agricultural communication students. Their survey was sent to all students in the college of agriculture at Texas A&M University, and of the 127 participants, 43 were graduate students. Along with the MWSP instrument, they also used the social networking time use scale to see if time spent on media impacted students' perceived writing abilities. As a result, they found that students' understanding of social media writing and professional publication writing was increased through the use of social media. Additionally, there was a positive correlation between time spent texting and students' writing self-efficacy, which shows that text messaging allows students to practice writing and gain more confidence in their writing overall.

Banwart and Qu's (2023) research objective was similar to Lawson et al.'s (2021), as they also sought to measure students' self-efficacy in writing and determine what factors, particularly

educator techniques, influence self-efficacy and confidence. However, instead of using the MWSP instrument, they designed a phenomenological qualitative study. Thirteen agricultural communication students were interviewed twice; they were asked questions about the types of writing they had experienced, how they perceive themselves as writers, and how their writing classes were instructed. Students were also asked to bring in examples of their writing and discuss their levels of self-efficacy associated with the writing samples. Their answers analyzed through the constant comparative method and coded through latent thematic analysis (Braun & Clark 2006), and seven themes were identified: writing performance; modeling and assignment expectations; social persuasion; physiological and emotional states; self-regulated writing strategies; types of writing; and types of courses. Upon analysis of the data, Banwart and Qu (2023) concluded that the students' self-efficacy was positively influenced by mastery experience (modeling after instructors or using rubrics), social persuasion (peer feedback), and self-regulated writing strategies (intentional habits and environment). This finding supports Bandura's (1997) self-efficacy theory, which emphasizes mastery experience as a factor that determines self-efficacy.

Leggette et al.'s (2015) study is a review of prominent theories of writing within an agricultural communication approach. It is the only study within agricultural communication, and agricultural education as a whole, that explores viable theoretical frameworks that could be used for writing research in agricultural communication. They found that the social cognitive theory of writing is the most "complete" theory because it incorporates both a sociocultural outlook and the writing process in its perspective. They noted that "few writing research studies or courses [in agricultural communications] are grounded in a writing theory," which is why this study has aimed to respond to Leggette et al.'s (2015) recommendation to use them in future

writing studies. The other nine writing studies do not use writing theories within their theoretical framework, even though several of them were published well after Leggette et al.'s (2015) article.

### **Writing and Literacy in Agriscience**

Stofer and Newberry (2017) explored the conceptions and differing definitions of agriculture and science, suggesting that the divide between them could be closed through the shared term “agriscience,” especially so that the public can better understand that agriculture is a scientific field. As such, the writing that occurs in agriscience is scientific and technical, which have their own definitions and specific contexts. For the purposes of this study, anyone who writes for the purpose of sharing or explaining information, whether they are primarily a scientist or a communicator, will be referred to as a writer—even if they do not or would not perceive themselves as one.

#### *Technical and Scientific Writing*

Hamlin (2016) defines technical as “refer[ring] to knowledge that is not widespread, that is more in the territory of experts and specialists” (p. 1). Thus, technical communication seeks to explain things that are specific to a field to others outside of the field, and it also particularly pays attention to the delivery of the information—even attempting to adapt to their readers’ “needs, level of understanding, and background” (p. 2). Scientific writing is a subgenre within technical writing (Collins & Tuttle, 1979). Scientific writing can be written by scientists for scientists or laypeople, or it can be written by non-scientists whose job is to communicate it to laypeople (Marks, 1985). Lindsay (2011) notes that a “good” style for scientific writing is one that emphasizes “precise, clear, [and] brief” writing (p. 12).

### *Connection between Literacy and Writing*

In 1978, Wales & Ashman attempted to answer the question, “What is technical style today?” by conducting a study that compared how agricultural station scientists view technical style in writing versus how professional communicators view it. Their populations consisted of station scientists, station editors, and journal editors, and each population was sent particular questions concerning factors influencing technical writing style, review protocols, and quality of manuscripts. The station scientists were also asked to rank themselves as technical writers. All participants were then asked to read two passages written by different scientists on the same topic and answer related questions on them (Kirkman, 1971). While both passages were about the same topic, they differed in phrasing and sentence length, with one being longer and the other shorter. Participants were asked which passage they preferred and which represented a better technical writing style. The shorter, simpler, and more direct passage was the most preferred and considered more appropriate for technical writing by both scientists and professional communicators. This passage also used more active verb phrases rather than passive, which is more typical in scientific writing (Banks, 2017). However, all respondents did consider the other passage’s author to be more competent, linking the more dense, complex, and more jargon-filled text to a perception of competence in a subject. In a sense, the more specialized a text gets, the more the author is considered superior in intellect; in the context of technical writing, though, the more complex the writing, the less readable and understandable the text is—which goes directly against the whole point of technical writing.

When a text has readability, it has an “ease of understanding or comprehension due to the style of writing” (Klare, 1963). Since technical writing is a means of explaining something to someone, technical writing (including scientific writing, depending on the reader) must be

successful in readability, particularly if the recipient of the writing is a layperson. To make something “readable” is to be intentional with vocabulary, sentence structures, and definitions when writing; the writer must also know their audience’s reading level in order to adjust their writing style (DuBay, 2004). Knowing literacy levels of a writer’s readership is pivotally important for attaining readability of a text. Considering the average American can read at the 8<sup>th</sup> grade reading level, most texts should strive for higher readability (Center for Plain Language, 2017). Currently, most scientific texts do not strive for readability; instead, they leave the reader more confused, impacting not only their knowledge but perceptions towards science (Freeling et al., 2021).

However, literacy is not necessarily just about being able to read words. It specifically refers to the “ability to use printed and written information to function in society, to achieve one’s goals, and to develop one’s knowledge and potential,” but in order to do this, one must have word-level reading skills (National Assessment of Adult Literacy, 2003). A technical writer cannot have any power over the reading levels of their readers, but they can utilize plain language techniques to help their readers better understand the content—and do something with it. Pinker (2014) offer an analogy for this in his *Sense of Style*: “a writer who explains technical terms can multiply her readership a thousandfold at the cost of a handful of characters, the literary equivalent of picking up hundred-dollar bills on the sidewalk” (p. 65). In other words, technical writers must make an effort to carefully craft their sentences specifically for their audience and not just hope that some of it will stick, and through that, they will be able to ensure that they are reaching a wider audience.

Writing in plain language can be difficult, even for people whose primary profession is to write. With that being the case, scientists or subject matter experts’ difficulties with increasing

the readability of their texts are understandable—to a degree. Salita (2015) illuminates the frustration of scientists, emphasizing that specialized knowledge and academic training limits their perception of others’ reading levels, potential knowledge gaps, and cultural perspectives. When asked to provide definitions or change their writing style to include more audiences, Salita argues that most scientists feel as though they are misrepresenting the content or data or losing accuracy to simplification. Some scientists and academics may prefer the “culture of exclusivity” (p. 184) and do not share the sentiment that the public needs to know all of the research that scientists are conducting. Keuhne and Olden (2015) argue that scientists can and should prioritize lay summaries of their research, especially with the increasing use of the internet as a main source of information by laypeople, creating a more streamlined system where not only laypeople but communicators and decision makers can refer to research-backed information.

### *Agricultural Literacy*

The National Research Council (1988) define agricultural literacy as having “an understanding of the food and fiber system” and knowing agriculture’s “history and its current economic, social, and environmental significance to all Americans” (p. 1). However, there is a difference between being agriculturally literate and agricultural literacy; Clemons et al. (2018) note the difference as “attainment and possession of knowledge (literacy)” and “an individual’s ability to write, read, and communicate (being literate)” about agriculture (p. 239). In their study, they found that agricultural professionals may not recognize this difference, which could impact how agriculture is communicated to the public. Having knowledge about agriculture and being able to communicate about it have become progressively important skills for our society, especially as the world population grows and agricultural production increases to combat food scarcity (Dale et al., 2017; Rotz & Fraser, 2015). Beyond the global food crisis, other agricultural

issues such as genetically engineered food, animal diseases, sustainability, and water conservation affect the general public and American economy as a whole, further emphasizing the need to increase the agricultural literacy of non-agriculturalists (McLeod-Morin et al., 2020).

In the American Association for Agricultural Education (2023) research values, “advancing public knowledge of AFNR systems” is the first research value (p. 8), putting emphasis on agricultural literacy as a research priority. Kovar and Ball (2013) recorded how many studies in agricultural education focused on agricultural literacy since 1988, finding 49 published articles that either produced an agricultural literacy framework or guide, evaluated a program, or assessed agricultural literacy of a population. Several more studies on agricultural literacy have been published since then, showing that the discipline has been active in its involvement in agricultural literacy research (Brune et al., 2020; Sandlin & Perez, 2017; Vallera & Bodzin, 2016). However, there is a consensus among agricultural education researchers that the American public is agriculturally illiterate, calling for more program initiatives and curriculum development to combat it.

Agricultural scientists and professionals can and should contribute to increasing agricultural literacy (Lundy et al., 2006; McLeod-Morin et al., 2020; Ruth et al., 2021). Lundy et al. (2006) names the failure of scientists to communicate with the public as one of the reasons for low science literacy levels. They surveyed agricultural scientists from many disciplines, such as agronomy, animal science, and horticulture. Ultimately, they found that their participants felt a responsibility to help with agricultural literacy, and they suggested media training to help scientists better understand how to work with journalists to inform the public in a more effective way.

A more recent study (McLeod-Morin et al., 2020) surveyed agricultural research center directors at land-grant universities to determine their perceptions, goals, and beliefs toward science communication, particularly focusing on agriculture. Their research revealed that these directors recognized the need for better science communication with the public, particularly from scientists themselves; the directors also collectively considered science communication to be a service to the public. A heavy emphasis was put on more communication training for scientists, who are typically just trained to talk to other scientists. While the role of journalists was discussed as well, it was the participants' consensus that scientists were the best people to communicate science, as they would communicate it more accurately, thus showing that accuracy is highly valued. However, by the end of the study, McLeod-Morin et al. determined from the directors that a partnership between scientists and journalists was potentially the best situation to increase scientific communication.

Ruth et al. (2021) came to a similar conclusion in their study, where they interviewed scientists at the Institute of Food and Agricultural Sciences at the University of Florida (a land-grant university) about their working relationship with journalists and reporters. The scientists were asked to report the frequency of their science communication as well as the quality of it; later, respondents were asked to participate in the qualitative part of the study, which involved interviews. Ruth et al. (2021) determined that agricultural scientists do have a fear of reporters misrepresenting information or providing inaccurate data, but scientists are also aware of the necessity of working with reporters as a means of communicating with the average media consumer.

Ultimately, in the fight for agricultural literacy, it seems as though scientists must become communicators or continue to work with communicators in order for the public to have

access to current scientific discoveries. However, in order for scientists to communicate directly, they must be aware of their audiences' reading levels and utilize plain language techniques to make their writing and the content more digestible for a layperson. General communicators may not have the subject knowledge, but they do know how to make things accessible to the average reader. As these previously addressed studies suggest, a working balance between scientists and communicators, or communicators training scientists, is a step in the right direction for agricultural literacy.

### **Land-grant Institutions and the Cooperative Extension Service**

The establishment of the land-grant system and the universities within it was part of a larger effort to promote and teach vocational education. Jonathan Baldwin Turner, a professor and botanist, advocated for publicly-funded universities to teach industrial class citizens in every state on agricultural and mechanical subjects (Herren & Hillison, 1996). His actions, along with the efforts of Justin Morrill, a representative, created the Morrill Land-Grant Act of 1862. When it was passed, each state was provided land for a college that offered studies in agriculture. In 1887, the Hatch Act guaranteed more funding for agricultural research and established State Agricultural Experiment Stations to contribute to institutional research. In 1890, a second Morrill Act was signed in; as a result of that act, states had to either set up another land-grant college for people of color or their current land-grant universities needed to open up their admission to people of color (Barrick, 1989). Both Morrill acts provided opportunities for people who would not otherwise have access to education, much less agricultural and mechanical education (Herren & Edwards, 2002).

The Cooperative Extension Service was established due to the Smith-Lever Act in 1914 as a way for institutional research to be translated and shared with farmers. Soon after, the

Smith-Hughes National Vocational Education Act of 1917 helped provide funding for the teaching of agriculture in secondary schools (Wirth, 1972). With that came the need for the training of vocational teachers at the college level as well. Much later, in 1994, thirty tribal colleges were recognized as part of the land-grant system under the Elementary and Secondary Reauthorization Act and were provided funding and access to Extension as well (Herren & Edwards, 2002). In alignment with the land-grant mission, Extension professionals are expected to not only have a basic knowledge of agricultural subjects, but they are also expected to be able to understand agricultural research and translate it to a lay audience (National Institute of Food and Agriculture, n.d.). They accomplish this through non-formal education by teaching workshops, leading programs, and creating guides or manuals to share (Strong et al., 2015; Torock, 2009). However, they can also educate and communicate informally by visiting farmers or discussing solutions for an agricultural issue with a stakeholder (Battel, 2005). It is important that a surrounding community can rely on relevant and current information for agricultural endeavors in their area, as inappropriate recommendations for their situation could result in a loss of produce or land.

### **Extension Competencies**

Extension professionals are expected to perform many tasks in order to further the Extension mission, which is taking “knowledge gained through research and education and bringing it directly to the people to create positive changes” (National Institute of Food and Agriculture, n.d.). Extension professionals can be considered as liaisons between agricultural scientists and the general public. Harder et al. (2019) noted that Extension agents need to be able to “assess community needs; develop relationships and partnerships; provide and evaluate research-based educational programming; manage volunteers; serve on and lead countless

internal and external committees, task forces, and boards,” and complete tasks in several other roles (p. 224). They must be subject-matter experts in addition to educators, communicators, and leaders. Not only do they need to be able to read and understand new research related to their subject area, but they must also be able to translate that research and information to both agriculturalists and non-agriculturalists, as well. On AgCareers.com (n.d.), it suggests that a bachelor’s or master’s degree in “a subject area or agriculture and extension education” is best for those wanting to become Extension agents, indicating an emphasis on either pursuing a particular agricultural-related major or an agricultural education major to prepare for the career. As such, it is possible that those who enter Extension are not fully prepared to fulfill all of their necessary tasks and roles (Ward et al., 2009).

On many levels, Extension routinely conducts internal needs assessments and program evaluations to determine the effectiveness of their programs (Terry & Osborne, 2015), perspectives and needs of their staff (Harder et al., 2009), organizational strengths (Lamm et al., 2021), and necessary competencies of agents to be successful (Benge et al., 2011). As a result of these assessments and evaluations, professional development is frequently offered to Extension staff to help supplement skills or implement new techniques in their daily work (Baughman et al., 2010). As technology advances, media landscapes change, policies affect stakeholders, and perceptions towards agriculture vary, Extension tries to be aware of the fluidic trends and needs of farmers and the public in order to provide timely and relevant information (Argabright et al., 2019; Arnold et al., 2012; Beck & Cilley, 1994).

#### *Missing Definition for Communication Competency*

There are many competencies that have been identified as necessary for Extension professionals; according to several studies, there is a shared consensus that top competencies are:

program management/development, communication, subject-matter expertise, and interpersonal skills, like leadership (Benge et al., 2011; Cooper et al., 2001; Elliott-Engel et al., 2021; Harder & Narine, 2019; Stone et al., 2004). Communication is consistently agreed upon as an important competency; this distinction makes sense, as agents are tasked with communicating agricultural research to the public. Nevertheless, even though communication has been highlighted as a competency, there is not any published consensus within these competency studies on the definition of communication or what subcategory skills are needed in communication, much less written communication.

For example, Cooper's (2001) study determined that an Extension agent's "ability to research and write" and "communication skills – (oral and written)," among others, were important competencies; these competencies were identified by county agents and supervisors. However, the study did not provide a further definition of what it meant to write or what writing entailed; however, it should be noted that defining each competency was not part of the original scope. As part of a Delphi study, Harder et al. (2010) found that "communication skills including speaking and writing skills" ranked as the fourth competency out of 19 core competencies that entry-level Extension agents should have (p. 48). Oral and written communication skills were not further defined, either. Similarly, in Benge et al.'s (2011) study, "communication skills" was determined to be third in the ranking of necessary pre-entry competencies, but no further explanation was given as to what it looks like or entails. A later study by Benge et al. (2020), which surveyed county Extension directors in Florida about professional development needs, also found that communication was a necessary skill for early-career agents. A survey participant particularly mentioned the need for "technical print and written communication training," but no other references to writing were mentioned by participants or the researchers themselves (p. 3).

Furthermore, even though Berven et al.'s (2020) study also determined that “communication skills” was an identified competency with nine skills categorized within it, those specific skills were actually not shared within the article, indicating that the general or competencies were more important to convey.

### *Emphasis on Science Communication (Outside of Writing)*

Science communication is a topic within Extension scholarship, which is both consistent with Extension’s mission to translate research to various audiences and the fact that communication is a recognized competency for Extension professionals. However, there is not a lot of research on *how* science should be communicated, at least on an academic level—an increasingly common theme. For instance, Crone (2011) emphasizes the need for more communication research in Extension and a clarification on what communication mastery looks like for Extension agents. While they only offer insight and tips for interviewing and decision making, they do reference their 2011 “Public Science Communication Research and Practice” series of publications by the Oregon Sea grant that Extension personnel can use. Within Crone’s (2011) article and publication series, there is not a focus on writing or a guide specifying how to write scientifically within an Extension context; instead, editors and communicators are mentioned as resources after the writing phase. Robinson (2013) refers to Extension professionals as science communicators, which expresses an understanding that Extension professionals have a communicator role. They also suggest using framing theory to share scientific information; they do not, however, mention written communication as a medium for framing theory to be applied to specifically or refer to any other representations, like newspaper articles, online content, and other public-facing documents.

Notably, Sarathchandra & Maredia (2014) published an overview of their international short course on science communication training for agricultural stakeholders, which included Extension professionals. Within their course, they have one component on “writing science for the public: media story development,” but the specific training within that segment was not shared within the article (p. 1). In their conclusion, they mention that “panel discussions are useful to identify where gaps exist (for instance, between scientists and journalists),” but this remark is not further explained (p. 3). Thus, while the topic of writing was included in this science communication course, not much is known about the contents of the lesson. These academic conversations about science communication within Extension illustrate that science communication is a goal and part of the Extension mission, but they do not thoroughly explore or explain writing’s place in science communication within the Extension context.

### **Writing in Extension**

Based on the previous studies that identified writing or written communication as a top competency, one can safely assume that Extension agents have to write. In 1993, Scanlon & Baxter conducted a study that asked recent college of agriculture graduates about their “on-the-job” writing; out of the 144 respondents, 22 identified as working in agricultural and Extension education. When asked how many hours they spend writing per week, the answers were spread out; out of the 22 in Extension, six reported 0-3 hours, six reported 4-7 hours, five reported 8-15 hours, and five reported 16+ hours. Thus, a majority (72%) of the Extension participants reported that they wrote for four or more hours during the week. Scanlon & Baxter also asked their participants how important it was that they had the ability to write in their role; 118 (82%) respondents answered that it was “important” or “very important.” Similarly, when asked whether the ability to write was important to advance in their careers, the Extension participants

indicated that it was either “important” or “very important.” While not generalizable, this study’s findings do indicate that, at least more than 20 years ago, Extension agents spent a good portion of their time writing—even though it does not specify what they were writing or if they were effective.

More recent studies on writing within Extension show that agents are still writing, although these studies also do not focus on defining what writing looks like or what skills are needed for it. Several articles offer writing advice, but they focus specifically on scholarship activity, which is usually more of a requirement for Extension specialists and faculty rather than Extension agents. For example, Teuteberg et al. (2016) and Duke (2020) suggest co-writing publications with other Extension staff to strengthen materials and lessen the tax of writing on one individual. While Teuteberg et al. (2016) is more focused on helping Extension professionals gain promotion and tenure through publications, Duke (2020) generally refers to the written materials that Extension professionals produce. Duke (2020) does help illustrate that writing demands enough of an Extension agent’s time to consider writing collaboratively with other agents. There are other articles that suggest ways to write scholarly articles (Bettis, 2012; Mills et al., 2016), but since these focus on those who have an academic appointment (i.e. Extension specialists), they will not be reviewed.

In another vein, Miller (2001) and Gordon (2003) suggest ways for Extension professionals to write materials or messages that will better reach their audience. Miller (2001) recommends 14 “quick tips” for Extension agents who are writing materials for readers with low literacy levels; tips such as simple writing, active voice, short words/sentences, and short summaries are suggested. In addition to that, Miller also suggests using the Fog Index, a readability formula, to test the readability of a document. Gordon (2003) takes a more conceptual

approach, offering suggestions on ways to write so that readers are more inclined to accept new, counterintuitive concepts instead of rejecting them. They specifically reference a writing tool called “transformative explanation,” which asks writers to follow a five-step process to make sure that their writing is following a structure that slowly explains new concepts and disregards old ones. Miller (2001) and Gordon (2003) are the only publications found that make suggestions on ways for Extension agents to format their writing for an audience or to elicit a particular response from the reader.

### *Types of Writing in Extension*

I have not found a published, recognized list that identifies the types of writing that Extension agents engage in. A list can be formed from various publications and studies, but there appears to be no singular study that attempts to collect and describe the types of writing that occur in Extension. For instance, Duke (2020) mentions that Extension agents write “fact sheets, technical pieces, and online content” (p. 1), while Gordon (2003) just mentions “messages” (p. 1). Adams et al. (2005) goes into a more extensive list, but it includes scholarly activity that not all Extension agents engage in. They mention books, grant proposals, curricula, bulletins, and educational manuals/guides, among other things that Extension professionals spend time writing. Beyond that, it can be concluded that Extension professionals write (or have written) content for social media (Beattie et al., 2019; Ferree, 2015; Nordby, 2014), newspapers (Ehret & Kiernan, 2008), and outreach (Tylczak et al., 2015) as well.

Carroll et al. (2022) conducted a study on how Extension audiences prefer to receive information, which provides a little more recent clarity on written communication. Out of the channels that communicate through writing, the internet, social media, newspapers, magazines were included. Among the most preferred were internet, social media, and newspapers, showing

that these written forms of communication are still relevant and appropriate today. Carroll et al. noted that a limitation of their study was as new communication channels emerge, these findings can potentially become irrelevant. However, in the interest of this study, writing, as a means of communicating through most of these channels, has been mentioned (intentionally or implicitly) as a skill Extension agents need for many decades, bolstering the argument to the importance of writing skill development in the present day (Duke, 2020; Gordon, 2003; Johnson & Satish, 1992; Mills et al., 2016; Upchurch, 1969).

Even though scholarship does provide a general idea of what types of writing Extension agents engage in, there is a lack of established scholarship that intentionally seeks to describe what agents write. State Extension offices themselves may provide a better look into what agents do, but there are only a few publicly available materials on writing that were easily found, as others may require an Extension login and password (Tschetter & Freeman, 2019; University of Maryland Extension, n.d.). It may prove better to conduct another, more in-depth study that collects and categorizes materials on writing that state offices create for their agents so that a more well-rounded understanding can be formed on what is available and used by agents as resources for writing.

## **Summary**

While national assessments have suggested that Americans can write at a basic level, studies have revealed a common assertion from past and current employers that writing was and will continue to be an incredibly important skill in the workplace. There are several types of writing present in the agricultural industry, and the nature of agriculture and science in general lends itself to a technical writing style, which is to explain concepts that people may not already understand. Since Extension's mission is to translate agricultural research to various audiences,

and this translation commonly happens through writing, Extension agents must be intentional with their writing style, taking into account their audience's literacy and their own content's readability. An expansion upon these studies and further investigation into what Extension writing is will provide a more tangible and measurable way to define what good written communication actually is. There is an opportunity to build upon previous competency-based Extension research and to focus attention on the written aspect of Extension communication.

## CHAPTER III

### METHODS

This study is quantitative, and it utilizes both a modified Delphi method and a quantitative survey method. The purpose of this study is to:

1. Determine the writing competencies Extension directors consider necessary for Extension agents.
2. Determine the genres of writing in which Extension agents in Alabama participate.
3. Describe how Alabama Extension agents' rank their perceived effectiveness of the writing competencies determined by Extension directors.
4. Evaluate perceived effectiveness to determine potential areas of need in agent training regarding written communication in Alabama.

#### **Objective 1**

It was decided that the first objective, creating competency statements, would be determined by experts in the field of Extension. In this case, the Delphi technique was chosen as the appropriate method because it provides a medium through which chosen experts can provide opinions and find consensus on a topic, the results of which can be used to build a knowledge base or foundation for further action (Buriak & Shinn, 1989). Originally, the Delphi technique was developed by Dalkey & Helmer (1963) within the RAND corporation as a way to collect “the most reliable consensus of opinion of a group of experts” (pp. 468). They did this through “a series of intensive questionnaires interspersed with controlled opinion feedback” (pp. 468). In a contemporary Delphi study, members do not physically see or talk with one another; consensus and feedback is communicated only through survey responses (Yousuf, 2007). In a Delphi, experts are identified and invited to share their opinions towards a topic; once a panel has been

formed, the experts engage in multiple rounds or re-surveying that incrementally build from one another as consensus is formed (Buriak & Shinn, 1989).

The Delphi technique has been used regularly within agricultural education to form university programmatic research efforts (Buriak & Shinn, 1989), reevaluate university program objectives and curriculum (Morgan & Rucker, 2013), establish discipline definitions (Clemons et al., 2018), and determine skills expected from employees or graduates (Albritton & Roberts, 2020; Wells et al., 2023). Specifically within Extension-based research, there have also been many Delphi studies conducted, usually focusing on competencies of Extension agents (Warner et al., 2016) and characteristics of a strong Extension office or program (Lamm et al., 2021; Terry & Osborne, 2015).

In this study, competencies were established from a group of experts, and those competency statements were then transferred into an assessment for county-based Extension agents in Alabama. This survey sought to evaluate the current attitude towards written communication competencies expected in their profession. Both parts of the study were assessed and approved by Auburn's Internal Review Board (IRB) before proceeding.

The purpose of the Delphi portion of this study was to establish competencies of writing expected of county Extension agents. Our Delphi consisted of three rounds; Delphi methods can typically have up to four rounds (Hsu & Sandford, 2007). Qualtrics was used to create and house the surveys that facilitated the rounds during the Delphi study. Round 1 was designed to illuminate the genres of writing that Extension agents engage in, rank the genres by importance, and then prompt experts to provide genre-specific competencies for each genre. Round 2 asked participants to look over all of the provided competencies in each genre and rate their level of agreement with each competency, using a 5-point Likert-type scale. Any competencies that were

less than 70% level of agreement were removed from the item list for that genre and did not move on to Round 3. Round 3 allowed for one more round of consensus and feedback on the established competencies, with any added competencies that were communicated in Round 2, asking again for a level of agreement with each identified competency in a particular genre.

### *Instrument Design*

The instruments for the Delphi were designed by the researcher and their chair. To help organize the instrument, it was determined that the experts would be asked to consider the writing competencies they expect in a particular genre, as different genres of writing engage different writing competencies. As a result, genres of writing within Extension were discussed, and genres to be included in the instrument were decided by the researcher: social media, program/workshop materials, newspaper/online articles, guides/manuals, journal articles, technical publications, and internal communications. These genres were established by a thorough review of the Alabama Cooperative Extension System's online website, where each of these materials were either accessible through archives or referenced in some way.

To test instrument validity and confirm genre selections and names, a pilot test of the Round 1 instrument was sent to a panel of ten experts within agricultural education and Extension outside of the sample population. The experts in this pilot study consisted of current and former Extension professionals, program heads, and faculty within the agricultural education, communications, and leadership field. Positive feedback with some suggestions for clearer wording was received from the pilot testing, and the initial invitation containing Round 1 was cleared by the research team to proceed.

## *Population*

The Delphi method calls for a panel of experts, and our panel consisted of state Extension directors in the southern region. Extension directors are at the highest level within state Extension offices, and their values are expected to be aligned with the greater national mission of Extension. Several studies have chosen directors (state, regional, county) and included them in expert panels in order to determine professional development needs, desired characteristics, and necessary competencies of Extension agents (Benge et al., 2020; Elliott-Engel et al., 2021; Harder et al., 2010; Jones, 2022; Moore & Rudd, 2004).

The methods for Objective One were built on the assumption that state Extension directors would have expectations regarding the writing competencies that their county-based agents possess. The parameters were set to the southern region states of the United States to allow for more cohesive membership to the Delphi study and a more robust collection of data. Therefore, the Association of Southern Region Extension Directors (ASRED) was chosen to aid in identifying which state directors would be invited to participate in the study. The states and territories that are in this association are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, the Virgin Islands, and Virginia. Thus, fifteen directors were identified to invite to participate in the study. This number of experts was considered an appropriate initial number, as Delbecq et al. (1975) suggests 10-15 participants in a Delphi study.

Information about each director as well as their contact information are publicly listed on the ASRED directory; emails were collected and double-checked with online state Extension directories for potential inconsistencies and corrected if necessary.

### *Round 1*

The fifteen state directors from Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, the Virgin Islands, and Virginia were emailed an invitation to participate in the Delphi study. As part of the invitation, directors who chose to participate were prompted to indicate participation on the Qualtrics survey and complete round 1. In an effort to increase data validity and account for potential dropouts or unavailability of state directors, we asked the directors who completed round 1 to provide the name and email of other administrators in their state that they thought would provide insight and value to the study. Thus, 15 additional experts were invited to the study during round 1, totaling 30 invites to the Delphi study overall. As a result, 20 experts accepted the invitations and completed round 1, with 13 states represented (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia). The initial invitation was sent out fall 2023, and after 2 email reminders, round 1 closed. In the writing competencies section, 137 responses, with some containing multiple competencies in one response, were collected. These responses were checked for duplicates and clarity and translated into 67 competencies, with many genres sharing the same competency.

### *Round 2*

Round 2's purpose was to present the submitted responses and prompt respondents to indicate their agreement or disagreement level with the importance of the writing competencies identified on a 5-point Likert-type scale (Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, and Strongly Agree). The instrument was still organized by genre, as the context of the genre could have an effect on the importance of the writing competency.

Participants were also asked to provide any other writing competencies that they would like to submit after seeing all of the responses. The same 20 experts who completed round 1 were invited to participate in round 2. However, during data collection for round 2, a member requested for someone else to take their place in the study due to leaving their position. As a result, two experts from that member's state Extension were asked to participate, and both said yes. The group size for the Delphi increased to 21 members. Two reminder emails were sent, and 14 Delphi members responded, with a 67% response rate.

When the responses were analyzed for consensus, the research team decided that any agreement below a 3.8 average would be removed from the list of competencies. Because of this parameter, two competencies were removed. Additionally, nine responses were collected that contained new suggested writing competencies. One of the nine was added to the list to be included in round 3, as the other eight suggestions were determined to be close or identical to existing competencies. Therefore, round 2 ended with 68 competencies.

### *Round 3*

For round 3, respondents worked through the items by genre, and even though there were only 68 competencies, several genres shared competencies, resulting in 121 items. To combat survey fatigue, the research and their chair decided to show the members the average level of agreement for each competency from Round 2 in each genre and ask them if they agreed with that average with a yes or no for each competency to indicate their decision. If the respondent said yes, then they would proceed to the next competency. If the respondent said no, then another question was populated that asked them to re-evaluate and indicate their level of agreement on a Likert-type scale, like the one from round 2 (Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, and Strongly Agree).

Round 3 was sent out winter 2023, and the round closed in late winter after 2 reminders were sent. In the second reminder, participants were asked if they needed an extension to response deadline. Two requested an extension, and the round stayed open to make sure that those responses could be collected. Sixteen members participated in Round 3 out of the 21, with a 76% response rate.

#### **Objectives 2-4**

The competencies that resulted from Objective One were necessary to create the instrument for Alabama Extension agents. In order to determine how effective agents' felt about their writing competencies, the research team needed competencies to ask them about. After the Delphi panel was able to reach consensus on competencies by Round 3, the competencies were transferred into the instrument for the Alabama Extension agents.

#### *Instrument Design*

The instrument for the agents in Alabama was structured by the genres identified by the Delphi members so that agents could determine whether they engaged in that genre and, consequently, their competency effectiveness within their writing context. Agents were asked if they engaged in a particular genre of writing (social media, newspapers, etc.); agents who indicated they did not, the instrument asked about the next genre of writing. If the agent indicated that they do engage in that genre of writing, then the instrument populated the corresponding competencies identified by the Delphi panel, asking them to determine how effective they felt in that competency with a five-point Likert scale (not effective at all, slightly effective, moderately effective, very effective, and extremely effective). At the most, if an agent indicated that they engage in all seven of the genres, they would need to respond to 120 items of competencies; however, if they only engaged in a few genres, then the instrument would be

much shorter. We wanted to keep in mind the possibility that agents may not engage in all identified genres of writing, and especially give them the chance to opt out of genres that did not apply to them. The average effectiveness across multiple genres was calculated and evaluated in order to determine potential needs of agents regarding certain forms of writing.

Other questions that were presented to them were demographic and asked about their official Extension program that they are assigned to, which university system they affiliate with (1862 or 1890), and their highest completed level of education. Finally, the instrument ended with asking agents if there were any other types of writing that they do that were not included in the questions.

### *Population*

The ACES website provides a public directory of its Extension personnel. The target population of objectives 2 and 3 included extension agents within the following program areas: Forestry, Wildlife & Natural Resources; Animal Sciences & Forages; Human Nutrition, Diet & Health; Home Grounds, Gardens & Home Pests; Commercial Horticulture; SNAP-Ed; Alabama 4-H; Food & Safety Quality; Financial Resource Management & Workforce Development; Farm & Agribusiness Management; Agronomic Crops; Aquatic Resources; Family & Child Development. While Alabama does have Extension specialists, this study does not include them as they have added research commitments in their role which may affect how they perceive importance and competency within writing. County Extension Coordinators were determined to be a separate population for this study, as well.

### *Data Collection*

The instrument was sent out via Qualtrics to 93 Extension agents in Alabama. In an effort to be transparent and inclusive of leadership, we contacted assistant directors for field operations

(ADFOs), administrators that work directly with regional and county agents, and communicated the objectives of the study as well as the possible benefits and applications of the research collected. They requested a small blurb and the link to the survey so that they could include the information about the survey and link in their bulk communication emails to their agents. It is possible that the emails collected from ACES online directory are outdated, so the added support in awareness and reach from the ADFOs may have actually encouraged participation from agents who otherwise may not have been included in the original 93 (Dillman, 2007). As a result, the Qualtrics survey was sent to a combination of 138 Extension agents. Following Dillman's Tailored Design Method (2007), a pre-invite announcement, an invitation letter, and three reminders were sent to all with an appeal to action. This resulted in 47 respondents to the survey. Only finished surveys were considered for data analysis, and any answers that were accidentally or intentionally skipped are reflected in the tables for full context. Early to late responders were compared in an effort to mitigate response bias (Lindner, 2002; Lindner et al., 2001). It was determined that the differences were not significant and not a threat to external validity.

## **Summary**

This study consists of two parts: the first part uses a Delphi method, and the second part uses a quantitative survey method. State Extension directors from the southern region of the U.S. were selected as the population for the Delphi, and they suggested other leaders and administrators in their state that would also be able to provide insight on writing expectations within Extension. Data collected from the Delphi were used to create the instrument for the second part of the study; regional and county Extension agents in Alabama were surveyed about the writing genres they engage in and their perceived effectiveness in each relevant competency. In both parts, data were analyzed using descriptive statistics.

## CHAPTER IV

### FINDINGS

Extension professionals engage in different types of writing in their daily tasks; this study seeks to determine what writing competencies are expected of county-based agents and if agents feel effective in these expected competencies. As such, the following objectives led our study:

1. Determine the writing competencies Extension directors consider necessary for Extension agents.
2. Determine the genres of writing in which Extension agents in Alabama participate.
3. Describe how Alabama Extension agents' rank their perceived effectiveness of the writing competencies determined by Extension directors.
4. Evaluate perceived effectiveness to determine potential areas of need in agent training regarding written communication in Alabama.

For objective one, the Delphi method was used have experts create a list of competencies. For objectives 2-4, we used a survey method that utilized the competencies from objective one to ask Extension agents about their perceived effectiveness. Thus, there are two parts to this study with two similar but different target populations.

**Objective One: Determine the writing competencies Extension directors consider necessary for Extension agents.**

#### *Demographics*

Fifteen Extension state and territory directors in the southeastern region were invited to participate in the Delphi study. As a result of directors' input, several other state or regional administrators were also invited to participate as a representative of their state ( $n = 6$ ). In the first round, twenty-one participants represented a total of 13 southeastern states: Alabama, Arkansas,

Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. Seven states had more than one person participate (Table 1). All participants indicated that they work for an 1862 land grant system, and the majority of participants had been employed in Extension for more than 20 years, with six participants (28.57%) employed for 21-25 years and seven participants (33.33%) employed for more than 25 years. Years employed indicates time spent in one or more positions within Extension as a whole, not the time spent in their current position.

**Table 1**  
*Characteristics of Delphi Experts*

| Variable                           | <i>n</i> | %     |
|------------------------------------|----------|-------|
| <b>State</b>                       |          |       |
| Alabama                            | 2        | 9.52  |
| Arkansas                           | 2        | 9.52  |
| Florida                            | 2        | 9.52  |
| Georgia                            | 3        | 14.29 |
| Kentucky                           | 1        | 4.76  |
| Louisiana                          | 2        | 9.52  |
| Mississippi                        | 1        | 4.76  |
| North Carolina                     | 1        | 4.76  |
| Oklahoma                           | 1        | 4.76  |
| South Carolina                     | 2        | 9.52  |
| Tennessee                          | 2        | 9.52  |
| Texas                              | 1        | 4.76  |
| Virginia                           | 1        | 4.76  |
| <b>Years employed in Extension</b> |          |       |
| 0-5                                | 3        | 14.29 |
| 6-10                               | 1        | 4.76  |
| 11-15                              | 1        | 4.76  |

|              |   |       |
|--------------|---|-------|
| 16-20        | 3 | 14.29 |
| 21-25        | 6 | 28.57 |
| More than 25 | 7 | 33.33 |

Note.  $N = 21$

### Round 1

In order to have Delphi experts determine and reflect on what writing competencies are expected within a certain type of writing, they were first asked to determine what genres of writing their agents engage in. They were given a list to choose from, and they were also given the opportunity to provide any genres or types of writing that were not already covered in the provided list. On the list, seven genres were provided: *social media*, *newspaper/online articles*, *program materials*, *internal communications*, *guides/manuals*, *technical publications*, and *journal articles* (Table 2). Three respondents suggested another genre, but the suggestions already fit under the category of *technical publications*, so nothing new was added to the list. There were two genres that every expert (100%,  $n = 21$ ) indicated as a type of writing that their agents engage in, which were *social media* and *newspaper/online articles*. Very close to 100% agreement was *program materials* ( $n = 20$ , 95.24%) and *internal communications* ( $n = 19$ , 90.48%). The lowest recognized type of writing was *journal articles* ( $n = 13$ , 61.90%), but the research team decided to keep *journal articles* within the list because it did not exceed lower than 50% agreement. The threshold of agreement at 50% was set for the genres *a priori*.

**Table 2**

### *Types of Writing that Agents Engage in*

| Genre                     | $n$ | %      |
|---------------------------|-----|--------|
| Social media              | 21  | 100.00 |
| Newspaper/online articles | 21  | 100.00 |
| Program materials         | 20  | 95.24  |

|                         |    |       |
|-------------------------|----|-------|
| Internal communications | 19 | 90.48 |
| Guides/Manuals          | 17 | 80.95 |
| Technical publications  | 16 | 76.19 |
| Journal articles        | 13 | 61.90 |

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Experts were then asked the same singular open-ended question for each of the seven genres: what competencies are needed for your county Extension agents to be successful in this type of writing? Duplicate competencies within genres were combined, resulting in 66 individual competencies. Experts identified 15 competencies in *social media, program/workshop* (17), *newspaper/online articles* (20), *guides/manuals* (19), *technical publications* (18), *journal articles* (19), and *internal communications* (15; Table 3). Ultimately, *newspaper/online articles* had the most writing competencies identified ( $n = 20$ ), with *social media* and *internal communications* both having the least ( $n = 15$ ). Several types of writing shared competencies.

**Table 3***Round 1: Results of Expected Writing Competencies*

| Social media<br>( <i>f</i> = 15)                     | Program/Workshop<br>( <i>f</i> = 17)          | Newspaper articles<br>( <i>f</i> = 20)                                 | Guides/Manuals<br>( <i>f</i> = 20)               | Technical pub.<br>( <i>f</i> = 18)               | Journal articles<br>( <i>f</i> = 19)         | Internal comm.<br>( <i>f</i> = 15)   |
|--|---|--|--|--|--|--|
| Identify and understand target audience.             | Identify and understand audience.             | Deliver on level of the reader.  | Write concisely.                                 | Follow organizational formatting guidelines.     | Follow organizational formatting guidelines. | Determine appropriate language and format between communication methods (memo, text, email, etc.). |
| Identify relevance to audience.                      | Develop engaging content.                     | Use plain language.  | Follow organizational formatting guidelines.     | Use technical language correctly.                | Use technical language correctly.            | Utilize etiquette.   |
| Select words that are appropriate, modern, creative. | Write clearly.<br>Write concisely.            | Use appropriate writing style (AP, APA, etc.).<br>Select action words. | Deliver on level of the reader.                  | Write concisely.                                 | Write concisely.                             | Write concisely.   |
| Adhere to accessibility requirements.                | Be knowledgeable in technical subject matter. | Identify engaging topics.  | Integrate and translate current research.        | Utilize and define tables and graphs.            | Use sources ethically.                       | Identify and understand audience.  |
| Use call to actions.                                 | Determine that information is accurate.       | Integrate and translate current research.                              | Organize information logically and consistently. | Identify and understand text's audience.         | Address a need or issue.                     | Write clearly.   |
| Communicate with precision.                          | Deliver on level of the reader.               | Write clearly.   | Use plain language.                              | Organize information logically and consistently. | Write clearly.                               | Determine if message is necessary.   |
| Write concisely.                                     | Organize instructions.                        | Write concisely.   | Create meaningful divisions within text.         | Organize information logically and consistently. | Communicate applicability of content.        | Organize information logically and consistently.   |
| Define technical terms.                              | Understand grammar rules.                     | Identify and understand audience.                                      | Write with a technical point of view.            | Avoid jargon.                                    | Respect copyright laws.                      | Respect copyright laws.  |
| Consider timeliness of information shared.           | Use correct spelling.                         | Remain objective.  | Write clearly.                                   | Respect copyright laws.                          | Proofread for errors.                        | Be knowledgeable in subject matter.  |
| Able to summarize.                                   | Adhere to Extension branding guidelines.      | Determine that information is accurate.                                | Write clearly.                                   | Use inclusive language.                          | Use inclusive language.                      | Communicate purpose.   |
| Use correct spelling.                                | Integrate and translate current research.     | Use inclusive language.  | Determine that information is accurate.          | Use active voice.                                | Synthesize research.                         | Adhere to Extension branding guidelines.   |
| Use correct punctuation.                             |   | Use call to actions.   |  |  | Identify and understand audience.            | Provide context.   |

**Table 3 continued***Round 1 Results of Expected Writing Competencies*

| Social media<br>( <i>f</i> = 15)              | Program/Workshop<br>( <i>f</i> = 17)                         | Newspaper articles<br>( <i>f</i> = 20)            | Guides/Manuals<br>( <i>f</i> = 19)                | Technical pub.<br>( <i>f</i> = 18)                                 | Journal articles<br>( <i>f</i> = 19)           | Internal comm.<br>( <i>f</i> = 15)         |
|---|--|---|---|--|--|--|
| Apply marketing knowledge.                    | Remain objective.  | Communicate applicability of content.             | Understand grammar rules.                         | Be aware of how material will be presented (digital, paper, etc.). | Use appropriate writing style (AP, APA, etc.). | Use appropriate tone.                      |
| Understand platform norms and culture.        | Use creativity to help visualize complex ideas.              | Consider timeliness of information shared.        | Be knowledgeable in technical subject matter.     | Adhere to peer review requirements.                                | Able to write abstractly.                      | Able to revise work.                       |
| Be knowledgeable in technical subject matter. | Develop program objectives and match objectives to outcomes. | Check readability level of text.                  | Define technical terms.                           | Be knowledgeable in technical subject matter.                      | Able to revise work.                           | Consider timeliness of information shared. |
|   | Synthesize research.   | Use appropriate paragraph and sentence structure. | Identify and understand audience.                 | Use descriptive writing.   | Proofread for errors.                          | Use correct spelling.                      |
|   | Organize information logically.                              | Determine objective of material.                  | Remain objective.                                 | Use correct spelling.  | Use appropriate tone.                          | Understand grammar rules.                  |
|   |  | Understand grammar rules.                         | Integrate visual examples.                        | Pay attention to cohesion and flow.                                | Understand grammar rules.                      | Understand grammar rules.                  |
|   |  | Use correct spelling.                             | Use appropriate paragraph and sentence structure. | Able to revise work.   | Use correct spelling.                          | Use correct spelling.                      |
|   |  | Use correct punctuation.                          | Determine objective of material.                  | Cite sources.  |  |  |
|   |  |   | Use correct punctuation.                          |  |  |  |

## Round 2

Following Delphi methods (Hsu & Sandford, 2007; Buriak & Shinn, 1989), the competencies identified in Round 1 were provided to the expert panel in Round 2, and participants were asked to determine their level of agreement with the importance of a competency in that particular genre. Agreement was measured using a five-point, Likert-type scale; agreement was determined to be when experts rated an item either agreed (4.0) or strongly agreed (5.0). Any competencies that resulted in a percent level of agreement that was less than 70% were removed from the item list for that genre and did not move on to Round 3 (Warner et al., 2016). At the end of every genre's section of the instrument, participants were asked to consider if there were any other competencies that needed to be added to the genre's specific list of competencies.

**Social Media.** “Identify and understand target audience” ( $M = 4.86$ ,  $SD = 0.35$ ) tied with “use correct spelling” ( $M = 4.86$ ,  $SD = 0.35$ ) as the most commonly agreed upon competencies in *social media*, both with 100.00% agreement (Table 4). “Use call to actions” had the lowest agreement at a 71.43% and with a mean of 3.93 ( $SD = 0.70$ ). No competencies were removed, but “deliver on level of the reader” was added this round to be later evaluated in Round 3, resulting in 16 recognized competencies in *social media*.

**Table 4**

*Round 2: Agreement of Social Media Competencies (f = 16)*

| Competency                                | <i>M</i> | <i>SD</i> | <i>% Agree<sup>l</sup></i> |
|---|----------|-----------|----------------------------|
| Identify and understand target audience   | 4.86     | 0.35      | 100.00%                    |
| Use correct spelling                      | 4.86     | 0.35      | 100.00%                    |
| Consider timeliness of information shared | 4.71     | 0.45      | 100.00%                    |
| Communicate with precision                | 4.64     | 0.48      | 100.00%                    |

|   |      |      |         |
|---|------|------|---------|
| Use correct punctuation                             | 4.64 | 0.48 | 100.00% |
| Identify relevance to audience                      | 4.57 | 0.49 | 100.00% |
| Write concisely                                     | 4.50 | 0.63 | 92.86%  |
| Adhere to accessibility requirements                | 4.43 | 0.82 | 92.86%  |
| Be knowledgeable in technical subject matter        | 4.43 | 0.82 | 78.57%  |
| Able to summarize                                   | 4.36 | 0.48 | 100.00% |
| Select words that are appropriate, modern, creative | 4.29 | 0.45 | 100.00% |
| Apply marketing knowledge                           | 4.00 | 0.65 | 78.57%  |
| Understand platform norms and culture               | 4.00 | 0.65 | 78.57%  |
| Use call to actions                                 | 3.93 | 0.70 | 71.43%  |
| Define technical terms                              | 3.92 | 0.62 | 76.92%  |
| Deliver on level of the reader*                     | -    | -    | -       |

Note. 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

<sup>1</sup> % Agree = combined responses of 4 or 5

\*Added as a result of Round 2

**Program/Workshop Materials.** There were five competencies that resulted in 100.00% agreement: “determine that information is accurate” ( $M = 4.93, SD = 0.26$ ), “identify and understand audience” ( $M = 4.79, SD = 0.41$ ), “use correct spelling” ( $M = 4.79, SD = 0.41$ ), “deliver on level of the reader” ( $M = 4.71, SD = 0.45$ ), and “write clearly” ( $M = 4.57, SD = 0.49$ ; Table 5). The lowest percent agreement was shared between “integrate and translate current research” ( $M = 4.43, SD = 0.73$ ), and “synthesize research” ( $M = 4.21, SD = 0.67$ ) with both at 85.71% agreement. No competencies were added or removed.

## Table 5

*Round 2: Agreement of Program/Workshop Material Competencies (f = 17)*

| Competency                             | <i>M</i> | <i>SD</i> | <i>% Agree<sup>1</sup></i> |
|--|----------|-----------|----------------------------|
| Determine that information is accurate | 4.93     | 0.26      | 100.00%                    |
| Identify and understand audience       | 4.79     | 0.41      | 100.00%                    |

|   |      |      |         |
|---|------|------|---------|
| Use correct spelling  | 4.79 | 0.41 | 100.00% |
| Deliver on level of the reader                              | 4.71 | 0.45 | 100.00% |
| Write clearly   | 4.57 | 0.49 | 100.00% |
| Remain objective  | 4.57 | 0.62 | 92.86%  |
| Develop program objectives and match objectives to outcomes | 4.57 | 0.49 | 100.00% |
| Adhere to Extension branding guidelines                     | 4.50 | 0.82 | 92.86%  |
| Be knowledgeable in technical subject matter                | 4.43 | 0.62 | 92.86%  |
| Integrate and translate current research                    | 4.43 | 0.73 | 85.71%  |
| Organize instructions                                       | 4.36 | 0.61 | 92.86%  |
| Write concisely   | 4.29 | 0.45 | 100.00% |
| Understand grammar rules                                    | 4.29 | 0.45 | 100.00% |
| Organize information logically                              | 4.29 | 0.45 | 100.00% |
| Develop engaging content                                    | 4.23 | 0.42 | 100.00% |
| Synthesize research   | 4.21 | 0.67 | 85.71%  |
| Use creativity to help visualize complex ideas              | 4.14 | 0.52 | 92.86%  |

Note. 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

<sup>1</sup> % Agree = combined responses of 4 or 5

**Newspapers/Online Articles.** 66.67% ( $f = 14$ ) of the 21 identified competencies in this genre received 100.00% agreement (Table 6). “Use call to actions” received the lowest percent level of agreement at 75.00% ( $M = 3.83$ ,  $SD = 0.55$ ). No competencies were added or removed.

**Table 6**

*Round 2: Agreement of Newspapers/Online Article Competencies ( $f = 21$ )*

| Competency                             | <i>M</i> | <i>SD</i> | <i>% Agree<sup>1</sup></i> |
|--|----------|-----------|----------------------------|
| Remain objective                       | 4.85     | 0.36      | 100.00%                    |
| Write clearly                          | 4.77     | 0.42      | 100.00%                    |
| Use correct spelling                   | 4.77     | 0.42      | 100.00%                    |
| Use correct punctuation                | 4.77     | 0.42      | 100.00%                    |
| Determine that information is accurate | 4.69     | 0.46      | 100.00%                    |

|  |      |      |         |
|--|------|------|---------|
| Deliver on level of the reader                   | 4.62 | 0.49 | 100.00% |
| Use plain language                               | 4.62 | 0.49 | 100.00% |
| Use appropriate paragraph and sentence structure | 4.62 | 0.49 | 100.00% |
| Understand grammar rules                         | 4.62 | 0.49 | 100.00% |
| Write concisely                                  | 4.54 | 0.50 | 100.00% |
| Identify and understand audience                 | 4.54 | 0.50 | 100.00% |
| Communicate applicability of content             | 4.54 | 0.50 | 100.00% |
| Consider timeliness of information shared        | 4.54 | 0.50 | 100.00% |
| Identify engaging topics                         | 4.38 | 0.62 | 92.31%  |
| Integrate and translate current research         | 4.38 | 0.62 | 92.31%  |
| Determine objective of material                  | 4.38 | 0.49 | 100.00% |
| Use inclusive language                           | 4.31 | 0.61 | 92.31%  |
| Check readability level of text                  | 4.23 | 0.58 | 92.31%  |
| Use appropriate writing style (AP, APA, etc.)    | 4.15 | 0.66 | 84.62%  |
| Select action words                              | 4.08 | 0.62 | 84.62%  |
| Use call to actions                              | 3.83 | 0.55 | 75.00%  |

Note. 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

<sup>1</sup> % Agree = combined responses of 4 or 5

**Guides/Manuals.** Half ( $f = 10$ ) of the competencies in this genre received 100.00% agreement (Table 7). The lowest percent agreement was 76.92%, which was for the competency “write with a technical point of view.” No competencies were added or removed.

**Table 7**

*Round 2: Agreement of Guides/Manuals Competencies (f = 20)*

| Competency                             | <i>M</i> | <i>SD</i> | <i>% Agree<sup>1</sup></i> |
|--|----------|-----------|----------------------------|
| Write concisely                        | 4.77     | 0.42      | 100.00%                    |
| Determine that information is accurate | 4.77     | 0.42      | 100.00%                    |
| Write clearly                          | 4.69     | 0.46      | 100.00%                    |
| Identify and understand audience       | 4.69     | 0.46      | 100.00%                    |

|  |      |      |         |
|--|------|------|---------|
| Use correct spelling                             | 4.69 | 0.46 | 100.00% |
| Use correct punctuation                          | 4.69 | 0.46 | 100.00% |
| Understand grammar rules                         | 4.62 | 0.49 | 100.00% |
| Be knowledgeable in technical subject matter     | 4.62 | 0.49 | 100.00% |
| Use appropriate paragraph and sentence structure | 4.54 | 0.50 | 100.00% |
| Deliver on level of the reader                   | 4.46 | 0.63 | 92.31%  |
| Organize information logically and consistently  | 4.46 | 0.50 | 100.00% |
| Define technical terms                           | 4.46 | 0.63 | 92.31%  |
| Remain objective                                 | 4.46 | 0.63 | 92.31%  |
| Integrate visual examples                        | 4.38 | 0.74 | 84.62%  |
| Integrate and translate current research         | 4.31 | 0.91 | 84.62%  |
| Use plain language                               | 4.31 | 0.61 | 92.31%  |
| Create meaningful divisions within text          | 4.31 | 0.61 | 92.31%  |
| Determine objective of material                  | 4.31 | 0.61 | 92.31%  |
| Follow organizational formatting guidelines      | 4.23 | 0.80 | 92.31%  |
| Write with a technical point of view             | 4.08 | 0.73 | 76.92%  |

Note. 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

<sup>1</sup> % Agree = combined responses of 4 or 5

**Technical Publications.** Seven competencies (38.89%) resulted in 100.00% agreement, and the lowest % level of agreement was 66.67%, which was for “use active voice” ( $M = 3.75$ ,  $SD = 0.60$ ; Table 8). This one competency, “use active voice,” had a % level of agreement that was less than 70%, and it was removed, resulting in 17 competencies being moved to Round 3 for *technical publications*. No competencies were added.

### Table 8

*Round 2: Agreement of Technical Publication Competencies (f = 18)*

| Competency                                  | <i>M</i> | <i>SD</i> | % Agree <sup>1</sup> |
|---|----------|-----------|----------------------|
| Follow organizational formatting guidelines | 4.67     | 0.47      | 100.00%              |
| Use technical language correctly            | 4.67     | 0.47      | 100.00%              |

|   |      |      |         |
|---|------|------|---------|
| Write concisely   | 4.58 | 0.49 | 100.00% |
| Utilize and define tables and graphs                              | 4.33 | 0.75 | 83.33%  |
| Identify and understand text's audience                           | 4.67 | 0.47 | 100.00% |
| Organize information logically and consistently                   | 4.58 | 0.49 | 100.00% |
| Avoid jargon  | 4.08 | 0.49 | 91.67%  |
| Respect copyright laws  | 4.75 | 0.60 | 91.67%  |
| Proofread for errors  | 4.92 | 0.28 | 100.00% |
| Use inclusive language  | 3.92 | 0.64 | 75.00%  |
| Be aware of how material will be presented (digital, paper, etc.) | 4.58 | 0.49 | 100.00% |
| Adhere to peer review requirements                                | 4.33 | 0.75 | 83.33%  |
| Be knowledgeable in technical subject matter                      | 4.50 | 0.65 | 91.67%  |
| Use descriptive writing   | 4.08 | 0.76 | 75.00%  |
| Pay attention to cohesion and flow                                | 4.17 | 0.55 | 91.67%  |
| Able to revise work   | 4.25 | 0.60 | 91.67%  |
| Cite sources  | 4.58 | 0.86 | 91.67%  |
| Use active voice*   | 3.75 | 0.60 | 66.67%  |

---

Note. 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

<sup>1</sup> % Agree = combined responses of 4 or 5

\*Removed since the percent agreement was below 70%

**Journal Articles.** Five competencies resulted in 100.00% agreement: “use correct spelling” ( $M = 4.67$ ,  $SD = 0.47$ ), “proofread for errors” ( $M = 4.58$ ,  $SD = 0.49$ ), “understand grammar rules” ( $M = 4.42$ ,  $SD = 0.49$ ), “communicate purpose” ( $M = 4.33$ ,  $SD = 0.47$ ), and “follow organizational formatting guidelines” ( $M = 4.25$ ,  $SD = 0.43$ ; Table 9). The competency “able to write abstractly” ( $M = 3.67$ ,  $SD = 0.75$ ) was removed as its percent level of agreement was below 70.00% (66.67%). As a result, 18 competencies moved on to Round 3 for *journal articles*. No competencies were added.

**Table 9***Round 2: Agreement of Journal Article Competencies (f = 19)*

| Competency                                    | <i>M</i> | <i>SD</i> | <i>% Agree<sup>1</sup></i> |
|---|----------|-----------|----------------------------|
| Respect copyright laws                        | 4.67     | 0.62      | 91.67%                     |
| Use correct spelling                          | 4.67     | 0.47      | 100.00%                    |
| Proofread for errors                          | 4.58     | 0.49      | 100.00%                    |
| Use sources ethically                         | 4.42     | 0.64      | 91.67%                     |
| Write clearly                                 | 4.42     | 0.64      | 91.67%                     |
| Be knowledgeable in subject matter            | 4.42     | 0.64      | 91.67%                     |
| Understand grammar rules                      | 4.42     | 0.49      | 100.00%                    |
| Communicate purpose                           | 4.33     | 0.47      | 100.00%                    |
| Use appropriate writing style (AP, APA, etc.) | 4.27     | 0.62      | 90.91%                     |
| Follow organizational formatting guidelines   | 4.25     | 0.43      | 100.00%                    |
| Use technical language correctly              | 4.25     | 0.72      | 83.33%                     |
| Write concisely                               | 4.17     | 0.80      | 91.67%                     |
| Communicate applicability of content          | 4.17     | 0.55      | 91.67%                     |
| Identify and understand audience              | 4.17     | 0.69      | 83.33%                     |
| Use appropriate tone                          | 4.17     | 0.55      | 91.67%                     |
| Address a need or issue                       | 4.08     | 0.49      | 91.67%                     |
| Synthesize research                           | 4.00     | 0.82      | 83.33%                     |
| Able to revise work                           | 4.00     | 0.58      | 83.33%                     |
| Able to write abstractly*                     | 3.67     | 0.75      | 66.67%                     |

Note. 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

<sup>1</sup> % Agree = combined responses of 4 or 5

\*Removed since the percent agreement was below 70%

**Internal Communications.** Ten (66.67%) of the competencies had 100.00% agreement (Table 10). The lowest percent level of agreement was for “adhere to Extension branding guidelines,” which had a 76.92% agreement. As a result, all 15 competencies for internal communications moved on to Round 3; no competencies were added or removed.

**Table 10***Round 2: Agreement of Internal Communications Competencies (f = 15)*

| Competency  | <i>M</i> | <i>SD</i> | % Agree <sup>1</sup> |
|---|----------|-----------|----------------------|
| Use appropriate tone  | 4.69     | 0.46      | 100.00%              |
| Use correct spelling  | 4.62     | 0.49      | 100.00%              |
| Utilize etiquette   | 4.54     | 0.50      | 100.00%              |
| Write clearly   | 4.54     | 0.50      | 100.00%              |
| Organize information logically and consistently   | 4.54     | 0.50      | 100.00%              |
| Consider timeliness of information shared   | 4.54     | 0.50      | 100.00%              |
| Determine appropriate language and format between communication methods (memo, text, email, etc.) | 4.46     | 0.50      | 100.00%              |
| Write concisely   | 4.46     | 0.50      | 100.00%              |
| Identify and understand audience  | 4.46     | 0.63      | 92.31%               |
| Determine if message is necessary   | 4.46     | 0.63      | 92.31%               |
| Communicate purpose   | 4.46     | 0.50      | 100.00%              |
| Provide context   | 4.46     | 0.50      | 100.00%              |
| Understand grammar rules  | 4.38     | 0.62      | 92.31%               |
| Adhere to Extension branding guidelines   | 4.23     | 0.97      | 76.92%               |
| Able to revise work   | 4.15     | 0.66      | 84.62%               |

Note. 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

<sup>1</sup> % Agree = combined responses of 4 or 5

### *Round 3*

In Round 3, participants were asked to determine if they agreed with the group average agreement level of a competency from Round 2 with a “Yes” or “No” choice. If the participant disagreed with the average, the survey would populate another Likert-scale question that had the participant re-evaluate the importance of the competency. When a competency had less than 90% agreement with the ranking on the Round 2 average (more than two experts disagree with the

group average), it would be re-evaluated with a new average as a result. Then, if the new average was below 4.0, the competency would be removed.

**Social Media.** Fifteen competencies were presented to participants for *social media* in Round 3. “Deliver on the level of the reader” was added as a result of Round 2 (Table 11). Since “Define technical terms” was below 4.0, it was removed. There were seven competencies (such as “identify and understand target audience,” “consider timeliness of information shared,” and “communicate with precision,” etc.) that had 100% agreement on the ranking in the previous Round 2 average. “Use call to actions” had the least amount of agreement (10 yes, 66.67%). Four competencies from *social media* had less than 90% agreement on their averages, and they were re-evaluated with new averages. The average for “Use call to actions” was below 4.0 after re-evaluation, so it was removed, resulting in 14 competencies within *social media*.

**Table 11**

*Round 3: Agreement with Averages in Social Media Competencies*

| Competency                                   | $f^1$ | % Agree | $M^2$ | $SD$ |
|--|-------|---------|-------|------|
| Identify and understand target audience      | 15    | 100.00% | -     | -    |
| Consider timeliness of information shared    | 15    | 100.00% | -     | -    |
| Communicate with precision                   | 15    | 100.00% | -     | -    |
| Use correct punctuation                      | 15    | 100.00% | -     | -    |
| Write concisely                              | 15    | 100.00% | -     | -    |
| Be knowledgeable in technical subject matter | 15    | 100.00% | -     | -    |
| Use correct spelling                         | 14    | 93.33%  | -     | -    |
| Identify relevance to audience               | 14    | 93.33%  | -     | -    |
| Able to summarize                            | 14    | 93.33%  | -     | -    |
| Apply marketing knowledge                    | 14    | 93.33%  | -     | -    |
| Adhere to accessibility requirements         | 13    | 86.67%  | 4.31  | 0.63 |
| Understand platform norms and culture        | 13    | 86.67%  | 4.00  | 0.37 |

|   |    |        |      |      |
|---|----|--------|------|------|
| Select words that are appropriate, modern, creative | 12 | 80.00% | 4.10 | 0.44 |
| Use call to actions*                                | 10 | 66.67% | 3.80 | 0.71 |
| Deliver on the level of the reader**                | -  | -      | -    | -    |

<sup>1</sup>  $f$  = yes

<sup>2</sup> Mean after re-evaluation

\*Removed since re-evaluated average is less than 4.0

\*\*Competency went through Likert-scale agreement question as newly added from Round 2

**Programs/Workshops Materials.** Seventeen competencies in *program/workshop* were presented to participants. The most commonly agreed-upon competencies were “identify and understand audience,” “use creativity to help visualize complex ideas,” “write concisely,” and “develop engaging content,” all having received 100% agreement on keeping the previous average from Round 2 (Table 12). The least agreed-upon competency average was “use correct spelling” (11 yes, 73.33%). Five competencies received below 90% agreement on their averages, and thus, their average was re-evaluated. No new averages resulted below 4.0, so no competencies were removed.

**Table 12**

*Round 3: Agreement with Averages in Program/Workshop Material Competencies*

| Competency                                     | $f^1$ | % Agree | $M^2$ | SD |
|--|-------|---------|-------|----|
| Identify and understand target audience        | 15    | 100.00% | -     | -  |
| Use creativity to help visualize complex ideas | 15    | 100.00% | -     | -  |
| Write concisely                                | 15    | 100.00% | -     | -  |
| Develop engaging content                       | 15    | 100.00% | -     | -  |
| Determine that information is accurate         | 14    | 93.33%  | -     | -  |
| Adhere to Extension branding guidelines        | 14    | 93.33%  | -     | -  |
| Deliver on level of the reader                 | 14    | 93.33%  | -     | -  |
| Write clearly                                  | 14    | 93.33%  | -     | -  |

|   |    |        |      |      |
|---|----|--------|------|------|
| Integrate and translate current research                    | 14 | 93.33% | -    | -    |
| Understand grammar rules                                    | 14 | 93.33% | -    | -    |
| Organize instructions                                       | 13 | 92.86% | -    | -    |
| Develop program objectives and match objectives to outcomes | 13 | 92.86% | -    | -    |
| Synthesize research   | 13 | 86.67% | 4.43 | 0.41 |
| Be knowledgeable in technical subject matter                | 13 | 86.67% | 4.44 | 0.18 |
| Remain objective  | 13 | 86.67% | 4.45 | 0.22 |
| Organize information logically                              | 13 | 86.67% | 4.38 | 0.24 |
| Use correct spelling  | 11 | 73.33% | 4.42 | 0.35 |

<sup>1</sup> *f* = yes, out of 15 participants

<sup>2</sup> Mean after re-evaluation

**Newspapers/Online Articles.** Round 2 resulted in 21 competencies for newspapers/online articles. Out of the 21 competency averages evaluated, 20 had higher than 90% agreement (Table 13). “Use call to actions” was re-evaluated as it was at 73.33% agreement, and the re-evaluation resulted in a new average that was lower than 4.0 ( $M = 3.79$ ,  $SD = 0.67$ ). Thus, “use call to actions” was removed from *newspaper/online article* genre, making the final number of competencies 20.

**Table 13**

*Round 3: Agreement with Averages in Newspaper/Online article Competencies*

| Competency                                       | <i>f</i> <sup>1</sup> | % Agree |   |   |
|--|-----------------------|---------|---|---|
| Use correct punctuation                          | 15                    | 100.00% | - | - |
| Use correct spelling                             | 15                    | 100.00% | - | - |
| Remain objective                                 | 15                    | 100.00% | - | - |
| Write clearly                                    | 15                    | 100.00% | - | - |
| Use appropriate paragraph and sentence structure | 15                    | 100.00% | - | - |
| Use plain language                               | 15                    | 100.00% | - | - |
| Consider timeliness of information               | 15                    | 100.00% | - | - |

|   |    |         |      |      |
|---|----|---------|------|------|
| shared  |    |         |      |      |
| Write concisely                               | 15 | 100.00% | -    | -    |
| Determine objective of material               | 15 | 100.00% | -    | -    |
| Use inclusive language                        | 15 | 100.00% | -    | -    |
| Check readability level of text               | 15 | 100.00% | -    | -    |
| Use appropriate writing style (AP, APA, etc.) | 15 | 100.00% | -    | -    |
| Select action words                           | 15 | 100.00% | -    | -    |
| Determine that information is accurate        | 14 | 93.33%  | -    | -    |
| Deliver on level of the reader                | 14 | 93.33%  | -    | -    |
| Understand grammar rules                      | 14 | 93.33%  | -    | -    |
| Identify and understand audience              | 14 | 93.33%  | -    | -    |
| Communicate applicability of content          | 14 | 93.33%  | -    | -    |
| Identify engaging topics                      | 14 | 93.33%  | -    | -    |
| Integrate and translate current research      | 14 | 93.33%  | -    | -    |
| Use call to actions*                          | 11 | 73.33%  | 3.79 | 0.67 |

<sup>1</sup>*f* = yes, out of 15 participants

<sup>2</sup>Mean after re-evaluation

\*Removed since agreed-upon average is less than 4.0

**Guides/Manuals.** Twenty competencies and their averages from Round 2 were evaluated by experts for *guides/manuals*. The majority (85.00%) of the averages were fully agreed-upon as a result of Round 3; 17 competency averages had a 93.33% or higher agreement (Table 14). Three competencies were re-evaluated; none of the new averages were lower than 4.0, so none were removed. This resulted in 20 final competencies for *guides/manuals*.

**Table 14**

*Round 3: Agreement with Averages in Guides/Manuals Competencies*

| Competency           | <i>f</i> <sup>1</sup> | % Agree | <i>M</i> <sup>2</sup> | <i>SD</i> |
|----------------------|-----------------------|---------|-----------------------|-----------|
| Write concisely      | 15                    | 100.00% | -                     | -         |
| Use correct spelling | 15                    | 100.00% | -                     | -         |

|  |    |         |      |      |
|--|----|---------|------|------|
| Use correct punctuation                          | 15 | 100.00% | -    | -    |
| Determine that information is accurate           | 15 | 100.00% | -    | -    |
| Identify and understand audience                 | 15 | 100.00% | -    | -    |
| Understand grammar rules                         | 15 | 100.00% | -    | -    |
| Define technical terms                           | 15 | 100.00% | -    | -    |
| Remain objective                                 | 15 | 100.00% | -    | -    |
| Use appropriate paragraph and sentence structure | 15 | 100.00% | -    | -    |
| Integrate visual examples                        | 15 | 100.00% | -    | -    |
| Create meaningful divisions within text          | 15 | 100.00% | -    | -    |
| Determine objective of material                  | 15 | 100.00% | -    | -    |
| Follow organizational formatting guidelines      | 15 | 100.00% | -    | -    |
| Write clearly                                    | 14 | 100.00% | -    | -    |
| Deliver on level of the reader                   | 14 | 93.33%  | -    | -    |
| Use plain language                               | 14 | 93.33%  | -    | -    |
| Write with a technical point of view             | 14 | 93.33%  | -    | -    |
| Be knowledgeable in technical subject matter     | 13 | 86.67%  | 4.59 | 0.19 |
| Organize information logically and consistently  | 13 | 86.67%  | 4.57 | 0.17 |
| Integrate and translate current research         | 13 | 86.67%  | 4.33 | 0.19 |

<sup>1</sup>*f* = yes, out of 15 participants

<sup>2</sup>Mean after re-evaluation

**Technical Publications.** Participants were presented seventeen competencies for *technical publications*; 76.47% ( $n = 13$ ) of the averages for the competencies were at or higher than 93.33% (Table 15). The least agreed-upon competency averages were “be knowledgeable in technical subject matter” and “use inclusive language,” which were both at an agreement level of 80.00%. Four competencies had below 90% agreement, and their averages were re-evaluated. “Use inclusive language” was removed from the list of competencies since its final average was 3.99 ( $SD = 0.46$ ). As a result, 16 competencies were identified for *technical publications*.

**Table 15***Round 3: Agreement with Averages in Technical Publications Competencies*

| Competency  | <i>f</i> <sup>1</sup> | % Agree | <i>M</i> <sup>2</sup> | <i>SD</i> |
|---|-----------------------|---------|-----------------------|-----------|
| Proofread for errors  | 15                    | 100.00% | -                     | -         |
| Use technical language correctly                                  | 15                    | 100.00% | -                     | -         |
| Identify and understand audience                                  | 15                    | 100.00% | -                     | -         |
| Organize information logically and consistently                   | 15                    | 100.00% | -                     | -         |
| Write concisely   | 15                    | 100.00% | -                     | -         |
| Be aware of how material will be presented (digital, paper, etc.) | 15                    | 100.00% | -                     | -         |
| Utilize and define tables and graphs                              | 15                    | 100.00% | -                     | -         |
| Pay attention to cohesion and flow                                | 15                    | 100.00% | -                     | -         |
| Use descriptive writing   | 15                    | 100.00% | -                     | -         |
| Adhere to peer review requirements                                | 14                    | 100.00% | -                     | -         |
| Respect copyright laws  | 14                    | 93.33%  | -                     | -         |
| Able to revise work   | 14                    | 93.33%  | -                     | -         |
| Avoid jargon  | 14                    | 93.33%  | -                     | -         |
| Follow organizational formatting guidelines                       | 13                    | 86.67%  | 4.67                  | 0.19      |
| Cite sources  | 13                    | 86.67%  | 4.53                  | 0.22      |
| Be knowledgeable in technical subject matter                      | 12                    | 80.00%  | 4.45                  | 0.42      |
| Use inclusive language*   | 12                    | 80.00%  | 3.99                  | 0.46      |

<sup>1</sup>*f* = yes, out of 15 participants<sup>2</sup>Mean after re-evaluation

\*Removed since agreed-upon average is less than 4.0

**Journal Articles.** Eighteen competency averages were evaluated for *journal articles*; 72.22% (*n* = 13) resulted in 90% or higher agreement (Table 16). Four competencies were re-

evaluated with new averages; all competencies remained as their new average was at or above a 4.0 mean.

**Table 16**

*Round 3: Agreement with Averages in Journal Articles Competencies*

| Competency                                    | <i>f</i> <sup>1</sup> | % Agree | <i>M</i> <sup>2</sup> | <i>SD</i> |
|---|-----------------------|---------|-----------------------|-----------|
| Use correct spelling                          | 15                    | 100.00% | -                     | -         |
| Write clearly                                 | 15                    | 100.00% | -                     | -         |
| Understand grammar rules                      | 15                    | 100.00% | -                     | -         |
| Follow organizational formatting guidelines   | 15                    | 100.00% | -                     | -         |
| Use appropriate writing style (AP, APA, etc.) | 15                    | 100.00% | -                     | -         |
| Write concisely                               | 15                    | 100.00% | -                     | -         |
| Identify and understand audience              | 15                    | 100.00% | -                     | -         |
| Use appropriate tone                          | 15                    | 100.00% | -                     | -         |
| Able to revise work                           | 14                    | 100.00% | -                     | -         |
| Respect copyright laws                        | 14                    | 93.33%  | -                     | -         |
| Proofread for errors                          | 14                    | 93.33%  | -                     | -         |
| Use sources ethically                         | 14                    | 93.33%  | -                     | -         |
| Communicate applicability of content          | 14                    | 93.33%  | -                     | -         |
| Address a need or issue                       | 14                    | 93.33%  | -                     | -         |
| Be knowledgeable in subject matter            | 13                    | 86.67%  | 4.48                  | 0.20      |
| Use technical language correctly              | 13                    | 86.67%  | 4.39                  | 0.24      |
| Communicate purpose                           | 13                    | 86.67%  | 4.39                  | 0.24      |
| Synthesize research                           | 13                    | 86.67%  | 4.00                  | 0.37      |

<sup>1</sup>*f* = yes, out of 15 participants

<sup>2</sup>Mean after re-evaluation

**Internal Communications.** Fifteen competencies and their averages were evaluated; all except one ( $n = 14$ ) received 90% agreement or higher (Table 17). Only one competency's average was re-evaluated, and its average remained higher than 4.0 ( $M = 4.57$ ,  $SD = 0.17$ ).

**Table 17**

*Round 3: Agreement with Averages in Internal Communication Competencies*

| Competency  | $f^1$ | % Agree | $M^2$ | SD   |
|---|-------|---------|-------|------|
| Use appropriate tone  | 15    | 100.00% | -     | -    |
| Write clearly   | 15    | 100.00% | -     | -    |
| Organize information logically and consistently   | 15    | 100.00% | -     | -    |
| Identify and understand audience  | 15    | 100.00% | -     | -    |
| Provide context   | 15    | 100.00% | -     | -    |
| Understand grammar rules  | 15    | 100.00% | -     | -    |
| Able to revise work   | 15    | 100.00% | -     | -    |
| Use correct spelling  | 14    | 93.33%  | -     | -    |
| Determine appropriate language and format between communication methods (memo, text, email, etc.) | 14    | 93.33%  | -     | -    |
| Utilize etiquette   | 14    | 93.33%  | -     | -    |
| Write concisely   | 14    | 93.33%  | -     | -    |
| Determine if message is necessary   | 14    | 93.33%  | -     | -    |
| Consider timeliness of information shared   | 14    | 93.33%  | -     | -    |
| Adhere to Extension branding guidelines   | 14    | 93.33%  | -     | -    |
| Communicate purpose   | 13    | 86.67%  | 4.57  | 0.17 |

<sup>1</sup> $f$  = yes, out of 15 participants

<sup>2</sup>Mean after re-evaluation

As a result of Round 3, four competencies were across genres. The final number of competencies for each genre are as follows: 14 in *social media*, 17 in *program/workshop*, 20 in

*newspaper/online articles*, 20 in *guides/manuals*, 16 in *technical publications*, 18 in *journal articles*, and 15 in *internal communications* (Table 18). Individually, the competency item list went from 66 (Round 1) to 63 (Round 3).

**Table 18***Round 3: Final Results of Expected Writing Competencies from Delphi Experts*

| Social media<br>( <i>f</i> = 14)                     | Program/Workshop<br>( <i>f</i> = 17)          | Newspaper articles<br>( <i>f</i> = 20)                     | Guides/Manuals<br>( <i>f</i> = 20)                                   | Technical pub.<br>( <i>f</i> = 16)                                 | Journal articles<br>( <i>f</i> = 18)         | Internal comm.<br>( <i>f</i> = 15)   |
|--|---|--|--|--|--|--|
| Identify and understand target audience.             | Identify and understand audience.             | Deliver on level of the reader.<br><br>Use plain language. | Write concisely.<br><br>Follow organizational formatting guidelines. | Follow organizational formatting guidelines.                       | Follow organizational formatting guidelines. | Determine appropriate language and format between communication methods (memo, text, email, etc.). |
| Identify relevance to audience.                      | Develop engaging content.                     | Use appropriate writing style (AP, APA, etc.).             | Deliver on level of the reader.                                      | Use technical language correctly.                                  | Use technical language correctly.            | Utilize etiquette.   |
| Select words that are appropriate, modern, creative. | Write clearly.<br><br>Write concisely.        | Select action words.                                       | Integrate and translate current research.                            | Write concisely.   | Write concisely.                             | Write concisely.   |
| Adhere to accessibility requirements.                | Be knowledgeable in technical subject matter. | Identify engaging topics.                                  | Organize and translate current research.                             | Utilize and define tables and graphs.                              | Use sources ethically.                       | Identify and understand audience.  |
| Communicate with precision.                          | Determine that information is accurate.       | Integrate and translate current research.                  | Organize information logically and consistently.                     | Identify and understand text's audience.                           | Address a need or issue.                     | Write clearly.   |
| Write concisely.                                     | Deliver on level of the reader.               | Write clearly.   | Use plain language.  | Organize information logically and consistently.                   | Write clearly.                               | Write clearly.   |
| Consider timeliness of information shared.           | Organize instructions.                        | Write concisely.   | Create meaningful divisions within text.                             | Communicate purpose.   | Communicate applicability of content.        | Determine if message is necessary.   |
| Able to summarize.                                   | Understand grammar rules.                     | Identify and understand audience.                          | Write with a technical point of view.                                | Avoid jargon.  | Respect copyright laws.                      | Organize information logically and consistently.   |
| Use correct spelling.                                | Understand grammar rules.                     | Remain objective.  | Write with a technical point of view.                                | Respect copyright laws.  | Respect copyright laws.                      | Communicate purpose.   |
| Use correct punctuation.                             | Use correct spelling.                         | Determine that information is accurate.                    | Write clearly.   | Proofread for errors.  | Be knowledgeable in subject matter.          | Communicate purpose.   |
| Apply marketing knowledge.                           | Adhere to Extension branding guidelines.      | Determine that information is accurate.                    | Determine that information is accurate.                              | Be aware of how material will be presented (digital, paper, etc.). | Synthesize research.                         | Adhere to Extension branding guidelines.   |
|  | Integrate and translate current research.     | Use inclusive language.                                    |  |  | Identify and understand audience.            | Provide context.   |

**Table 18 continued***Round 3: Final Results of Expected Writing Competencies from Delphi Experts*

| Social media<br>( <i>f</i> = 14)              | Program/Workshop<br>( <i>f</i> = 17)                         | Newspaper articles<br>( <i>f</i> = 20)            | Guides/Manuals<br>( <i>f</i> = 19)                | Technical pub.<br>( <i>f</i> = 16)            | Journal articles<br>( <i>f</i> = 18)           | Internal comm.<br>( <i>f</i> = 15)         |
|---|--|---|---|---|--|--|
| Understand platform norms and culture.        | Remain objective.  | Communicate applicability of content.             | Understand grammar rules.                         | Adhere to peer review requirements.           | Use appropriate writing style (AP, APA, etc.). | Use appropriate tone.                      |
| Be knowledgeable in technical subject matter. | Use creativity to help visualize complex ideas.              | Consider timeliness of information shared.        | Be knowledgeable in technical subject matter.     | Be knowledgeable in technical subject matter. | Able to revise work.                           | Able to revise work.                       |
| Deliver on level of the reader.               | Develop program objectives and match objectives to outcomes. | Check readability level of text.                  | Define technical terms.                           | Use descriptive writing.                      | Proofread for errors.                          | Consider timeliness of information shared. |
|   | Synthesize research.   | Use appropriate paragraph and sentence structure. | Identify and understand audience.                 | Pay attention to cohesion and flow.           | Use appropriate tone.                          | Use correct spelling.                      |
|   | Organize information logically.                              | Determine objective of material.                  | Remain objective.                                 | Able to revise work.                          | Understand grammar rules.                      | Understand grammar rules.                  |
|   |  | Understand grammar rules.                         | Use correct spelling.                             | Use correct spelling.                         | Use correct spelling.                          |  |
|   |  | Use correct punctuation.                          | Integrate visual examples.                        | Cite sources.                                 |  |  |
|   |  |   | Use appropriate paragraph and sentence structure. |   |  |  |
|   |  |   | Determine objective of material.                  |   |  |  |
|   |  |   | Use correct punctuation.                          |   |  |  |

**Objective Two: Determine the genres of writing in which Extension agents in Alabama participate.**

*Demographics*

Agents ( $n = 47$ ) were asked to share what program they primarily are assigned to, what university they are affiliated with, and their highest level of education (Table 19). Alabama 4-H was the highest reported program represented at 25.00% ( $n = 12$ ). The majority of respondents (89.36%,  $n = 42$ ) are affiliated with Auburn University. As for the highest completed level of education, most (70.21%,  $n = 33$ ) had at least obtained a Masters. The highest level reported was a doctorate (4.26%,  $n = 2$ ).

**Table 19**

*Characteristics of Survey Participants ( $n = 47$ )*

| Variable  | <i>n</i> | %      |
|---|----------|--------|
| <b>Program*</b>                                       |          |        |
| Alabama 4-H   | 12       | 25.00% |
| Human Nutrition, Diet & Health                        | 9        | 18.75% |
| Home Grounds, Gardens & Home Pests                    | 6        | 12.50% |
| SNAP-Ed   | 6        | 12.50% |
| Forestry, Wildlife & Natural Resources                | 5        | 10.42% |
| Commercial Horticulture                               | 3        | 6.25%  |
| Agronomic Crops                                       | 3        | 6.25%  |
| Food & Safety Quality                                 | 2        | 4.17%  |
| Animal Sciences & Forages                             | 1        | 2.08%  |
| Financial Resource Management & Workforce Development | 1        | 2.08%  |
| Farm & Agribusiness Management                        | 0        | 0.00%  |
| Aquatic Resources                                     | 0        | 0.00%  |
| Family & Child Development                            | 0        | 0.00%  |

**University affiliation**

|                   |    |        |
|-------------------|----|--------|
| Alabama A&M       | 5  | 10.64% |
| Auburn University | 42 | 89.36% |

**Highest level of completed education**

|                        |    |        |
|------------------------|----|--------|
| Associates             | 0  | 0.00%  |
| Bachelor's             | 12 | 25.53% |
| Master's               | 33 | 70.21% |
| Educational Specialist | 0  | 0.00%  |
| Doctorate              | 2  | 4.26%  |

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\*Two respondents indicated more than one category ( $n = 49$ )

*Genres that Alabama Extension Agents Engage in*

In the survey for the Extension agents in Alabama, participants were asked what genres they engage in. Their answers were somewhat to what the Delphi experts (their directors and administrators) shared; *internal communications* (100.00%) and *social media* (80.85%) were also the top genres that participating agents indicated they engage in (Table 20). These Extension agents reported that they do not engage in *technical publications* (23.40%), *journal articles* (12.77%), and *guides/manuals* (8.51%).

**Table 20**

*Genres that Alabama Extension Agents Engage in (N = 47)*

| Genre                   | <i>n</i> | %       |
|-------------------------|----------|---------|
| Internal communications | 47       | 100.00% |
| Social media            | 38       | 80.85%  |
| Program materials       | 35       | 74.47%  |
| Newspapers              | 33       | 70.21%  |
| Technical publications  | 11       | 23.40%  |
| Journal articles        | 6        | 12.77%  |
| Guides/Manuals          | 4        | 8.51%   |

Agents were asked if there were any other types of writing that they engage in that were not contained in the survey. While there was no consensus, other genres that were submitted were: youth development curriculum, radio blurbs, county newsletters, and correspondences with external clients and agencies.

**Objective Three: Describe how Alabama Extension agents’ rank their perceived effectiveness of the writing competencies determined by Extension directors.**

Extension agents were asked whether they engaged in a type of genre or not; if they do, then the survey populated the competencies within that genre for them to consider. For each competency, they were prompted to respond with how effective they perceive themselves to be in that competency with a rating of Not Effective at All (1), Slightly Effective (2), Moderately Effective (3), Very Effective (4), and Extremely Effective (5).

*Perceived Effectiveness in Social Media*

Thirty-eight (80.85%,  $N = 47$ ) Extension agents indicated that they engage in writing for social media. In *social media*, “use correct spelling” ( $M = 4.34, SD = 0.62$ ) and “use correct punctuation” ( $M = 4.32, SD = 0.65$ ) were the top two competencies that agents considered themselves to be most effective in (Table 21). “Apply marketing knowledge” ( $M = 3.18, SD = 1.17$ ) was the competency that agents felt the least effective in for this genre.

**Table 21**

*Perceived Effectiveness in Social Media*

| Competency                                   | <i>M</i> | <i>SD</i> |
|--|----------|-----------|
| Use correct spelling                         | 4.34     | 0.62      |
| Use correct punctuation                      | 4.32     | 0.65      |
| Be knowledgeable in technical subject matter | 4.11     | 0.79      |
| Identify relevance to audience               | 3.95     | 0.89      |

|   |      |      |
|---|------|------|
| Able to summarize                                   | 3.89 | 0.82 |
| Communicate with precision                          | 3.84 | 0.74 |
| Write concisely                                     | 3.84 | 0.87 |
| Consider timeliness of information shared           | 3.79 | 0.92 |
| Select words that are appropriate, modern, creative | 3.76 | 0.98 |
| Deliver on the level of the reader                  | 3.66 | 0.98 |
| Identify and understand target audience             | 3.55 | 0.82 |
| Adhere to accessibility requirements                | 3.39 | 0.96 |
| Understand platform norms and culture               | 3.21 | 1.26 |
| Apply marketing knowledge                           | 3.18 | 1.17 |

Note.  $n = 38$  for each competency

#### *Perceived Effectiveness in Programs/Workshop Materials*

There were 35 (74.47%,  $N = 47$ ) Extension agents who responded for the *programs/workshop materials* genre. Similar to *social media*, “use correct spelling” ( $M = 4.20$ ,  $SD = 0.79$ ) was the competency that agents in which considered themselves the most effective, with “understand grammar rules” ( $M = 4.09$ ,  $SD = 0.84$ ) following (Table 22). The competency that averaged as the least effective was “synthesize research” ( $M = 3.21$ ,  $SD = 1.23$ ).

**Table 22**

#### *Perceived Effectiveness in Programs/Workshop Materials*

| Competency                             | $M$  | $SD$ |
|--|------|------|
| Use correct spelling                   | 4.20 | 0.79 |
| Understand grammar rules               | 4.09 | 0.84 |
| Determine that information is accurate | 4.06 | 0.71 |
| Organize information logically         | 4.00 | 0.72 |
| Identify and understand audience       | 3.94 | 0.75 |
| Write clearly                          | 3.91 | 0.77 |
| Organize instructions                  | 3.91 | 0.69 |

|   |      |      |
|---|------|------|
| Be knowledgeable in technical subject matter                | 3.86 | 0.96 |
| Deliver on level of the reader                              | 3.80 | 0.75 |
| Write concisely   | 3.80 | 0.79 |
| Develop engaging content                                    | 3.74 | 0.84 |
| Remain objective  | 3.71 | 0.74 |
| Adhere to Extension branding guidelines                     | 3.60 | 0.93 |
| Develop program objectives and match objectives to outcomes | 3.54 | 0.87 |
| Use creativity to help visualize complex ideas              | 3.49 | 0.97 |
| Integrate and translate current research                    | 3.26 | 1.18 |
| Synthesize research*  | 3.21 | 1.23 |

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\*One respondent skipped this item ( $n = 34$ )

*Perceived Effectiveness in Newspapers/Online Articles*

Thirty-three (70.21%,  $n = 47$ ) Extension agents indicated that they write in the *newspapers/online articles* genre. Agents felt that they were most effective in the competency “determine that information is accurate” ( $M = 4.39$ ,  $SD = 0.55$ ). They felt the least effective in “use appropriate writing style (AP, APA, etc.)” ( $M = 3.39$ ,  $SD = 1.07$ ; Table 23).

**Table 23**

*Perceived Effectiveness in Newspapers/Online Articles*

| Competency                                       | <i>M</i> | <i>SD</i> |
|--|----------|-----------|
| Determine that information is accurate           | 4.39     | 0.55      |
| Use correct spelling                             | 4.21     | 0.69      |
| Use correct punctuation                          | 4.18     | 0.72      |
| Use appropriate paragraph and sentence structure | 4.15     | 0.78      |
| Understand grammar rules                         | 4.15     | 0.74      |
| Write clearly                                    | 4.09     | 0.83      |
| Use plain language                               | 4.09     | 0.67      |
| Identify engaging topics                         | 4.03     | 0.80      |

|   |      |      |
|---|------|------|
| Remain objective                              | 4.00 | 0.82 |
| Identify and understand audience              | 4.00 | 0.82 |
| Consider timeliness of information shared     | 4.00 | 0.78 |
| Communicate applicability of content          | 3.97 | 0.83 |
| Determine objective of material               | 3.97 | 0.76 |
| Write concisely                               | 3.94 | 0.85 |
| Deliver on level of the reader                | 3.91 | 0.75 |
| Integrate and translate current research      | 3.79 | 0.81 |
| Use inclusive language                        | 3.76 | 1.05 |
| Select action words                           | 3.76 | 0.89 |
| Check readability level of text               | 3.73 | 1.02 |
| Use appropriate writing style (AP, APA, etc.) | 3.39 | 1.07 |

---

Note.  $n = 33$  for each competency

*Perceived Effectiveness in Guides/Manuals*

In *guides/manuals*, only four (8.51%,  $n = 47$ ) agents indicated that they engage in writing for this genre. “Identify and understand audience” ( $M = 4.75$ ,  $SD = 0.43$ ) in addition to “be knowledgeable in technical subject matter” ( $M = 4.75$ ,  $SD = 0.43$ ) were the competencies that agents considered themselves to be the most effective in (Table 24). There were 11 competencies that all shared the same average ( $M = 4.50$ ,  $SD = 0.50$ ). Participants felt they were least effective in the competency “use plain language” ( $M = 3.50$ ,  $SD = 0.87$ ).

**Table 24**

*Perceived Effectiveness in Guides/Manuals*

---

| Competency                                   | $M$  | $SD$ |
|--|------|------|
| Identify and understand audience             | 4.75 | 0.43 |
| Be knowledgeable in technical subject matter | 4.75 | 0.43 |
| Use correct spelling                         | 4.50 | 0.50 |
| Use correct punctuation                      | 4.50 | 0.50 |

|  |      |      |
|--|------|------|
| Write clearly                                    | 4.50 | 0.50 |
| Determine that information is accurate           | 4.50 | 0.50 |
| Understand grammar rules                         | 4.50 | 0.50 |
| Organize information logically and consistently  | 4.50 | 0.50 |
| Define technical terms                           | 4.50 | 0.50 |
| Use appropriate paragraph and sentence structure | 4.50 | 0.50 |
| Integrate and translate current research         | 4.50 | 0.50 |
| Determine objective of material                  | 4.50 | 0.50 |
| Follow organizational formatting guidelines      | 4.50 | 0.50 |
| Remain objective                                 | 4.25 | 0.43 |
| Write with a technical point of view             | 4.25 | 0.43 |
| Write concisely                                  | 4.00 | 0.71 |
| Deliver on level of the reader                   | 4.00 | 0.71 |
| Create meaningful divisions within text          | 4.00 | 0.00 |
| Integrate visual examples*                       | 3.67 | 0.47 |
| Use plain language                               | 3.50 | 0.87 |

---

\*One respondent skipped this item ( $n = 3$ )

### *Perceived Effectiveness in Technical Publications*

Only 10 (21.28%,  $N = 47$ ) Extension agents responded that they engage in writing technical publications. “Be knowledgeable in technical subject matter” ( $M = 4.40$ ,  $SD = 0.66$ ) was the competency that agents felt the most effective in, with “avoid jargon” as the competency that was reported as their least effective ( $M = 3.60$ ,  $SD = 0.92$ ; Table 25).

**Table 25**

### *Perceived Effectiveness in Technical Publications*

| Competency                                      | <i>M</i> | <i>SD</i> |
|---|----------|-----------|
| Be knowledgeable in technical subject matter    | 4.40     | 0.66      |
| Organize information logically and consistently | 4.20     | 0.60      |
| Cite sources                                    | 4.20     | 0.60      |

|   |      |      |
|---|------|------|
| Adhere to peer review requirements                                | 4.20 | 0.75 |
| Respect copyright laws  | 4.10 | 0.83 |
| Use technical language correctly                                  | 4.10 | 0.70 |
| Identify and understand audience                                  | 4.10 | 0.94 |
| Proofread for errors  | 4.00 | 0.77 |
| Utilize and define tables and graphs                              | 4.00 | 0.89 |
| Able to revise work   | 4.00 | 0.89 |
| Be aware of how material will be presented (digital, paper, etc.) | 3.90 | 0.83 |
| Pay attention to cohesion and flow                                | 3.90 | 0.54 |
| Follow organizational formatting guidelines                       | 3.80 | 0.75 |
| Write concisely   | 3.80 | 0.60 |
| Use descriptive writing   | 3.80 | 0.75 |
| Avoid jargon  | 3.60 | 0.92 |

---

Note.  $n = 10$  for each competency

#### *Perceived Effectiveness in Journal Articles*

Six (12.77%,  $n = 47$ ) of the Extension agents indicated that they write journal articles. The competencies they felt the most effective in were “respect copyright laws,” “use correct spelling,” and “use sources ethically” ( $M = 4.67$ ,  $SD = 0.47$ ; Table 26). The two competencies (“write clearly” and “write concisely”) that agents felt they were least effective in had an average of 4.0 ( $SD = 0.82$ ), which is still in the range of Very Effective to Extremely Effective (Lindner & Lindner, 2024).

**Table 26**

#### *Perceived Effectiveness in Journal Articles*

| Competency             | $M$  | $SD$ |
|------------------------|------|------|
| Respect copyright laws | 4.67 | 0.47 |
| Use correct spelling   | 4.67 | 0.47 |
| Use sources ethically  | 4.67 | 0.47 |

|   |      |      |
|---|------|------|
| Be knowledgeable in subject matter            | 4.50 | 0.50 |
| Understand grammar rules                      | 4.50 | 0.50 |
| Follow organizational formatting guidelines   | 4.50 | 0.50 |
| Use technical language correctly              | 4.50 | 0.50 |
| Identify and understand audience              | 4.50 | 0.50 |
| Proofread for errors                          | 4.33 | 0.47 |
| Use appropriate writing style (AP, APA, etc.) | 4.33 | 0.47 |
| Communicate purpose                           | 4.33 | 0.47 |
| Communicate applicability of content          | 4.17 | 0.69 |
| Write clearly                                 | 4.00 | 0.82 |
| Write concisely                               | 4.00 | 0.82 |

---

Note.  $n = 6$  for each competency

*Perceived Effectiveness in Internal Communications*

One hundred percent ( $n = 47$ ) of Extension agents indicated that they engage in internal communications. In this genre, “use correct spelling” ( $M = 4.27$ ,  $SD = 0.71$ ) was the competency that agents felt most effective in, while “adhere to Extension branding guidelines” ( $M = 3.82$ ,  $SD = 0.90$ ) was the one they felt least effective in (Table 27).

**Table 27**

*Perceived Effectiveness in Internal Communications*

| Competency                        | <i>M</i> | <i>SD</i> |
|-----------------------------------|----------|-----------|
| Use correct spelling              | 4.27     | 0.71      |
| Understand grammar rules          | 4.18     | 0.80      |
| Utilize etiquette                 | 4.16     | 0.79      |
| Identify and understand audience  | 4.16     | 0.76      |
| Determine if message is necessary | 4.16     | 0.79      |
| Able to revise work               | 4.13     | 0.81      |
| Write clearly                     | 4.11     | 0.80      |
| Communicate purpose               | 4.11     | 0.74      |

|   |      |      |
|---|------|------|
| Provide context   | 4.07 | 0.80 |
| Consider timeliness of information shared   | 4.07 | 0.71 |
| Organize information logically and consistently   | 4.04 | 0.76 |
| Use appropriate tone  | 4.00 | 0.82 |
| Determine appropriate language and format between communication methods (memo, text, email, etc.) | 4.00 | 0.87 |
| Write concisely   | 3.91 | 0.90 |
| Adhere to Extension branding guidelines   | 3.82 | 0.90 |

**Objective Four: Evaluate perceived effectiveness to determine potential areas of need in agent training regarding written communication in Alabama.**

Across all genres, the overall perceived effectiveness for the identified competencies was 3.92, which is between Moderately Effective and Very Effective but closer to Very Effective (Lindner & Lindner, 2024). These Extension agents, even though they may not have felt more effective in all competencies, seem to feel they are very effective in their ability to write. In fact, when looking at each individual agent’s average over all reported competencies, three averaged Moderately Effective (2.5-3.5), 24 averaged Very Effective (3.5-4.5), and 20 averaged Extremely Effective (4.5-5.0; Lindner & Lindner, 2024).

As for the average effectiveness within genres, the highest average of effectiveness was with *journal articles* ( $M = 4.43, SD = 0.27$ ; Table 28). Six (12.77%) agents feel very effective in writing for that specific purpose. On the other hand, the genre that had the lowest average for effectiveness was *social media* ( $M = 3.71, SD = 0.41$ ), for which the majority of agents (85.00%) reported their engagement. The lowest average was still between Moderately Effective and Very Effective, which indicates that agents still feel fairly effective in *social media*.

**Table 28***Average Effectiveness within Genres of Alabama Extension Agents (n = 47)*

| Genre                      | <i>M</i> | <i>SD</i> | <i>n</i> |
|----------------------------|----------|-----------|----------|
| Journal articles           | 4.43     | 0.27      | 6        |
| Guides/Manuals             | 4.37     | 0.35      | 4        |
| Technical publications     | 4.08     | 0.34      | 11       |
| Newspapers/Online articles | 3.98     | 0.21      | 33       |
| Internal communications    | 3.94     | 0.55      | 47       |
| Program/Workshop           | 3.74     | 0.29      | 35       |
| Social media               | 3.71     | 0.41      | 38       |

**Summary**

This study used two methods to determine the expected writing competencies and effectiveness in writing within an Extension context. To determine expectations at a supervisory level within Extension, a Delphi panel was formed, which consisted of 21 members. As a result of the Delphi, participants were able to come to a consensus on what writing competencies they expect Extension agents to have within certain genres. These competencies were used in the second part of the study, where Extension agents in Alabama were asked whether they felt effective in the competencies or not. Overall, agents reported that they felt at least moderately effective in their competencies.

## CHAPTER V

### CONCLUSIONS & DISCUSSION

This study sought to identify writing competencies within Extension and determine the effectiveness of agents regarding those competencies. Based on the agents' perceived effectiveness, this study also sought to identify any training areas agents' need in relation to their writing.

#### **Conclusion**

*Objective One: Determine the writing competencies Extension directors consider necessary for Extension agents.*

In order to have a set of competencies to ask Extension agents about, a Delphi expert panel was formed that composed of 21 state directors and other supervisors in Extension that regularly see and evaluate writing within Extension. In the first round, participants were asked to determine if the provided genres (*social media, program/workshop materials, newspapers/online articles, guides/manuals, technical publications, journal articles, and internal communications*) were applicable to their agents and if they had any other genres or types of writing to suggest. These genres received 50% or higher in agreement, and they were kept. No other genres were suggested. Delphi experts were asked to continue providing competencies for genres even if the genre was not applicable to their state's agents in particular.

After three rounds, a final consensus was formed on the competencies that the experts expect within seven writing genres. While there were 63 individual competencies identified, ranging from using proper spelling to branding guidelines, the experts agreed upon 120 items shared across the seven genres. Competencies that focused on grammar or grammar-related topics were typically consistent and expected across all genres. This finding is supported by

previous studies in agricultural communication, where employers indicated that they preferred graduates who were competent in their grammatical competencies (Morgan, 2010; Wyss & Cletzer, 2023).

**Social Media.** Fourteen competencies were established in this genre. The most highly agreed-upon (100.00%) competencies were “identify and understand target audience,” “consider timeliness of information shared,” “communicate with precision,” “use correct punctuation,” and “write concisely.” Experts considered multiple elements to be important when writing for social media, such as audience awareness, timeliness, and presentation of content. For example, “deliver on level of the reader” was suggested to be added in Round 2 upon further consideration, which also takes into account audience needs during writing for social media.

On the other hand, during the last round, competencies “define technical terms” and “use call to actions” were removed from the entire list due to their low agreement rate. With the short and quick nature of social media content, defining technical terms may not be applicable or appropriate for the genre, which is why it might have gotten removed. As for “use call to actions,” it was also removed in *newspapers/online articles*, which ultimately removed it from the competency list as a whole. It is possible that this competency, while identified by Delphi members, just did not fully make sense within the list as the rounds went on.

**Programs/Workshop Materials.** Seventeen competencies were established in this genre. “Identify and understand target audience,” “use creativity to help visualize complex ideas,” “write concisely,” and “develop engaging content” were the most agreed-upon competencies at 100.00% agreement. In this case, audience was still an identified priority, as with *social media*, and other elements like creativity, concision, and engagement were identified for this genre as well. Since Extension programs and workshops are meant to interact and serve different

audiences, the top competencies here resonate with that purpose (Fox et al., 2017). For example, “use creativity to help visualize complex ideas” and “develop engaging content” are both competencies that are only included within this genre and do not appear in any other genre’s competency list, showing that the Delphi members were intentional in their consideration of what competencies go with which context.

**Newspapers/Online Articles.** Twenty competencies were established in this genre. 65% ( $f=13$ ) of the finalized competencies had 100.00% agreement and the other remaining seven had 93.33%, indicating that the Delphi participants were very much aligned in their feelings towards these competencies. Competencies in this genre mostly focused on mechanical things (like spelling, punctuation, and grammar), language use or word choice, accuracy, concision, objectivity, and formatting. As mentioned earlier, “call to actions” was removed from this genre’s list in Round 3, as its re-evaluated average was less than 4.0; it was also the only one on the list that had below 90% agreement.

**Guides/Manuals.** There were 20 competencies that were established in this genre. Similar to *newspapers/online articles*, there were several ( $f=10$ ) competencies that received 100.00% agreement. Competencies such as “determine that information is accurate,” “write clearly,” “identify and understand audience,” “define technical terms,” and “use appropriate paragraph and sentence structure” seem to be relevant to this genre, which is written in a technical writing style. Accuracy, clarity, visual paragraph elements, and objectivity are all elements of a technical piece that instructs or educates, such as a guide (Lindsay, 2011). The competencies that received the lowest agreement were still fairly high in agreement (86.67%), but they had more to do with being knowledgeable, organizing information, and adding in

current research. While these competencies were also considered to be in this genre, there was just a little less consensus on them.

**Technical Publications.** Sixteen competencies were established in this genre. 76.47% ( $f = 13$ ) of the competencies had an agreement higher than 90%. Among the most agreed-upon competencies were “proofread for errors,” “use technical language correctly,” “utilize and define tables and graphs,” and “pay attention to cohesion and flow.” Since some technical publications include research and can be used towards promotions for agents, there seemed to be more of an emphasis on double-checking and being vigilant with potential content or writing errors (Duke, 2020). “Be aware of how material will be presented (digital, paper, etc.)” in addition to “adhere to peer review requirements” were among the competencies that only appeared in this genre’s list, which further indicates that participants were considering the nuances of writing in genre rather than writing as a whole.

In Round 2, “use active voice” was removed from the list due to low % level of agreement; this lack of consensus is consistent with current academic conversations on whether to use passive or active voice in scientific writing (Banks, 2017). In Round 3, “use inclusive language” was removed after re-evaluation, and its average was below 4.0 ( $M = 3.99$ ,  $SD = 0.46$ ). The consensus on this competency was very close to being accepted in this genre’s list, but it still remained outside of the research team’s set parameters. In this way, this competency could still be considered relevant or important, just not in the scope of this study in particular.

**Journal Articles.** In this genre, 18 competencies were agreed upon. Nine (50.00%) of the competencies had 100.00% agreement; those competencies focused on spelling, clarity, grammar adherence, formatting guidelines, appropriate writing style, concision, and tone. Other competencies that were specific to this genre were “use sources ethically” and “address a need or

issue,” both of which make sense within this genre. Journal articles typically require the use of sources, particularly in an ethical way with the use of in-text citations and references, and they are also usually organized by research objectives that address a potential need. This genre shared the competency “synthesize research” with program/workshop materials; while these genres have potentially different audiences and methods of conveying research, they both use synthesis as a means to present research.

**Internal Communications.** This genre resulted in 15 competencies. Almost half (46.67%,  $n = 7$ ) of the competencies received 100.00% agreement on them. The most agreed-upon competencies included “use appropriate tone,” “write clearly,” “provide context,” “understand grammar rules,” and “able to revise work”; most of these competencies either focus on clarity or things that will help in clarity of content. In email etiquette, professionalism has to be communicated through writing, which many competencies can contribute or culminate into. There were a few competencies particular to this genre, such as “utilize etiquette,” “determine if message is necessary,” “determine appropriate language and format between communication methods (memo, text, email, etc.)” and “provide context.” In fact, internal communications had the most unique competencies, speaking to its distinctiveness.

**Ties to Theoretical Framework.** In creating the competencies, these experts in Extension demonstrated that they were able to consider types of writing within each genre’s own sociocultural context (Flowers, 1994). While they may not have knowingly engaged in social cognitive thinking (Bandura, 1986), they were able to consider how writers may have personal, behavioral, and environmental factors within each genre that could affect writers, their writing, and even their audience. For example, *program/workshop materials* contained “use creativity to help visualize complex ideas” and “develop engaging content” within their competency list;

these competencies did not appear elsewhere. These competencies also indicate that writers needed to take into account the presentation of their written content in order to best serve that particular genre's audience, which would be through programs or workshops (Tylczak et al., 2015). The creation of these competencies and the panels' agreement on them helps demonstrate that Delphi panel experts considered the context of the genre and how the writer should take action in their writing.

The final competencies collected from this part of the study also indicate that people in supervisory power in Extension consider their agents to be active in their writing. Not active as in producing a lot of content, but active as in an active, cognitive agent who is able to perceive multiple contextual, social elements and respond to them in their writing. This is supported by Bandura's (1986) social cognitive theory as well as Flower's (1994) social cognitive theory of writing; both posit that humans are not only able to recognize the social and cultural aspects surrounding a situation but also able to actively engage and make choices appropriate to that context. For instance, the competencies "define technical terms" and "proofread for errors" are things that are more mechanical in nature; they can be easier to perform as they are easier to measure self-assessment. But Delphi panel experts also included competencies that share an expectation for their agents to be socially cognitive as well, such as "use appropriate tone" (*internal communications*) and "consider timeliness of information shared" (*social media, newspaper/online articles, and internal communications*). These competencies imply that Extension directors recognize and want their agents to recognize that some competencies are only needed in their corresponding areas.

Comparatively, however, "identify and understand audience" was deemed appropriate in all seven genres, showing that the Delphi experts recognized that all of these types of writing

have to reach an audience, and in order to do so, the audience must first be identified and also understood. As this was not the only competency that was submitted and agreed upon, experts believed and agreed that other competencies also contribute to overall the effectiveness and success of the writing but also that “identify and understand audience” was important enough to be included in all of the genres they looked at.

*Objective Two: Determine the genres of writing in which Extension agents in Alabama participate.*

Using the final competencies that the experts on the Delphi panel provided, an instrument containing these competencies was built to send out to Alabama Extension agents. This instrument was sent in survey form for agents to indicate whether or not they engaged in any of the seven identified genres (*social media, program/workshop materials, newspapers/online articles, guides/manuals, technical publications, journal articles, and internal communications*) and to then report their effectiveness with competencies within an applicable genre. If an agent indicated that they did not engage in a genre, then the survey did not ask them to report their effectiveness in that genre and skipped to the next one. As a result, agents shared which genres of writing that they consistently participate in.

The genre that received the most indication of participation was *internal communications*. We assumed that all Extension agents participate in *internal communications* through the use of email and other workplace, text-based mediums, and our assumption was confirmed. All agents who participated in the study ( $n = 47$ ) indicated that they engage in *internal communications* as a genre. Following *internal communications*, *social media* was the second-most indicated genre that agents engage in. This finding is consistent with recent studies that focus on equipping Extension agents with more strategies and techniques for reaching audiences through social

media (Beattie et al., 2019; Ferree, 2015; Nordby, 2014). Notably, *program materials* and *newspapers/online articles* also had higher indications of participation with 74.47% ( $n = 35$ ) and 70.21% ( $n = 38$ ) of agents reporting their engagement in them. Thus, while not all agents in Alabama engage in writing for program materials or newspapers, the majority of this sample size indicated that they do.

This finding of the most engaged-in genres (*internal communications, social media, program/materials, and newspapers/online articles*) lines up with the identification of genres from the Extension directors, who shared what genres they thought their Extension agents participate in (Table 2). In the same way, the genres that fewer agents reported participating in (*technical publications, journal articles, and guides/manuals*) were also collectively reported as genres with less agent engagement by experts. This alignment shows a potential consistency in thought. Also, if experts and leaders in Extension recognize and understand the types of writing that are more applicable to agents, then the competencies that they produced through the Delphi may also be identifiable with agents, which strengthens this study overall.

*Objective Three: Describe how Alabama Extension agents' rank their perceived effectiveness of the writing competencies determined by Extension directors.*

Relying on our theoretical frameworks, we surmised that the Extension agents would be able to recognize various types of writing they produce and consider the type of writing within its own context (Flower, 1994), and determine their own perception towards themselves and their writing competencies (Bandura, 1997). By asking agents to share their perceptions of their own competencies through a Likert scale (not effective at all, slightly effective, moderately effective, very effective, and extremely effective), we gave them the means to measure and report their own self-efficacy in a competency and genre as a whole.

In the information letter, agents were informed that supervisors within Extension, some belonging to their state, had provided and agreed to the genres and competencies contained in the survey. In addition to their employers' expectations, we also expected agents to consider previous performance evaluations (external factors) and potentially weigh their own comfortability with the genre and its competencies individually (internal factors). Most notably, there were no competencies that received a "not effective at all" rating, so for every genre, agents felt at least slightly effective in every competency as a base starting point. Overall, agents felt particularly more effective in competencies that focused on grammar and mechanics, which are generally more well-defined, easier to learn and to check for effectiveness. They also felt effective in writing competencies that relied on their subject-matter knowledge or fact-checking abilities, competencies in which they already likely excel or are effective in from their own specialized content background.

**Social Media.** The competencies that agents considered themselves to be the most effective in for this type of writing was "use correct spelling" and "use correct punctuation," with "be knowledgeable in technical subject matter" and "identify relevance to audience" following. As such, agents seemed to be most comfortable with things that could be checked and corrected before publishing a post. Agents still felt very effective in things where they needed to rely on their own knowledge of subject matter or help the audience understand why their post could be relevant to them, which could increase engagement. On the other hand, agents indicated that they did not feel as effective in "understand platform norms and culture" as well as "apply marketing knowledge," but the means for these were 3.21 and 3.18, which still put the average effectiveness above "moderately effective." Thus, agents feel relatively more effective across all competencies in *social media*.

**Program/Workshop Materials.** Grammar-related competencies received the highest perceived effectiveness for this genre (“use correct spelling” and “understand grammar rules”). Following these competences was “determine that information is accurate.” The responses for this genre are similar to the ones in *social media*, with agents indicating that they felt more effective with competencies that focused on spelling and grammar, followed by a competency that centered on information and fact-checking. Since agents are subject-matter experts, it makes sense that they would feel effective in ensuring the accuracy of their content. The competencies that had the lowest average effectiveness were “integrate and translate current research” and “synthesize research,” indicating that agents felt less effective with research-related competency areas. These competencies, however, still averaged 3.26 and 3.21, placing them between moderately effective and very effective on the scale. When writing for *program/workshop* materials, agents indicated that they felt, at the least, moderately effective to extremely effective.

**Newspapers/Online Articles.** For this genre of writing, the competency that agents felt the most effective in was “determine that information is accurate,” which was followed by four competencies that were mechanics and grammar related (i.e., “use correct punctuation,” “use appropriate paragraph and sentence structure”). This finding continues the trend that agents feel most effective in competencies where their knowledge about subject-matter or grammar can affect their perceived effectiveness. While “use appropriate writing style (AP, APA, etc.)” received the lowest average effectiveness, it was also still within the moderately effective to very effective range ( $M = 3.39$ ), showing that agents still felt effective in this competency, just not as effective as others.

**Guides/Manuals.** The top two competencies that agents felt they were most effective in were “identify and understand audience” and “be knowledgeable in subject matter” at 4.75,

which is a relatively high mean. Actually, the agents of this study who participate in this form of writing felt more than “very effective” for almost all of the competencies. There were only two competencies that were lower than a 4.0 average, and even they were close. “Integrate visual examples” and “use plain language” were 3.67 and 3.50 respectively. With the average effectiveness for each competency being rather high, even the ones that are the “lowest,” these findings indicate that the agents who engage in writing guides or manuals consider themselves to be close to “extremely effective” in it collectively.

**Technical Publications.** “Be knowledgeable in technical subject matter” was the competency that agents shared being the most effective in for this writing genre. In these findings, agents indicated a higher perceived effectiveness again in a writing competency that involves subject matter; while grammar-related competencies are ranked lower on the average effectiveness, the means are very close together still, indicating only a slightly lower perceived effectiveness in them. The competency that was indicated as the lowest in effectiveness was “avoid jargon,” and even this competency’s mean was still at 3.60, which placed it in between “moderately effective” and “very effective” as a result. Thus, even though agents seemed to feel less confident in their effectiveness on avoiding jargon, they still seemed to feel confident, nonetheless. Technical publications tend to cover research-heavy topics, so avoiding jargon can likely be considered difficult by some writers. Additionally, agents rated themselves as more than “very effective” in the competency “use technical language correctly,” so it is possible that these agents prefer to work around jargon rather than avoid it entirely.

**Journal Articles.** The agents in this study who engage in writing journal articles perceive themselves to be between “very effective” and “extremely effective,” as the competencies that shared the lowest mean ( $M = 4.0$ ) were still on the higher end of the scale. Thus, these agents do

not seem to have any perceptions about a lowered effectiveness in their writing abilities for journal articles. As journal articles are a form of academic writing, it is possible that the agents who participated in this section have had more formal training in higher education, which would bolster their own perceived effectiveness.

**Internal Communications.** This was the only genre that all agents indicated that they engaged in writing for *internal communications*. “Use correct spelling” and “understand grammar rules” were the competencies that had the highest average effectiveness within this genre, while “adhere to Extension branding guidelines” was the lowest average. As is the case with most of the other genres, the lowest mean ( $M = 3.82$ ) was still relatively high on the scale, between “moderately effective” and “very effective,” meaning that, as a whole, all agents felt at least moderately effective in the competencies for this genre. This finding is consistent with the fact that basic communication through mediums such as emails is expected for most employees in the workforce, and agents would likely already be effective prior to employment (Kleckner & Marshall, 2023; Leggette et al., 2011).

**Ties to Theoretical Framework.** Agents consistently perceived themselves as more effective in competencies that centered on grammar and subject-matter knowledge. Bandura (1997) posits that both a solid efficacy belief and prior competencies produce the ability to perform well at a task. These agents are more likely to have had more intensive training in grammar and agricultural concepts in higher education, especially considering that the majority of the agents who participated ( $n = 33$ ) have a masters. In addition, agents were able to consider themselves as writers who actively engage in some, most, or all of the genres presented in the instrument. Agents engaged and provided a self-assessment, indicating they recognized they are an active participant in these written discourses (Flower, 1994).

*Objective Four: Evaluate perceived effectiveness to determine potential areas of need in agent training regarding written communication in Alabama.*

The overall average effectiveness across all genres for participating agents was 3.92, which indicates that agents generally felt closer to “very effective” but at least “moderately effective” in these genres of writing and their competencies. Whether this is because of specialized, writing-intensive courses in higher education or current training that is provided at the regional or state level, the agents who participated in this study demonstrated that they perceive themselves to be more effective than not in their writing.

In terms of ranking by average effectiveness, even the genre with the lowest average effectiveness, *social media*, had an overall average effectiveness of 3.71 ( $SD = 0.27$ ), which is still relatively high. However, the competencies that received a lower average of perceived effectiveness were genre specific within *social media*; therefore, writing for social media may still need to be addressed with training, with special attention towards the different types of platforms, accessibility requirements, and marketing strategies. Since *social media* was one of the most frequently indicated forms of writing that agents in Alabama engage in (80.85%,  $n = 37$ ), the data collected in this section is more generalizable.

**Ties to Theoretical Framework.** While it is possible that the participating agents in this study may have incorrect perceptions towards themselves and their effectiveness, Bandura (1997) states that it is still important for employers to know the perceptions and self-efficacy of their employees in order to plan for training. In this way, agents shared that they feel mostly effective in their writing, which can help Extension leadership prepare professional development to be more appropriate and applicable.

## Implications

*Objective One: Determine the writing competencies Extension directors consider necessary for Extension agents.*

By agreeing on a set list of writing genres and their corresponding competencies, participating Extension leadership demonstrated that they recognize and expect many forms of writing from their Extension agents. Many of these competencies generally focused on clarity, translation of research, and audience awareness, which shows an acknowledgement of the purpose behind writing in Extension—to clearly communicate agricultural research to an audience. This acknowledgement is similar to the findings of other studies where leaders in the agricultural industry recognized the need for clearer communication of scientific and agricultural information (Morgan, 2010; McLeod-Morin et al., 2020).

These experts in Extension produced and agreed upon competencies that were relevant and appropriate, further showing their understanding of the types of writing they identified. Following consensus, several forms of writing contained competencies that particularly mentioned spelling, punctuation, sentence and paragraph structure, and other grammatical topics; this identification is consistent with several previous studies outside of the agricultural industry that emphasized the desire for employees to have a mastery of grammar-related competencies (Deane et al., 2008; National Association of Colleges and Employers, 2019). State Extension directors also included competencies that were genre-specific, like “determine appropriate language and format between communication methods (memo, text, email, etc.)” in *internal communications*, among others. As such, participating Extension leadership showed that they can consider the contextual and sociocultural factors that make genres unique and verbalize them through expected competencies (Flowers, 1994).

*Objective Two: Determine the genres of writing in which Extension agents in Alabama participate.*

Agents were asked about their engagement with seven forms of writing; while not every agent engaged in every form of writing that was included, every genre had at least one agent that indicated engagement. Many of these Extension agents indicated that they wrote in more than one genre, as well. As such, at least with this sample population, Extension agents switch between various forms of writing during their employment. More Extension agents seemed to write for *internal communications, social media, program/workshop materials, and newspapers/online articles*. This reporting is consistent with previously identified types of writing in Extension (Adams et al., 2005; Beattie et al., 2019; Ehret & Kiernan, 2008; Tylczak et al., 2015). Writing that occurs within *internal communications* has not been specifically identified in scholarship, and yet, all participating agents indicated their engagement with it. Even though the writing that occurs within *internal communications* might seem basic or implied, it is still a form of writing that is expected and evaluated by Extension leadership.

*Objective Three: Describe how Alabama Extension agents' rank their perceived effectiveness of the writing competencies determined by Extension directors.*

Since each writing genre carries its own contextual formatting and elements to consider, these agents showed that they are actively considering (and reporting effectiveness in) these elements. Flower (1994) argued that writers should be able to recognize the sociocultural parameters of writing and the differences between various forms as they participate and add to the discussion. These agents showed that they see themselves as mostly skilled and effective in their writing, ultimately indicating that their self-efficacy, or self-beliefs, are positive and high (Bandura, 1997).

This overall positive report on effectiveness also provides an interesting connection between Extension leadership and their employees. In this study, state directors shared their expectations, and Extension employees evaluated themselves in consideration of these expectations. As a result, the participating agents shared that they not only rise to these expectations but also execute their expected competencies effectively. As such, Extension agents in Alabama consider themselves to be operating quite well in their written communication.

*Objective Four: Evaluate perceived effectiveness to determine potential areas of need in agent training regarding written communication in Alabama.*

Extension agents in this study shared that they feel very effective in their writing competencies across all writing genres. For example, even though *social media* was collectively ranked the lowest in terms of effectiveness, its overall average was still very high. However, *social media* was also indicated as one of the writing genres that most agents engage in; professional development offered on writing for social media could be more relevant to all agents collectively. Additionally, agents did not select “extremely effective” for all competencies and genres, showing that there is still room for improvement in every writing genre that can be strengthened by further training.

## **Recommendations**

### *For Research*

While this study established that Extension agents in Alabama have strong self-efficacy in their writing competencies, it was not clear why their self-efficacy was so high. Bandura (1997) suggests that multiple external and internal factors can contribute to self-efficacy; thus, a continuation of this research could be through an investigation of the factors influencing these Extension agents. There are several existing studies in agricultural education that take this step

further in assessing self-efficacy (Banwart & Qu, 2023; Lawson et al., 2021; Ruth & Emmert, 2019).

Only the state directors in the southern region of the United States were invited and included in this study; future research could extend this study to a national level to determine the common forms of writing that Extension directors expect in every state. Likewise, Extension agents in other states could be invited to reflect on their own perceived effectiveness within different forms of writing. It is possible that there are still several writing genres that were unidentified within this study; another study on common forms of writing in Extension could further clarify what writing in Extension looks like.

#### *For Practitioners*

Even though participating Extension agents perceived themselves to be very effective in their writing competencies, there is still a need for further training. While perception can affect performance, it is possible these agents' writing is not effective in practice. Extension leadership and administration should consider their agents' self-efficacy when preparing their professional developments, but they should also continue to evaluate their agents' writing to determine areas of need as well. When evaluating, Extension leadership should consider the contextual differences and needs between each form of writing to appropriately assess their employees. Similarly, specific expectations towards writing and necessary writing competencies should be shared with agents so that they can respond accordingly.

#### **Summary**

State Extension directors and other Extension leadership identified genres of writing in Extension and the necessary competencies within them. These experts considered each form of writing separately and showed that they considered the contextual differences between each and

changed their expectations in response. Extension agents were asked to consider which genres of writing they engage in; participating agents reported that they engage in several forms of writing. *Internal communications* and *social media* were among the highest reported genres of writing that agents produce content for. Extension agents in Alabama also assessed themselves and shared their perceived effectiveness in each relevant writing genre and the competencies within that genre. As a whole, participants perceive themselves to be very effective in their writing within every genre of writing that was identified. *Social media* was reported as a form of writing that the majority of agents engage in, and it was also the writing genre that received the lowest average of effectiveness. Alabama Extension agents might benefit from more training that focuses specifically on writing for social media.

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## APPENDICES

### APPENDIX A

#### **Extension Writing Delphi Questionnaire: Round 1**

Hello! We would like to invite you as an expert in the field of Extension to participate in the Delphi process. I am Clare Hancock, a graduate student in Agricultural Communication, under the supervision of Jason McKibben, an Assistant Professor in the Department of Curriculum and Teaching at Auburn University. The objective of this study is to determine core competency areas of Extension Agents when it comes to written communication. Since Extension Agents engage in many different writing genres for different audiences, we are attempting to understand what is expected of Extension Agents' writing skills. You may participate if you are a member of the Association of Southern Region Extension Directors or recommended to participate by a state director, employed by the Extension Cooperative System, and are 18 or older.

As a successful leader in Extension, we look to you as the expert in what it takes to be a “good” Extension faculty member and hope to be able to use that knowledge to better Extension and the Extension mission. You are one of a small handful of professionals that have been identified and whose input is invaluable to this work. We are very grateful for your time and contribution, and we have arranged the following questionnaires to be quick and to-the-point.

If you decide to participate, round one will ask open-ended questions about what expectations you have for your agents' writing, round two will allow you to see yours and others' expectations and rate them by level of importance, and round three will ask for a final rating, which will finalize the expectations. Each round should take no more than 10 minutes of your time and there will be several days or weeks between the rounds, so the time burden will be minimal there as well. Your total time commitment should be no more than 30 minutes overall, across the three rounds of questions. Your participation is completely voluntary, and should you wish to not participate or withdraw at any time in the process, it will be with no hard feelings or ill will.

You can contact Clare Hancock ([cet0071@auburn.edu](mailto:cet0071@auburn.edu)) or Jason McKibben ([jdm0184@auburn.edu](mailto:jdm0184@auburn.edu)) to withdraw, and your data will also be withdrawn. There are no risks or discomforts accompanying this study, you will not be compensated or incur costs, and you will not directly benefit from this research. However, your contributions will help determine a more solidified understanding of Extension writing and the expectations surrounding that, which will hopefully lead to opportunities for professional development.

The study findings will only report grouped results, and your individual participation will not be shared so feel free to be honest. Responses will be stored in a secure folder in Box protected by a two-factor authentication. Information collected through your participation may be used to fulfill an educational requirement, published in a professional journal, and/or presented at a professional conference.

If you wish to participate in this study, please indicate your consent below. We look forward to learning from your hard-won expertise and guidance.

Clare Hancock, Ph.D. Candidate  
Agricultural Communications  
Agricultural Education, Auburn University

Jason McKibben, Ph.D.  
Assistant Professor  
Agricultural Education, Auburn University

- **I will participate**
- **I will not participate**

Which state extension system do you currently work? Please select your state from the dropdown box.

▼ Alabama... Virginia

Which land grant system do you primarily align with?

- 1862
- 1890
- 1994
- Non-land grant

How many years have you been employed with Extension?

- 0-5
- 6-10
- 11-15
- 16-20
- 21-25
- More than 25

Do you directly evaluate extension personnel?

- County support staff
- Professional support staff
- County-based agents
- Regional agents
- County coordinator
- Specialists
- Extension faculty
- Administrators/Directors/Deans

How many years have you been in your current position?

- 0-5
- 6-10
- 11-15
- 16-20
- 21-25
- More than 25

What genres of writing do County Extension Agents engage in? (Select all that apply.)

- Social Media Posts
- Program Materials
- Newspaper articles/Newsletters
- Guides/Manuals/Instructions
- Technical Publications/White Paper
- Journal Articles
- Internal Communications
- Other \_\_\_\_\_

Out of these types of writing, what would you say is the most important for County Extension Agents to devote time to? Please rank the following, with 1 being the most important and 6 being the least.

- \_\_\_\_\_ Social Media Posts
- \_\_\_\_\_ Program Materials
- \_\_\_\_\_ Newspaper article/Newsletters
- \_\_\_\_\_ Technical Publications/White Paper
- \_\_\_\_\_ Journal Articles
- \_\_\_\_\_ Internal Communications

For **social media**, what skills are needed for your County Extension Agents to be successful in writing? (e.g. audience awareness, modern word usage/slang, relevance, etc...)

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For **program/workshop materials**, what skills are needed for your County Extension Agents to be successful in writing? (e.g. technical terms, objective writing, etc...)

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For **newspaper articles**, what skills are needed for your County Extension Agents to be successful in writing? (e.g. knowledge of AP style, plain language use, etc...)

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For **guides/manuals/instructions**, what skills are needed for your County Extension Agents to be successful in writing? (e.g. clarity, formatting, writing concisely, etc...)

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For **technical publications/white paper**, what skills are needed for your County Extension Agents to be successful in writing? (e.g. Formatting, charts and tables, technical language, etc...)

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For **journal articles**, what skills are needed for your County Extension Agents to be successful in writing? (e.g. ethical source use, knowledge of APA style, clarity, etc...)

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Question 14 For **internal communications**, what skills are needed for your County Extension Agents to be successful in writing? (e.g. clarity, etiquette, relevancy, concise language, etc...)

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In the Extension profession, what general abilities does a “good writer” possess?

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If there is someone else in your organization that would have value to add to this research discussion, please add their name and email:

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## APPENDIX B

### Extension Writing Delphi Questionnaire: Round 2

Hello! This is Round 2 of Expected Writing Competencies of Extension Agents. Thank you for your continued participation in this project; your insight and experiences are greatly valued.

If you have any questions about the study or how your answers will be used, please contact Clare Hancock (cet0071@auburn.edu) or Jason McKibben (jdm0184@auburn.edu).

**Note:** The next section of questions has compiled all of the answers that were given from all of the participants in Round 1, and duplicate items have been taken out.

In this round you will be asked to tell us how much you agree or disagree with the skill being important for a county-based agent. You will see seven different types of writing (social media, program/workshop, guides, etc.) and asked about skills in each. You will see the same or similar skills in each genre. For some shared skills, your answers might be different based on the genre.

For the following questions, please answer to the best of your ability, even if your state's county-based agents do not engage in this genre of writing.

Please add your university/Extension email below for verification:

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## Social Media

Please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre.

|   | SD                    | D                     | N                     | A                     | SA                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Identify and understand target audience             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify relevance to audience                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Select words that are appropriate, modern, creative | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to accessibility requirements                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use call to actions                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate with precision                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Define technical terms                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Consider timeliness of information shared           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to summarize                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct punctuation                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Apply marketing knowledge                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand platform norms and culture               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Are there any skills that need to be added to this list?

\_\_\_\_\_

Is this genre applicable to the work of your county-based agents?

- Yes
- No, why? \_\_\_\_\_

## Program/Workshop Materials

Please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre.

|   | SD                    | D                     | N                     | A                     | SA                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Identify and understand audience                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop engaging content                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine that information is accurate                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deliver on level of the reader                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize instructions                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to Extension branding guidelines                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate and translate current research                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Remain objective  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use creativity to help visualize complex ideas              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop program objectives and match objectives to outcomes | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Synthesize research   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Are there any skills that need to be added to this list?

\_\_\_\_\_

Is this genre applicable to the work of your county-based agents?

Yes

No, why? \_\_\_\_\_

## Newspapers/Online Articles

Please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre.

|  | SD                    | D                     | N                     | A                     | SA                    |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Deliver on level of the reader                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use plain language                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate writing style (AP, APA, etc.)    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Select action words                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify engaging topics                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate and translate current research         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Remain objective                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine that information is accurate           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use inclusive language                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use call to actions                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate applicability of content             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Consider timeliness of information shared        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Check readability level of text                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate paragraph and sentence structure | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine objective of material                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct punctuation                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Are there any skills that need to be added to this list?

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Is this genre applicable to the work of your county-based agents?

- Yes
- No, why? \_\_\_\_\_

### Guides/Manuals

Please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre.

|  | SD                    | D                     | N                     | A                     | SA                    |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Write concisely                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Follow organizational formatting guidelines      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deliver on level of the reader                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate and translate current research         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically and consistently  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use plain language                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Create meaningful divisions within text          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write with a technical point of view             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine that information is accurate           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Define technical terms                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Remain objective                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate visual examples                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate paragraph and sentence structure | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine objective of material                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct punctuation                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Are there any skills that need to be added to this list?

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Is this genre applicable to the work of your county-based agents?

- Yes
- No, why? \_\_\_\_\_

## Technical Publications

Please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre.

|  | SD                    | D                     | N                     | A                     | SA                    |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Follow organizational formatting guidelines (1)                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use technical language correctly (22)                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely (23)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Utilize and define tables and graphs (24)                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand text's audience (25)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically and consistently (26)                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Avoid jargon (27)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Respect copyright laws (28)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Proofread for errors (29)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use inclusive language (30)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use active voice (31)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be aware of how material will be presented (digital, paper, etc.) (32) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to peer review requirements (33)                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter (34)                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use descriptive writing (35)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Pay attention to cohesion and flow (36)                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to revise work (37)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cite sources   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Are there any skills that need to be added to this list?

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Is this genre applicable to the work of your county-based agents?

- Yes
- No, why? \_\_\_\_\_

## Journal Articles

Please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre.

|   | SD                    | D                     | N                     | A                     | SA                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Follow organizational formatting guidelines   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use technical language correctly              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use sources ethically                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Address a need or issue                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate purpose                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate applicability of content          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Respect copyright laws                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in subject matter            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Synthesize research                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate writing style (AP, APA, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to write abstractly                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to revise work                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Proofread for errors                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate tone                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Are there any skills that need to be added to this list?

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Is this genre applicable to the work of your county-based agents?

- Yes
- No, why? \_\_\_\_\_

## Internal Communications

Please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre.

|   | SD                    | D                     | N                     | A                     | SA                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Determine appropriate language and format between communication methods (memo, text, email, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Utilize etiquette   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine if message is necessary   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically and consistently   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate purpose   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to Extension branding guidelines   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Provide context   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate tone  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to revise work   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Consider timeliness of information shared   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Are there any skills that need to be added to this list?

\_\_\_\_\_

Is this genre applicable to the work of your county-based agents?

- Yes
- No, why? \_\_\_\_\_

## APPENDIX C

### **Extension Writing Study Delphi: Round 3**

Hello! This is Round 3 of Expected Writing Competencies of Extension Agents. Thank you for your continued participation in this project; your insight and experiences are greatly valued.

If you have any questions about the study or how your answers will be used, please contact Clare Hancock (cet0071@auburn.edu) or Jason McKibben (jdm0184@auburn.edu).

Round 3 consists of the same identified skills from Round 1 and Round 2, but there were some additional items identified as a result of Round 2. This final round will solidify consensus on the skills.

As such, the structure and questions are similar to Round 2 in that you will be asked one more time to tell us how much you agree or disagree with the skill being important for a county-based agent. You will see seven different types of writing (social media, program/workshop, guides, etc.) and asked about skills in each.

Please add your university/Extension email below for verification:

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## Social Media

The average rating of you and your peers in round two is provided in parenthesis after the statement. Do you agree with the average rating (out of 5, with 5 being the most important)?

If not, please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre if you differ from the round two group average.

|   | SD                    | D                     | N                     | A                     | SA                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Identify and understand target audience (4.9)             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling (4.9)                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Consider timeliness of information shared (4.7)           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify relevance to audience (4.6)                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct punctuation (4.6)                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate with precision (4.6)                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely (4.5)                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to accessibility requirements (4.4)                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to summarize (4.4)                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter (4.4)        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Select words that are appropriate, modern, creative (4.3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Apply marketing knowledge (4)                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand platform norms and culture (4)                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Define technical terms (3.9)                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use call to actions (3.9)                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

The following competencies were added as a result of Round 2. Please rate your level of agreement with the importance of these skills in **Social Media**.

|                                    | SD                    | D                     | N                     | A                     | SA                    |
|------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Deliver on the level of the reader | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Program/Workshop

The average rating of you and your peers in round two is provided in parenthesis after the statement. Do you agree with the average rating (out of 5, with 5 being the most important)?

If not, please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre if you differ from the round two group average.

|   | SD                    | D                     | N                     | A                     | SA                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Determine that information is accurate (4.9)                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to Extension branding guidelines (4.8)                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience (4.8)                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deliver on level of the reader (4.7)                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use creativity to help visualize complex ideas (4.6)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly (4.6)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Synthesize research (4.6)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate and translate current research (4.5)                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter (4.4)                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize instructions (4.4)                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Remain objective (4.4)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely (4.3)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules (4.3)                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically (4.3)                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop engaging content (4.2)                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling (4.2)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop program objectives and match objectives to outcomes (4.1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Newspaper/Online Articles

The average rating of you and your peers in round two is provided in parenthesis after the statement. Do you agree with the average rating (out of 5, with 5 being the most important)?

If not, please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre if you differ from the round two group average.

|  | SD                    | D                     | N                     | A                     | SA                    |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Use correct punctuation (4.8)                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling (4.8)                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Remain objective (4.8)                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly (4.8)                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine that information is accurate (4.7)           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deliver on level of the reader (4.6)                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate paragraph and sentence structure (4.6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use plain language (4.6)                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules (4.6)                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience (4.5)                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Consider timeliness of information shared (4.5)        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate applicability of content (4.5)             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely (4.5)                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify engaging topics (4.4)                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate and translate current research (4.4)         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine objective of material (4.4)                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use inclusive language (4.3)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Check readability level of text (4.2)                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate writing style (AP, APA, etc.) (4.2)    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Select action words (4.1)                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use call to actions (3.8)                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Guides/Manuals

The average rating of you and your peers in round two is provided in parenthesis after the statement. Do you agree with the average rating (out of 5, with 5 being the most important)?

If not, please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre if you differ from the round two group average.

|  | SD                    | D                     | N                     | A                     | SA                    |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Write concisely (4.8)                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling (4.7)                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct punctuation (4.7)                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly (4.7)                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine that information is accurate (4.7)           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience (4.7)                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter (4.6)     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules (4.6)                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deliver on level of the reader (4.5)                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically and consistently (4.5)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Define technical terms (4.5)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Remain objective (4.5)                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate paragraph and sentence structure (4.5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate visual examples (4.4)                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use plain language (4.3)                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Create meaningful divisions within text (4.3)          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate and translate current research (4.3)         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine objective of material (4.3)                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Follow organizational formatting guidelines (4.2)      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write with a technical point of view (4.1)             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Technical Publications

The average rating of you and your peers in round two is provided in parenthesis after the statement. Do you agree with the average rating (out of 5, with 5 being the most important)?

If not, please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre if you differ from the round two group average.

|   | SD                    | D                     | N                     | A                     | SA                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Proofread for errors (4.9)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Respect copyright laws (4.8)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Follow organizational formatting guidelines (4.7)                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use technical language correctly (4.7)                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience (4.7)                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically and consistently (4.6)                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely (4.6)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be aware of how material will be presented (digital, paper, etc.) (4.6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cite sources (4.6)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter (4.5)                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to peer review requirements (4.3)                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Utilize and define tables and graphs (4.3)                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to revise work (4.3)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Pay attention to cohesion and flow (4.2)                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use descriptive writing (4.1)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Avoid jargon (4.1)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use inclusive language (3.9)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Journal Articles

The average rating of you and your peers in round two is provided in parenthesis after the statement. Do you agree with the average rating (out of 5, with 5 being the most important)?

If not, please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre if you differ from the round two group average.

|   | SD                    | D                     | N                     | A                     | SA                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Respect copyright laws (4.7)                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Proofread for errors (4.6)                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling (4.6)                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use sources ethically (4.4)                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly (4.4)                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in subject matter (4.4)            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules (4.4)                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Follow organizational formatting guidelines (4.3)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate writing style (AP, APA, etc.) (4.3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use technical language correctly (4.3)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate purpose (4.3)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely (4.2)                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate applicability of content (4.2)          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience (4.2)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate tone (4.2)                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Address a need or issue (4.1)                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Synthesize research (4.0)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to revise work (4.0)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Internal Communications

The average rating of you and your peers in round two is provided in parenthesis after the statement. Do you agree with the average rating (out of 5, with 5 being the most important)?

If not, please rate your level of agreement (Strongly Disagree – SD, Disagree – D, Neutral – N, Agree – A, Strongly Agree – SA) with the importance of the skill in this genre if you differ from the round two group average.

|   | SD                    | D                     | N                     | A                     | SA                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Use appropriate tone (4.7)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling (4.6)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine appropriate language and format between communication methods (memo, text, email, etc.) (4.5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly (4.5)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Utilize etiquette (4.5)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely (4.5)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically and consistently (4.5)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience (4.5)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine if message is necessary (4.5)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate purpose (4.5)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Provide context (4.5)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Consider timeliness of information shared (4.5)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules (4.4)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to revise work (4.2)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to Extension branding guidelines (4.2)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## APPENDIX D

### Alabama Extension Agent Survey

Hello! I am Clare Hancock, a graduate student in Agricultural Communication, under the supervision of Jason McKibben, an Associate Professor in the Department of Curriculum and Teaching at Auburn University. We ask you to participate in a needs assessment based on information that the state directors and heads of Extension services/systems in the southeast provided to us. You may participate if you are a regional or county Extension agent, employed by the Alabama Extension Cooperative System, and are 18 or older. If you decide to participate, the survey will ask you about how effective you feel in aspects of writing within different contexts (social media, online articles, internal communications, etc.). Your total time commitment should be no more than 10 minutes overall.

The writing skills within the survey were provided by your director/coordinators—the people who perform your evaluations. These questions might seem repetitive, as the information we were provided with was repetitive as well. This assessment will allow us to determine if there are specific contexts or skills that you might want assistance with. We know that you engage in many tasks that demand your attention, and we also know that you likely perform several different types of skills within just one day. A lot is asked of Extension agents, especially since its mission is so important for our communities and future as a country. Thus, our hope is to use this data to design programming to help future and current Extension professionals be more successful—and by default, reach more audiences about agriculture.

Your participation is completely voluntary, and should you wish to not participate or withdraw at any time in the process, it will be with no hard feelings or ill will. You can contact Clare Hancock (cet0071@auburn.edu) or Jason McKibben (jdm0184@auburn.edu) to withdraw, and your data will also be withdrawn. There are no risks or discomforts accompanying this study, you will not be compensated or incur costs, and you will not directly benefit from this research. However, your contributions will help determine a more solidified understanding of Extension writing and the expectations surrounding that, which will hopefully lead to opportunities for professional development.

The study findings will only report grouped results, and your individual participation will not be shared so feel free to be honest. Responses will be stored in a secure folder in Box protected by a two-factor authentication. Information collected through your participation may be used to fulfill an educational requirement, published in a professional journal, and/or presented at a professional conference.

If you wish to participate in this study, please indicate below. Just as you look to your community for their needs, we look to you for yours and are eager to be able to assist.

Clare Hancock, Ph.D. Candidate  
Agricultural Communications  
Agricultural Education, Auburn University

Jason McKibben, Ph.D.  
Assistant Professor  
Agricultural Education, Auburn University

- I will participate**
  
- I will not participate**

What area of programing are you OFFICIALLY responsible for (we know most of us are wearing LOTS of hats, so pick the areas you are officially responsible for doing)?

- Agriculture, Forestry, & Natural Resources (animal science, poultry, forestry, wildlife, forages, aquaculture, etc...)
- 4-H & Youth Development (Youth focused programing of any kind)
- Human & Family Sciences (nutrition, safety, food safety, SNAP, etc...)
- Economic & Community Development (workforce development, community development, agribusiness management, governments, etc...)

Do you write content for **social media**? If not, please skip to the next section.

- Yes
- No

## Social Media

When writing for SOCIAL MEDIA how effective is your ability to do the following:

Please rate your level of effectiveness (Not Effective at All – NE, Slightly Effective – SE, Moderately Effective – ME, Very Effective – VE, Extremely Effective – EE) regarding each skill in this genre.

|   | NE                    | SE                    | ME                    | VE                    | EE                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Identify and understand target audience             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Consider timeliness of information shared           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify relevance to audience                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct punctuation                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate with precision                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to accessibility requirements                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to summarize                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Select words that are appropriate, modern, creative | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Apply marketing knowledge                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand platform norms and culture               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Define technical terms                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use call to actions                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deliver on the level of the reader                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Do you write content for **programming/workshop materials**? If not, please skip to the next section.

- Yes
- No

### **Programs/Workshops**

When writing for PROGRAMING/WORKSHOPS how effective is your ability to do the following:

Please rate your level of effectiveness (Not Effective at All – NE, Slightly Effective – SE, Moderately Effective – ME, Very Effective – VE, Extremely Effective – EE) regarding each skill in this genre.

|   | NE                    | SE                    | ME                    | VE                    | EE                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Determine that information is accurate                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to Extension branding guidelines                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deliver on level of the reader                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use creativity to help visualize complex ideas              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Synthesize research   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate and translate current research                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize instructions                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Remain objective  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop engaging content                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop program objectives and match objectives to outcomes | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Which university do you affiliate most with?

- Alabama A&M
- Auburn

Do you write content for **newspapers or online article sources**? If not, please skip to the next section.

- Yes
- No

### **Newspapers/Online Articles**

When writing for NEWSPAPER/ONLINE ARTICLES how effective is your ability to do the following:

Please rate your level of effectiveness (Not Effective at All – NE, Slightly Effective – SE, Moderately Effective – ME, Very Effective – VE, Extremely Effective – EE) regarding each skill in this genre.

|  | NE | SE | ME | VE | EE |
|--|----|----|----|----|----|
| Use correct punctuation                          | ○  | ○  | ○  | ○  | ○  |
| Use correct spelling                             | ○  | ○  | ○  | ○  | ○  |
| Remain objective                                 | ○  | ○  | ○  | ○  | ○  |
| Write clearly                                    | ○  | ○  | ○  | ○  | ○  |
| Determine that information is accurate           | ○  | ○  | ○  | ○  | ○  |
| Deliver on level of the reader                   | ○  | ○  | ○  | ○  | ○  |
| Use appropriate paragraph and sentence structure | ○  | ○  | ○  | ○  | ○  |
| Use plain language                               | ○  | ○  | ○  | ○  | ○  |
| Understand grammar rules                         | ○  | ○  | ○  | ○  | ○  |
| Identify and understand audience                 | ○  | ○  | ○  | ○  | ○  |
| Consider timeliness of information shared        | ○  | ○  | ○  | ○  | ○  |
| Communicate applicability of content             | ○  | ○  | ○  | ○  | ○  |
| Write concisely                                  | ○  | ○  | ○  | ○  | ○  |
| Identify engaging topics                         | ○  | ○  | ○  | ○  | ○  |
| Integrate and translate current research         | ○  | ○  | ○  | ○  | ○  |

|   |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Determine objective of material               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate writing style (AP, APA, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Select action words                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use call to actions                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Do you write content for **guides or manuals**? If not, please skip to the next section.

- Yes
- No

### **Guides/Manuals**

When writing for GUIDES/MANUALS how effective is your ability to do following:

Please rate your level of effectiveness (Not Effective at All – NE, Slightly Effective – SE, Moderately Effective – ME, Very Effective – VE, Extremely Effective – EE) regarding each skill in this genre.

|  | NE                    | SE                    | ME                    | VE                    | EE                    |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Write concisely                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct punctuation                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine that information is accurate           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deliver on level of the reader                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically and consistently  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Define technical terms                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Remain objective                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate paragraph and sentence structure | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate visual examples                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|   |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Use plain language                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Create meaningful divisions within text     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Integrate and translate current research    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine objective of material             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Follow organizational formatting guidelines | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write with a technical point of view        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

---

What is your highest level of completed education?

- Doctorate (Ph.D., Ed.D.)
  - Educational Specialist (Ed.S.)
  - Master's (M.S., M.A., M.Ed.,)
  - Bachelor's (B.A., B.S.)
  - Associates (A.A., A.S., A.A.S, A.A.A)
-

Do you write content for **technical publications**? If not, please skip to the next section.

- Yes
- No

### Technical Publications

When writing for TECHNICAL PUBLICATIONS how effective is your ability to do the following:

Please rate your level of effectiveness (Not Effective at All – NE, Slightly Effective – SE, Moderately Effective – ME, Very Effective – VE, Extremely Effective – EE) regarding each skill in this genre.

|   | NE                    | SE                    | ME                    | VE                    | EE                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Proofread for errors  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Respect copyright laws  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Follow organizational formatting guidelines                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use technical language correctly                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically and consistently                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be aware of how material will be presented (digital, paper, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cite sources  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in technical subject matter                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to peer review requirements                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Utilize and define tables and graphs                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to revise work   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Pay attention to cohesion and flow                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use descriptive writing   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Avoid jargon  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Do you write content for **journal articles**? If not, please skip to the next section.

- Yes
- No

### **Journal Articles**

When writing for JOURNAL ARTICLES how effective is your ability to do the following:

Please rate your level of effectiveness (Not Effective at All – NE, Slightly Effective – SE, Moderately Effective – ME, Very Effective – VE, Extremely Effective – EE) regarding each skill in this genre.

|   | NE                    | SE                    | ME                    | VE                    | EE                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Respect copyright laws                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Proofread for errors                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use sources ethically                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Be knowledgeable in subject matter            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Follow organizational formatting guidelines   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate writing style (AP, APA, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use technical language correctly              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate purpose                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate applicability of content          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use appropriate tone                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Address a need or issue                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Synthesize research                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to revise work                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Last one! Do you write when engaging in **internal communications** (emails, memos, etc.)? If not, please skip to the next section.

- Yes
- No

### **Internal Communications**

When writing for INTERNAL COMMUNICATIONS, how effective is your ability to do the following:

Please rate your level of effectiveness (Not Effective at All – NE, Slightly Effective – SE, Moderately Effective – ME, Very Effective – VE, Extremely Effective – EE) regarding each skill in this genre.

|   | NE                    | SE                    | ME                    | VE                    | EE                    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Use appropriate tone  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use correct spelling  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine appropriate language and format between communication methods (memo, text, email, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write clearly   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Utilize etiquette   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Write concisely   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Organize information logically and consistently   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify and understand audience  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Determine if message is necessary   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicate purpose   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Provide context   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Consider timeliness of information shared   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand grammar rules  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to revise work   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Adhere to Extension branding guidelines   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

You made it! We know this was repetitive and took time from your day. It's only with your responses that we can better understand what all you do and determine where even more insight might be needed. Thank you for helping us, and if Agricultural Education (Agriscience Education) can do anything to help you, never hesitate to reach out to us.

Information about: Agricultural Education at Auburn University