Journal of Applied Communications

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Research

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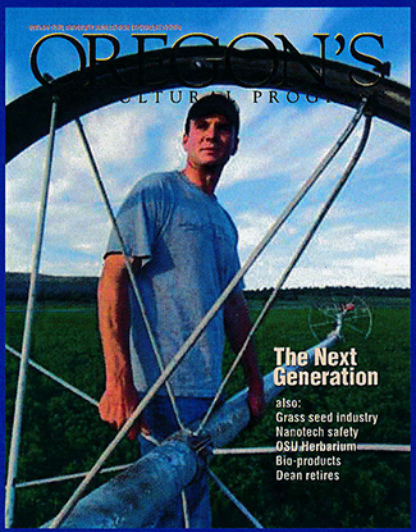



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On the Cover

Oregon's Agricultural Progress *magazine has been distributed to Oregonians as a print publication for over 50 years. A Web version of the magazine was recently introduced and a readership survey conducted to profile both print and online readers, learn more about their opinions of the two media, and characterize their involvement in communities across the state.* *Read more on page 23.*

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In This Issue...

Mark Tucker
JAC Executive Editor

Applied communication professionals are nothing if not practical. Especially in the workplace, we're more likely to learn by doing than by reading or theorizing.

Yet we're indebted to communication theoreticians and historians for much of what we know. Their insights are especially helpful when it comes to adoption of new communication technologies and media. For example, learning from television's influence on radio, our predecessors found that new media usually don't replace existing media, but they often transform and redefine them. Audiences may come to expect new or more specialized content from both the old and new media, and the process repeats when newer media are again introduced.

It's a very tidy explanation that's easy to describe from a distance. But it's much more complex for communication practitioners and managers who must make daily decisions about media strategies to reach target audiences. Theory provides a place to start, but we quickly discover that we need more specific information, data, and insights from those who are close to the situation.

That's why I'm happy to introduce this issue's current articles and authors. They provide an interesting mix of theory, data, and discussion about pressing issues in our field. Peg Herring and Bob Rost ask, "Is Print Dead?" Their data provide not only a partial answer to the question, but also a platform for further discussion. Emily Rhoades and Kelsey Hall then take readers on an excursion through the "Agricultural Blogosphere." On another front, David Doerfert and his colleagues share a possible framework for agricultural communications research. Finally, Judith White and Gary Wingenbach provide insights about ACE members and their needs.

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Developing an International Framework and Agenda for Agricultural Communications Research

David Doerfert, James Evans, Dwayne Cartmell, and Tracy Irani

Abstract

Timely, effective research is becoming a vital tool for communicators to use in the dynamic setting of the information age. Increasingly, it can support effective communications and decision-making related to agriculture. The authors report results of their recent efforts as members of a national project to envision a framework and agenda for agricultural communications research during the next 5 years. Noting the emergence and dynamics of the information age, they emphasize the centrality and resilience of agriculture. They observe how the agriculture-related sectors—food, fiber, natural resources, bio-based energy, nutrition and health, rural development, and others—tend to transform themselves and adapt over time and across societies. Similarly, the roles of communicators are adapting beyond that of the historical "town crier." Increasingly, communicators are helping people gather and share information, deliberate, sort through the mountains of information, select what they need, and make decisions. The authors identify 4 research priority areas and 18 key questions for research that communicators can use to address such challenges. They also suggest agricultural knowledge management as an integrative, international framework for strengthening this research agenda.

Now more than ever, research opportunities are needed to support effective agricultural communications. Interrelations throughout the food industry—from farm to fork—are becoming more complex and vital. Producers, citizens, and other decision-makers who need information about this broad-based endeavor are becoming more diverse and global. The ever-increasing volume of information they require is becoming more specialized and changing more rapidly. The emergence of new electronic technologies is creating new channels for information distribution.

This dramatic development has not happened suddenly, nor is it confined to agriculture. Since Fritz Machlup's 1962 book *The Production and Distribution of Knowledge in the United States*, philosophers, business leaders,

and communicators have been discussing the information age, its impact on the acquisition and management of knowledge, and their roles in our future economy. In his book *The Effective Executive* (1967), Peter Drucker predicted that major changes in society would be brought about by information, and that knowledge workers would become the largest working group. In his book *The Coming of Post-Industrial Society* (1973), Daniel Bell noted that the United States was moving from being a producer of goods to a service economy, and predicted that theoretical knowledge, technology, and information would become our major commodities. Bell added that those who know how to create, assemble, and disperse information are more valued than labor. Alvin Toffler's *The Third Wave* (1980) heralded a new culture based on information that is more than just technology—it includes social, cultural, institutional, moral, and political dislocations during our transition from a brute force industry society to a brain force economy.

One of the clear challenges in this information age is managing the information before us and converting it to knowledge that will serve our decision-making and problem-solving processes. As Naisbitt stated in his book *Megatrends* (1982):

> We are drowning in information but starved for knowledge. This level of information is clearly impossible to be handled by present means. Uncontrolled and unorganized information is no longer a resource in an information society; instead it becomes an enemy. (p. 24)

This situation exists internationally within the food, agriculture, and natural resources sectors. It is easy to see the information challenges that are generated not only by an increasingly complex global food industry, but also through the use of increasingly complex information systems, technologies, and processes. There are also difficulties and inequities with regard to sharing agricultural information within the food industry—locally to globally, and among diverse stakeholders. Further, in some countries, the decline in the number of people involved in production agriculture has resulted in a general lack of agricultural awareness among citizens, leaders, and others involved in decisions about food, agriculture, natural resources, and related societal interests.

These trends reflect the changing landscape of the food and agriculture industries. They also highlight the difficulties involved in providing information that can help societies find the vital balance between change (for progress) and constancy (for stability) in their endeavors related to food, agriculture, and natural resources. More than 25 years ago, Naisbitt (1982) described both the problem and the steps societies need to take to move forward through these changing times:

> The problem is that our thinking, our attitudes, and consequently our decision making have not caught up with the reality of things... the level of change involved is so fundamental yet so subtle that we tend not to see it, or if we see it, we dismiss it as overly simplistic, and then we ignore it....But we have to release this death grip on the past and deal with the future. We must understand this new information society and the changes it brings. We need to reconceptualize our national and global objectives to fit the new economics of information. (p. 13)

What does this societal change mean for agriculture? Bertels and Savage (1999) pointed to the United States' transition from the industrial era to the knowledge era, noting that during the 50 to 150 years required to move from the agricultural era to the industrial era, agriculture did not die; rather, it was transformed to the point where less than 5% of the population now farms, as opposed to 65% when the transformation began. During this same time period, the scope of agriculture broadened from its original food and fiber focus to include natural resources, environment, nutrition and health, rural interests, and other related sectors, such as energy.

As societies continue to change in this information age, so, too, will agriculture. The key to the success of this transformation will be the ability to create, process, and use information to advance agriculture and societies as a whole.

A Golden Age Is Unfolding

A golden age of agricultural communications could emerge through this transformation if we are ready to meet the challenges in store for us. Increasingly, our role involves helping people think critically and operate more efficiently while they sort through the mountains of information available to them. For communicators, this transition requires focusing on settings, states of mind, dialogue, and relationships as much as we focus on communication techniques and technologies. Our effectiveness as communicators is revealed through much more than numbers of releases or broadcasts produced, brochures created, or "hits" on a Web site. Increasingly, we measure our effectiveness in terms of behavior responses, impacts of decisions made, and returns on efforts and funds invested.

According to Selltiz, Wrightsman, and Cook (1976), agricultural communications research could have an important role in shaping this golden age:

> Social science research not only corrects perception; it expands it.... When social change occurs, the current practices may no longer

> work. But if we know why they worked in the first place, we also know why they no longer work.... In a time of rapid social change and increasing permeability of institutions, general explanations are wanted more than ever. Thus, by generating new concepts and explanations, social science can heighten our awareness of where things fit in a larger framework. (p. 5)

Throughout the history of agricultural communications, research and evaluation efforts both within and outside the profession have helped to advance our general understanding and improve the way we deliver content to a wide variety of stakeholders. However, funding challenges often limit those efforts. Also, past efforts reveal a scattershot pattern of research that has understandably been shaped by information needs of the place and time, individual interests, funding opportunities, and a wide array of other factors. Focusing our research efforts to make better use of those resources and finding ways to expand our efforts in a coordinated way can help us achieve the future we desire.

Developing and Framing a Research Agenda

In December 2005, a 27-member development team met in Orlando, Florida, to begin developing a research agenda for agricultural education and communications. The outcomes envisioned for this project included:

- a document to guide our collective research efforts,
- a vehicle to clearly communicate our priorities to external groups and funding agencies,
- a greater synergy within the broader profession,
- a focal point for research discussions within special interest groups,
- more focused, programmatic research centered on priorities, and
- more active research teams throughout the profession.

This project was the culmination of an effort that had been gaining momentum for several years. According to Ed Osborne, project coordinator and chair of the Department of Agricultural Education and Communications at the University of Florida, the idea for the project first surfaced 8 years ago at a meeting with representatives of several extramural funding agencies, including the USDA and the National Science Foundation (NSF), in Washington, DC During that meeting, the funding agencies suggested that agricultural education and communications researchers could benefit by collaborating on a research agenda focused on research priorities by specific area of interest (E. Osborne, personal communication, 2006).

The development team that convened in Orlando included officers and representatives from all of the major professional agricultural education, leadership, Extension, and communications associations (including ACE), the agriculture industry, and the National Research Council. Individuals were organized into 5 teams, each pursuing 1 of 5 dimensions of the research agenda: agricultural communications, agricultural leadership, agricultural education in community settings, agricultural education in university settings, and agricultural education in schools.

At the end of the 3-day meeting, a first draft of a 5-year research agenda had been created. The report was completed during the following year, then endorsed by the professional bodies involved and published in early 2007. It was introduced to ACE members during the 2007 conference in Albuquerque, New Mexico, and formally ratified by the organization later that year. Funding support for the meeting and report dissemination came from the National Research Council (NRC), the American Association for Agricultural Education (AAAE), and the USDA.

An Agenda and Framework for Agricultural Communications Research

The 5-member team charged with envisioning a research agenda for agricultural communications began by identifying topics for such an agenda. Team members found themselves working to identify a framework that would reflect the breadth and dynamics of this field. In addition, the team wanted to create a framework and agenda broad enough to serve agricultural communications research needs and opportunities in any society, including internationally. Team members wanted an agenda that would be focused on improving the effectiveness of public and private decision-making and problem-solving throughout the agricultural, food, fiber, and natural resource industries in all levels of society. They also wanted an agenda that would position agricultural communications at the forefront of the knowledge era.

Discussion led team members to consider knowledge management as a potentially helpful framework for research in agricultural communications during these changing times. The growth of information technology and computing has made it possible for organizations, including land-grant institutions, to utilize information and acquire knowledge in new and different ways, which gave rise to the concept of knowledge management. Knowledge management evolved in the for-profit sector as a conceptual framework for the creation, management, and utilization of information in the form of data, especially data used to make decisions (McElroy, 2000). Industry has long seen the utilization of knowledge as significant in maintaining competitive advantage. Technology has provided the impetus

for a focus in the corporate sector on knowledge management as a set of methods, techniques, and practices to manage an organization's intellectual capital (Center for Ledelse, 2002). However, there have been relatively few studies of knowledge management, and those that exist have been primarily conducted in large corporations.

Within agriculture, knowledge management has been the subject of research primarily in the agricultural development context, where a strong connection to Extension outreach and communication is typically made. Leeuwis and Van den Ban (2004), for example, drew a connection between knowledge management, rural innovation, and communication, arguing that communicative strategies must be used to foster change and development in agriculture and natural resource management based on knowledge management principles. This agricultural knowledge management framework is commonly used internationally—often within the context of communications support for agricultural and rural development (e.g., Boateng [2006]; Hinton [2003]; James [2006]; Linking Local Learners [2006]; Rangi, Day, & Asaba [2006]; Rivera, Alex, Hanson, & Birner [2006]). Its emphasis on discovery, creation, flow, selection, management, and uses of information seemed promising, as did the concepts of information sharing, networking, and collaboration across all settings.

Within the agricultural knowledge management framework, the team identified 4 areas of research priority and 18 key research questions. The team also identified nearly 60 sample research initiatives to address those questions. This work by no means represents all potential research questions and initiatives. However, it serves as a helpful starting point.

Priority Area 1: Enhance Decision-Making Within Agriculture

Who are the relevant audiences for agriculture with respect to high-priority issues?

Developing knowledge management systems that enhance the decision-making and problem-solving abilities of the various stakeholders within the agriculture industry requires a deeper understanding of diverse audiences, their behaviors, and their needs. Sample research initiatives include developing and using tools for identifying and analyzing audiences and situations, as well as assessing awareness and knowledge levels, attitudes, practices, information needs, and information-seeking behaviors among producers and other relevant stakeholders.

What are the most effective ways to identify and communicate information that has economic and social value?

In the industrial era, we focused on raw materials. In the knowledge era, we are working not just with raw materials, but also raw ideas (Bertels

& Savage, 1999). Value will lie not only in explicit knowledge (such as what we can read, see, or hear), but also in tacit knowledge. Sample research initiatives include assessing viewing and listening patterns, readership, and information sources; analyzing the development and effectiveness of communications organizations, technologies, and methods; strengthening guidelines for using coordinated rather than piecemeal approaches; and examining the economic and social returns of agricultural information.

What information do various stakeholders need to make informed decisions?

Knowledge management is a conscious strategy of getting the right information to the right people at the right time so they can take action and create value (O'Dell & Grayson, 1998). Sample research initiatives include evaluating message content and presentation, including specific media skills involved; providing guidelines for information sharing, networking, and collaboration; and identifying ethical issues and information asymmetries and imperfections.

Priority Area 2: Within and Among Societies, Help the Public Participate Effectively in Public Decision-Making Related to Agriculture

How do we reach, create awareness within, and constructively engage the public in high- priority agricultural issues?

Informed decision-making is important for both the citizens of a democracy and the leaders in government and industry whose decisions influence the health and welfare of communities, the nation, and agriculture. Sample research initiatives include analyzing levels and dynamics of public participation, providing guidelines for building networks and coalitions, developing case studies of risk communications, and improving incentives and methods for mediation and conflict management.

How do we identify, assimilate, disseminate, format, and evaluate relevant information that facilitates public decision-making about high-priority agricultural issues?

Informed decision-making requires holistic thinking. Most issues relating to agriculture are complex and include varying degrees of risk. Provided with reliable information and given solid tools with which to process it, people become better able to make decisions that are good for themselves, society, and the world. Sample research initiatives include assessing the quality and adequacy of information available for public decision-making about specific issues related to agriculture, understanding how the public interprets and values information about specific issues, and analyzing the value and effectiveness of participatory approaches.

How do we improve the amount and quality of mass media coverage of agricultural issues?

The mass media are one of the major sources of information for most individuals and groups. Therefore, the ability of the media to present detailed, accurate, and balanced information on a variety of agricultural issues is critical for informed public decisions. Sample research initiatives include examining the amount and effectiveness of media coverage of agricultural topics, identifying constraints and developing strategies to increase the amount of media coverage of such topics; developing new tools and concepts to improve accuracy, completeness, and quality of media reporting; and testing in-service training methods to help media professionals improve their skills in covering agriculture.

How will emerging technologies affect public participation in the flow of agricultural information?

Place, time, and position no longer limit the flow of information as they did in the past. The impact of digital and wireless technologies on knowledge management behaviors is currently unknown and calls for research. Sample research initiatives include identifying, adapting, and testing new information technologies to encourage and increase public participation, as well as improving applications of new and traditional media in engaging the public.

Priority Area 3: Build Competitive Societal Knowledge and Intellectual Capabilities

How do we improve thinking processes and problem-solving capabilities through the effective use of information systems?

Information only comes alive by our interpretation; we create meaning by distinguishing and valuing information. Understanding the interplay among data, information, and meaning will require much more than sophisticated models of data storage and will force us to understand the process of creating meaning (Bertels & Savage, 1999). Sample research initiatives include monitoring flows of agricultural information and developing ways to improve them, along with identifying and analyzing the forces behind cultural change as a guide for improving agricultural information systems.

How does information and media delivery affect thinking processes, problem-solving, and decision-making related to agriculture?

The task is not just to structure the information, but to structure the whole process of acquiring, processing, and sorting out this information and discovering its meaning. In other words, we need to put whole systems together so that we can effectively see patterns and act in a timely manner

(Bertels & Savage, 1999). Sample research initiatives include analyzing past and current information-processing systems related to agriculture; developing new ways, through information, to improve critical thinking and problem-solving skills among specific audiences; and identifying trends, implications, and options related to the globalization of agricultural information and media convergence.

How can we gather and make available the widely scattered literature about agricultural communications?

In *Megatrends*, Naisbitt (1982) stated that "uncontrolled and unorganized information is no longer a resource in an information society" (p. 24). The capturing and sharing of information in a useable format is critical to the future of the food and agriculture industry. Sample research initiatives include seeking ways to strengthen the efforts of the Agricultural Communications Documentation Center and other places that identify and provide such literature, as well as developing ways to capture and share expert knowledge related to effective agricultural communications.

How do we use communications networks, linkages, and approaches more effectively in agricultural knowledge management?

Digital communications methods now allow the sharing of information beyond the traditional communication boundaries of place and time. These new patterns have the potential to create value and generate new ideas. It is critical to implement new, flexible technologies and systems that support and enable communities of practice and other informal and semiformal networks of individuals and organizations. Sample research initiatives include experimenting with knowledge management tools, such as shared-interest networks, and identifying and fostering relationships with existing international professional agricultural communicator organizations.

What sectors of society contain our most valuable ideas and knowledge related to agriculture?

No one person has all the insight needed to be successful in every task and venture he or she undertakes. Real value can be found when individuals and organizations build upon and share their diverse backgrounds and experiences. Sample research initiatives include examining if and how knowledge gains value when shared with others, determining ways to encourage sharing information among agricultural interests and related stakeholders, and analyzing cultural diversity as an element in communications effectiveness.

Professional Development

What strategies can we apply to prepare today's organizations for expected shifts in agricultural knowledge management?

We live in a global marketplace, and its effects are visible everywhere. Matching local competence with global ideas calls for participation and communication across functional, organizational, and cultural frontiers (Bertels & Savage, 1999). Sample research initiatives include examining the responses of individuals and organizations at different times and in different locations in terms of their patterns of information sharing, networking, and collaborating.

How do we weave the idea of knowledge and its value into agriculture and remain able to function in the present business situation?

Toffler (1980) noted that information is more than technology because it includes social, cultural, institutional, moral, and political factors. In today's global economy, businesses and organizations are in a state of near-constant change. As new data and information emerge, individuals and organizations require a culture that values all these factors in responding to ever-changing business opportunities. Sample research initiatives include examining how knowledge era factors, such as 24/7 business hours, language challenges, and other cross-cultural factors, affect the agriculture industry at various levels, both locally and globally.

How do we balance the needs, wants, and aspirations of individuals with those of larger organizational structures related to agriculture?

Knowledge is the key to sustainable development. Rather than being merely sustained by use, it grows—especially through sharing. There will still be competition in the knowledge era, but the old understanding of "us and them" is likely to change to a more dynamic relationship (Bertels & Savage, 1999). Sample research initiatives include examining amounts, kinds, and determiners of knowledge sharing within agricultural systems and organizations and analyzing ethical standards involved in the fair exchange of agricultural information.

Priority Area 4: Develop Effective Agricultural Work Forces for Knowledge-Based Societies

What are the theoretical underpinnings of and synergistic relationships between the knowledge management concept and agricultural communications as a field of research, education, and practice?

Knowledge management embodies processes that combine data and the unique capacity of information technologies with the creative and innovative capacity of humans to communicate and create understanding. It also helps identify the related parts of each knowledge system and identifies possible

ways to connect those parts productively. Sample research initiatives include analyzing elements and features of specific agriculture-related knowledge systems; assessing the extent to which the knowledge management framework can improve communication in settings related to food, agriculture, and natural resources; and examining theoretical connections between agricultural communications and the human/social disciplines (e.g., communication, sociology, economics) to which it relates.

What are the skills and competencies necessary to improve the communication and knowledge management effectiveness of those in the agriculture workforce?

Any sector of society is dependent upon the capability of its workforce. Knowledge and information are increasingly vital parts of that capability in today's global economy. As a result, agricultural producers, processors, marketers, scientists, and others involved in the vast food, agriculture, and natural resource sectors need greater skills as communicators, information processors, and knowledge creators and managers. Sample research initiatives include assessing the communications and critical thinking skills of those working in various sectors in agriculture and developing strategies and mechanisms to strengthen such skills.

What are the skills, competencies, and resources necessary to prepare professional communicators for success in agricultural knowledge management?

Agricultural communications professionals could be among the leaders in creating knowledge management systems for the food and agriculture sector. As such, their knowledge, skills, and abilities must be at a level that ensures their continued success. Sample research initiatives include assessing the skills and perspectives that professional agricultural journalists and communicators need for working successfully in the knowledge era and strengthening courses, curricula, and other entry-level and career-long education programs for professionals in this field.

Benefits of a Framework

This agenda is organized within what may be the first comprehensive, integrative framework for the broad and diverse body of research in our field. Agricultural knowledge management seems to hold promise in several ways. It offers a broad framework to integrate diverse elements, such as information flow and function (e.g., creation, retention, transfer, use), types of knowledge (e.g., explicit or tacit), types of agents (e.g., individuals and organizations), and types of knowledge management tools (e.g., knowledge mapping, social network analysis). "Many of these elements are currently being addressed in agricultural communications research and are inviting integration" (Evans, 2006, p. 22).

Such a framework can help us see where our current and past research fits within the larger research agenda. In fact, it can help researchers see where they are contributing the most. Researchers can also use the framework to identify unanswered questions and knowledge gaps, as well as to find promising new fronts for their efforts.

This framework leaves unlimited room for addressing specific topics. It accommodates research about topics as diverse as the communications aspects of food labeling, drought issues, global warming, international trade, risk communications, precision farming, diets of rural youth, bio-based energy, feedlot runoff, family relations, and rural community development. All topics related to agriculture can fit into the framework.

Finally, a geographically inclusive framework such as this can serve researchers throughout the world. It can encourage and guide agricultural communications research within all geographic areas and cultures, as well as among them. The geographically inclusive nature of such a framework also helps researchers address global issues, such as avian flu, agricultural biotechnology, and agricultural sustainability.

Conclusions

In the introduction to their book *Megatrends 2000*, Naisbitt and Aburdene (1991) looked forward to the 21st century with the following thoughts:

> When we think of the 21st century, we think technology: space travel, biotechnology, robots. But the face of the future is more complex than the technology we use to envision it. The most exciting breakthroughs of the 21st century will occur not because of technology but because of an expanding concept of what it means to be human. (p. 16)

Our profession is growing, but the global population is urbanizing, and public understanding of agriculture is decreasing. Yet, as noted earlier, this same population will help shape the agricultural industry in the future. Agricultural sustainability, land use and natural resource management, food safety, biotechnology, and bio-based energy are just a few of the areas that will be examined during the coming years and decades—each from the perspective of what it means to the future of society.

The 18 key research questions listed in this manuscript reflect important issues and concerns for the future of agricultural communications. It is clear that, based on these research questions, the following priority areas for investigation are key to the future of the agricultural communications profession and agriculture as a whole:

1. Enhance decision-making within agriculture.
2. Help citizens participate effectively in public decision-making related to agriculture.
3. Help societies build strong knowledge and intellectual capabilities.
4. Develop effective agricultural work forces for knowledge-based societies.

It is incumbent upon each of us in agricultural communications to focus our efforts, including our research, in order to maximize our potential impact and reach a wider variety of stakeholders. These research questions and priority initiatives are proposed to help develop a comprehensive, focused, dynamic research agenda to support our efforts for the future. In Naisbitt's latest book *Mind Set!: Reset Your Thinking and See the Future* (2006), he describes the future as a picture puzzle.

> The future is a collection of possibilities, directions, events, twists and turns, advances, and surprises. As time passes, everything finds its place and together all pieces form a new picture of the world. In a projection of the future, we have to anticipate where the pieces will go, and the better we understand the connections, the more accurate the picture will be. (p. 43)

We do not know what the final picture of our future will look like. However, we must move into this new information era and begin to manage knowledge like never before. This can become a golden age in our shared field of interest if we both embrace and lead this change. The agricultural well-being of society may depend on our ability to communicate effectively in a dynamic knowledge era.

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Keywords

agriculture, agricultural communications, communications research, research agenda, knowledge management, information age

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Is Print Dead? Characterizing the Influence of Print and Online Audiences From a Readership Survey

Peg Herring and Bob Rost

Abstract

Oregon's Agricultural Progress magazine, published by the Oregon State University Agricultural Experiment Station, has been distributed to Oregonians as a print publication for over 50 years. Recently, a Web version of the magazine, *Oregon's Agricultural Progress Online*, was introduced. The publication's editors conducted a readership survey intended to profile both print and online readers, learn more about their opinions of the two media, and characterize their involvement in communities across the state. While response to the online survey was negligible, the print survey received a 76% response rate from general subscribers. It characterized an engaged, responsive readership who share the print magazine with others and who function as self-identified stakeholders for the College of Agricultural Sciences and Oregon's Agricultural Experiment Station. Institutions with print periodicals may want to use a similar survey approach to explore the influence of their readers and how print-based communications may be shared through communities where loyal readers live and work.

So What?

Is print dead? This question is fueling a debate among communicators as they face the choice of online or print communications. Which medium has the most engagement? Who are the readers and what influence do they have in their communities? To learn more about who reads what and how readers share information, the editors of *Oregon's Agricultural Progress* magazine conducted a market-based survey to profile both print and online readers and characterize their involvement in communities across the state.

Research

Is print dead? This question is being debated among communicators in both the educational and commercial arenas. Newspapers and magazines are losing advertising dollars while a multiplicity of new electronic gadgets offers instant information to an ever more mobile audience. The trend toward electronic access of news was underscored in a recent study by the Carnegie Corporation, which reports that people ages 18 to 34 no longer rely on traditional print and broadcast media for their news, opting instead for the Internet as their news medium of choice (Brown, 2005).

A cursory view of the literature suggests that ink on paper is a dying medium and that influence is brokered less in print than in electronic media (Pew Internet and American Life Project, 2006). Audiences are moving toward information on demand, to media that can tell them what they want to know when they want to know it (Project for Excellence in Journalism, 2008).

However, when Jeff Jarvis, an Internet commentator and prolific blogger, asserted that print is where words go to die, his blog attracted a chorus of dissenting opinions from readers—from *online* readers—defending print as the most reliable and longest-lasting form of archiving information, more durable than electronics, and more capable of delivering graphics and aesthetically pleasing pages (Jarvis, 2006). Others have defended print publications, especially magazines, for their ability to provide high-quality content to a clearly identified community of readers (Magazine Publishers of America, 2006). More reliable than a computer, with a seamless user interface, print magazines require no instruction manuals or batteries and can be carried anywhere. In short, the printed word "is superbly designed, wickedly functional, infinitely useful and beloved more passionately than any gadget in a Best Buy" (Levy, 2007, ¶ 1).

Both sides of the print-versus-online debate claim to have a community of devoted readers. But who are these readers? In planning communications and choosing to invest in print or online media, organizations, including land-grant universities, need to know who they are reaching with their publications and what influence their readers have in their communities. Therefore, the authors (the editors of *Oregon's Agricultural Progress* magazine) undertook to design and conduct a readership survey that would characterize the audiences that their magazine reaches in print and online to help them plan where to invest communications efforts.

Purpose

Readership analyses are among the most important types of evaluation research in agriculture communications today (Wood-Turley & Tucker, 2003) and a valuable tool for analyzing reader opinion (Connors, Elliot, & Heinze,

1994). A continuing challenge for land-grant university communicators is determining how well publications and other information sources meet users' needs (Tucker, Wood-Turley, & Truong, 1997).

With this in mind, in 2005, the editors of *Oregon's Agricultural Progress* magazine at Oregon State University conducted a readership survey to characterize their print and online audiences, to learn how the magazine contributes to readers' knowledge about agriculture and natural resource research, and to identify readers' community engagement. In addition, the editors wanted a measurement of the "pass-along readership" (Snowdon, 1995) of the magazine through subscribers' circles of influence.

The editors took a market approach to surveying their readerships. Market surveys attempt to characterize a product's market—the consumers of the product—or in this case, the readers of the magazine. The ability to document an influential market can add value to a product, and in commercial magazines, it can boost ad revenues (Reichheld, 2003). By characterizing readers' influence or engagement in their communities, the authors hoped to demonstrate the value of *Oregon's Agricultural Progress* magazine to university administrators. The editors did not ask about readability of the stories or quality of the photos, as earlier surveys of the magazine had done. By seeking to understand the readership itself and measure the community involvement of that readership, the editors followed an approach more often used by business market surveys. The editors sought to determine:

1. Who is reading the magazine? (What is their gender and age? What is the size and location of their communities?)
2. What is their level of community involvement? (Where do they work and volunteer? How likely are they to vote?)
3. How much do they value the information in the magazine? (How much of the magazine do they read? Do they find the information useful? Do they share the information? Would they recommend the magazine to colleagues?)

Because the magazine is circulated to a significant number of Oregon high schools and news media, the editors made an effort to survey science teachers and reporters as well as the print magazine's general subscribers, in order to reach readers in settings where the potential pass-along rate is high (Suvedi, Heinze, & Ferris, 1991).

Background

Oregon's Agricultural Progress magazine was established in 1954 to communicate knowledge generated by OSU Agricultural Experiment Station researchers to the general public. Subscriptions to the magazine are

by request of the individual and are free to Oregon citizens. Circulation has held steady over the past several years at about 9,000 general subscribers and approximately 1,000 schools, libraries, and media outlets. *Oregon's Agricultural Progress* magazine is not only a report to taxpayers from the Agricultural Experiment Station, but also an accountability vehicle that highlights the valuable contributions of the Experiment Station and OSU's College of Agricultural Sciences to Oregon's communities and people. It is produced by a team of editors, writers, photographers, and designers in the OSU Department of Extension and Experiment Station Communications.

Prior to the creation of the magazine, the OSU Agricultural Experiment Station published annual reports, but these were considered to be ineffective tools for communicating with the public. Since the transition to a magazine format, *Progress* editors have periodically conducted readership surveys to assess the communication impact of the publication. Previous readership surveys conducted in 1970, 1982, and 1989 focused on readability—reader interest in the magazine, amount of material read by individuals in a particular issue, and reader opinions about the quality of feature articles and photos. The editors reviewed those older surveys and designed some of the questions in the current survey to provide comparable data. However, the 2005 survey took more of a marketing approach to readership in order to learn more about the civic involvement of readers as a measure of their influence in community circles.

In addition, the survey included online readers for the first time. *Oregon's Agricultural Progress Online* (http://oregonprogress.oregonstate.edu) was launched in 1998. According to Web statistics, use of the *Progress Online* site has increased steadily over the past several years. In 2005, for example, Web statistics indicated a total of 56,800 visitor sessions to the site. A visitor session is defined as a user visiting one or more pages on a Web site during a specified time period, or session, usually lasting less than 30 minutes. With this much traffic, the editors expected that a survey of *Progress Online* readers would yield interesting and useful results.

The editors were granted $11,500 from their department's carry-over funds to work with the OSU Survey Research Center to conduct a survey that would build on data from older surveys, characterize the current print and online readership, and identify their readers' circles of influence.

Methods

In planning the survey, the editors interviewed three groups with an interest in the survey results: the College of Agricultural Sciences administrators and Agricultural Experiment Station supervisors who underwrite the publication, the Agricultural Research Foundation that helps

fund the expense of color reproduction for the magazine, and two of the magazine's former editors who guided the publication's development over much of its 54-year history.

All three groups agreed that demographic information, including readers' ages, genders, work sectors, geographic distribution, and the size of their communities, would be an important component of the survey. The editors also included questions that would characterize readers' civic involvement: Do they vote regularly? Do they volunteer their time? Do they belong to any civic organizations? In what sectors do they work and volunteer? These data had not been collected in earlier surveys and their addition would provide a measure of community engagement and influence.

Of course, the editors also wanted to know what readers thought of the magazine, what knowledge readers gain from it, how they share information learned from the magazine, and—the gold-standard question, according to the *Harvard Business Review*—whether readers would recommend the magazine to a friend or colleague (Reichheld, 2003).

The Survey Research Center on the Oregon State campus provided the editors with a team of survey specialists, some of whom had worked on earlier *Progress* readership surveys. This team helped to design three surveys, each targeted to a particular audience: 1) subscribers to the print magazine, 2) specialty groups (science educators and Oregon news media) who receive the print magazine, and 3) online visitors to the Web-based magazine.

The survey questions for all three target audiences were similar and in many cases identical, designed to gather demographic and civic information, assess reader interest in the publication, and explore if and how readers share information in the magazine with others. The editors hoped to compare demographics and community involvement among the three types of readers.

All surveys included a combination of multiple-choice and open-ended questions. In the end, three surveys were developed: an 18-question survey for general print subscribers sent to a random sample of 753 subscribers, a 10-question survey sent to 600 teachers and 284 journalists who receive the magazine directly, and a 12-question survey for online readers that was posted on the *Oregon's Agricultural Progress Online* Web site.

The OSU Survey Research Center mailed the print surveys to the general subscribers, teachers, and journalists following distribution of the fall 2004 issue of the print magazine. The online version of the survey was posted on the *Progress Online* Web site when the fall 2004 issue was placed online in November.

Aside from mentioning the survey in the pages of the print magazine and inviting readers to participate, the editors did not advertise the online survey. The population for the online survey was self-selecting. Respondents were Web users who viewed *Progress Online* while the survey was posted and chose to complete and submit the survey. The survey remained active through 2005 so the editors could continue to collect survey data from users of subsequent issues.

The OSU Survey Research Center oversaw the survey, using Statistical Analysis System (SAS) software for data entry and processing. Simple frequency analysis was used to summarize and describe the compiled data. The SAS frequency analysis tools were used to generate frequencies, percentages, cumulative frequencies, and cumulative percentages.

Results

General Subscribers to the Print Magazine

Results show that *Oregon's Agricultural Progress* print magazine has an engaged and supportive readership. The survey sampled 753 general print subscribers (a 5% margin of error) and received a 76% response rate, considered high by mail survey standards. The survey suggested that *Progress* subscribers are loyal readers. One-third (33%) have subscribed for more than 10 years, and 24% for 6 to 10 years. More than half (51%) reported that they usually read more than three-quarters of each issue of the magazine (Table 1).

Subscribers value the magazine. Results show that 96% of the responding print subscribers rated the magazine as informative to very informative. Responding print subscribers also share the magazine. Results show 83% would recommend the magazine to a friend or colleague (Table 1). And more than three-fourths (78%) pass the magazine on to others or donate them to schools or libraries (Figure 1).

The editors found that *Progress* readers are older: 47% are 65 years or older, 46% are between the ages of 45 and 64, and only 7% are 44 years or younger. *Progress* readers are from all across the state and work in many sectors. According to the survey, 21% of respondents live in the Portland metropolitan area, where over half of the state's population is concentrated. The remaining 79% are from throughout the state (Table 2).

Progress readers are involved in their communities (Figure 2). Ninety-eight percent say they vote; 63% volunteer their time; and 72% currently belong to one or more community service, political, or education support organizations (Table 3.)

Table 1. *Subscriber Responses* (N = 572)

Variables	Frequency	Percent
How long a subscriber?		
< 1 year	30	5.24
1-3 years	84	14.69
> 3, but < 6 years	106	18.53
6-10 years	140	24.48
> 10 years	192	33.57
No response	20	3.50
How much of the magazine *Oregon's Agricultural Progress* do you usually read?		
> 75%	291	50.87
50-74%	153	26.75
25-49%	93	16.26
< 25%	31	5.42
No response	4	0.70
How informative is *Progress* magazine to you personally?		
Very informative	365	63.81
Somewhat informative	187	32.69
Not too informative	13	2.27
Not at all informative	3	0.52
No response	4	0.70
Would you recommend *Progress* magazine to a friend?		
Yes, I would	475	83.04
Maybe	70	12.24
Probably not	20	3.50
No, I would not	2	0.35
No response	5	0.87

Special Groups Receiving the Print Magazine

The adjusted response rate for science teachers and news media was disappointingly small (11% and 13%, respectively). In both cases, it seems possible that the people receiving the magazine and, therefore, the survey (an office assistant, for example) are not the people who read the magazine.

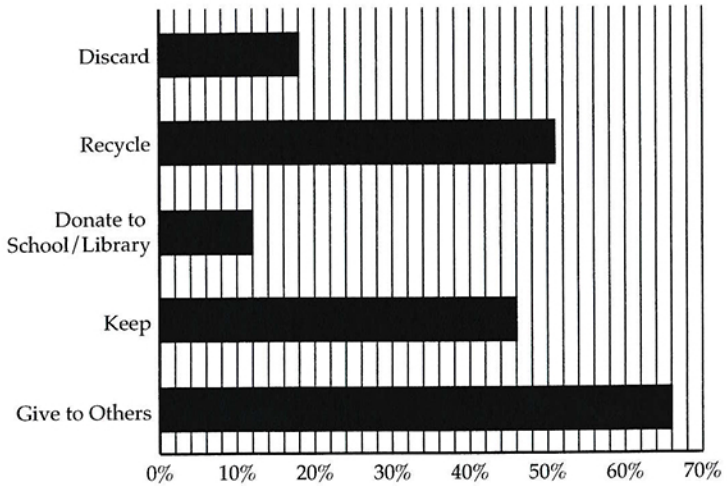

Figure 1. Responses regarding what readers do with past issues. ($N = 572$)

Online Survey

The online survey did not generate enough response for data analysis. Despite leaving the survey in place on the *Progress Online* Web site for more than a year and linking every *Progress Online* story to a prominent "Stop Sign" alert requesting that visitors to the site take the survey, the survey received just 11 responses.

Discussion

Is a print magazine still relevant in a world increasingly dominated by electronic media? Clearly, the print version of *Oregon's Agricultural Progress* magazine has a responsive and civically engaged readership. The statistics characterize an audience that represents both urban and rural communities throughout the state across many business sectors. Readers are active in community organizations and they vote. They read most of the magazine and they share it with others. The high percentage (66%) of respondents who indicated that they share their copy of *Progress* with others indicates a significant "pass-along" readership for the magazine. This suggests that each issue of the magazine distributed to subscribers has the potential to reach a pool of readers whose only connection to the publication is their association with a current *Progress* subscriber in their community.

In addition, nearly three-quarters of the completed print surveys included supplementary written comments about memorable articles or photographs from past issues, topics the readers would like to see covered in future issues, and general impressions of the content and quality of the

Table 2. *Respondent Demographics* (N = 572)

Variables	Frequency	Percent
Age group?		
25-34	5	0.87
35-44	34	5.94
45-54	95	16.61
55-64	164	28.67
65 or over	271	47.38
No response	3	0.52
Where in Oregon do you live?		
Portland metro area	122	21.33
Willamette Valley	246	43.01
Oregon Coast	47	8.22
Southern Oregon	57	9.97
Central Oregon or Eastern Oregon	92	16.08
No response	8	1.40
In what area do you work or volunteer?		
Do not work or volunteer	105	18.36
Agriculture	142	24.83
Food	15	2.62
Natural resources	25	4.37
Tourism	4	0.70
High tech	10	1.75
Other industry	14	2.45
Government agency	39	6.82
Education (K-12)	25	4.37
Higher ed./adult ed.	27	4.72
Medical/legal services	16	2.80
Other services	17	2.97
Other	41	7.17
More than one selected	41	7.17
No response	51	8.92

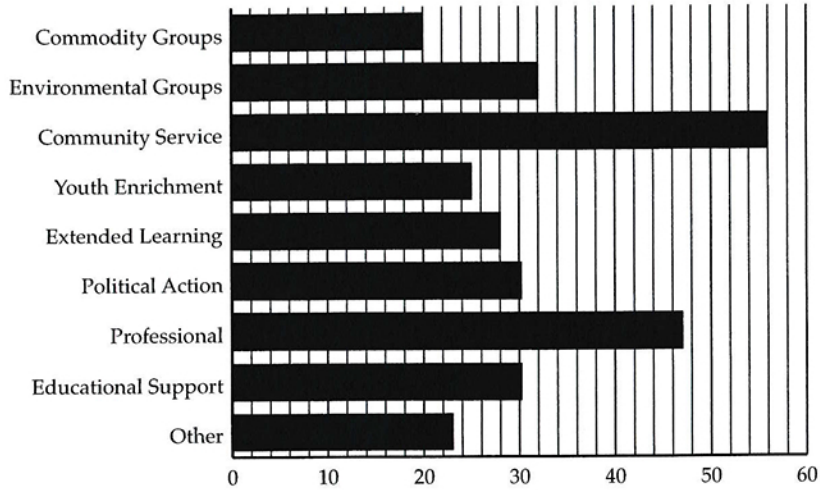

Figure 2. Respondents' organizational affiliations (many indicated belonging to multiple groups). ($N = 410$)

Table 3. *Respondents' Community Involvement* (N = 572)

Variables	Frequency	Percent
Do you vote in Oregon elections?		
I usually vote	561	98.08
I usually don't vote	8	1.40
No response	3	0.52
Have you volunteered with an organization within the last 12 months?		
No	200	34.97
Yes	363	63.46
No response	9	1.57
Do you currently belong to any organizations?		
No	146	25.52
Yes	410	71.68
No response	16	2.80

magazine. The willingness to add written comments to an already lengthy survey suggested an engaged readership for which the magazine provided meaningful communications.

These statistics validate an important return on the investment the college makes to support the magazine as a medium of public education and

accountability. In many ways, *Progress* readers function as stakeholders for Oregon State University and the College of Agricultural Sciences as they read and share stories from the magazine.

But what about younger readers? The editors received very few surveys from people between the ages of 18 and 34, the group identified by the Carnegie Report as turning away from traditional sources of news and information (Brown, 2005). Two conclusions are possible: either few people between the ages of 18 and 34 are reading *Oregon's Agricultural Progress* magazine, or younger readers have no interest in filling out a survey questionnaire.

And what about online readers? Despite the prominence the editors gave to its position on the Web site, and despite its long-term presence on the site, the online survey did not attract a significant response from its readership, although the site received nearly 57,000 visitor sessions during the time the survey was posted. In retrospect, the Web component of the survey may have failed because it was designed to be self-selecting. In the absence of a direct personalized appeal to take the survey—comparable to receiving the printed request and survey in the mail—potential online respondents apparently saw no compelling reason to volunteer their time for the survey. Recent research offers some support for this conclusion. According to Kiernan, Kiernan, Oyler, and Gilles (2005), online surveys have poor response rates, suggesting resistance to this method. Kiernan et al. added that Web surveys parallel the poor response rates for e-mail surveys that are self-selecting.

Conclusions

Print is not dead, although print readers of *Oregon's Agricultural Progress* magazine are getting older. This survey tapped a responsive audience among print readers that is engaged and willing to fill out and mail a survey questionnaire. In contrast, the online survey was dismissed by nearly 57,000 Web visitors who saw no reason to take the time to respond.

The original purpose of the study was *not* to compare survey methodologies, but to use survey methods to compare the readership of print and online magazines. A low response rate from online readers made it impossible to make these comparisons. Unfortunately, the survey may not have been passed to the primary readers at the schools or media bureaus. The editors recommend that future surveys include a note clearly requesting that the questionnaire be passed to specific science teachers and reporters.

However, the enthusiastic response from print readers suggested a compelling argument for continuing to print the magazine. The survey revealed a loyal print readership that is civically engaged, values the magazine, and shares it with their communities. In other words, the print

magazine reaches influential people—across the state and in many sectors—who share information from the university and the college within their circles of influence as community members, volunteers, and voters.

The readership survey provided evidence that, despite their age, readers of *Oregon's Agricultural Progress* magazine represent a supportive community across the state whose members serve as stakeholders for the College of Agricultural Sciences. These data provide compelling evidence that the print magazine communicates effectively with an influential audience spread across the state and many sectors.

The editors reported their findings to the three groups they had initially interviewed for advice before developing the survey: college administrators, foundation funders, and former *Progress* editors. All three groups found new reasons to continue their support for the venerable print magazine that remains the voice for agricultural progress in Oregon.

In addition, the survey helped to identify future possibilities to increase the magazine's effectiveness in print and online:

1. Engage online readers through the influence of print readers. Channel the interest of print readers to additional features online by publishing links to more information in the print magazine. Encourage print readers to share stories by e-mail and contribute to online conversations about particular topics featured in each issue of the print magazine.
2. Engage younger audiences through the influence of older readers. In particular, engage high-school-age readers through their teachers by developing curricula and learning guides for *Progress Online*. In addition, engage college-age readers through their parents by sending subscriptions to families of agricultural sciences undergraduates to stimulate conversations at home.

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Keywords

print communications, online communications, readership survey, market survey, research magazine, Oregon State University, *Oregon's Agricultural Progress*, subscriber survey

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The Agricultural Blogosphere: A Snapshot of New Agricultural Communicators Online

Emily Rhoades and Kelsey Hall

Abstract

Political science and journalism researchers have extensively explored the characteristics of blogs and the users who produce and read them. However, blogging research has tended to focus on a few specific genres, such as politics and popular culture, and has not usually included agricultural blogging. Blogs have emerged as an alternative to traditional media sources, making it important to understand if the trend of minimal agricultural coverage continues online. It is also important to understand who serves as "reporters" of agriculture in the blogosphere. This content analysis of 52 agriculture blogs—all of which originate in North America—shows that while many characteristics of these blogs are similar to those of other genres, the age of the blogger and frequency of blogging tend to be different. While many mainstream blogs serve as personal journals offering glimpses into the author's life, agriculture blogs mainly focus on filtering news and information for readers. These blogs cover agricultural issues ranging from livestock and crops to biotechnology, biodiesel, and politics.

So What?

For years, agricultural communicators have monitored the mainstream press to see how it is covering issues of agricultural importance. However, with the advent of blogging technology, that conversation is no longer in the hands of a few. As communicators, we must be aware of how agriculture is portrayed and covered in the blogosphere.

Merriam-Webster recognized "blog" in 2004 as the number-one word for the year (CNN.com, 2004). While many individuals credit this development to the explosion of political blogs during the 2004 election (Herring, Scheidt, Kouper, & Wright, 2007; Tremayne, 2007), blogging technology had been making its mark for several years already (Blood, 2002). The term "blog," or

"Weblog," dates back to 1990 and is used to describe a reverse chronological presentation of information that often is written in first person, includes links to other online content, and may have a listing of links to other blogs (a blogroll) (Tremayne).

First developed in the 1990s, blogs did not see steady growth until 1999, when the first free Weblog tools were launched (Blood, 2002). Once applications such as Pita, Blogger, and Groksoup launched, blogging became increasingly popular (Herring, Scheidt, Bonus, & Wright, 2004). These applications allow easy self-publication of information for a potentially large audience (Herring et al., 2007). It is estimated that there are more than 165 million blogs on the Web (*blo.gs*, n.d.) and 12 million adults in America who publish their own blogs (Lenhart & Fox, 2006). Journalists, educators, and business organizations are just some of the individuals embracing this new communication tool (Fannin & Chenault, 2005; Festa, 2004; Robinson, 2006). While political science and journalism researchers have studied the characteristics of blogs and the users who produce and read them, some topics, such as agriculture, have not yet been a focus of blogging research.

Given the recent scares about *E. coli* and other food-borne pathogens and the resulting media coverage, it is vital that published agricultural information be accurate and be perceived as accurate by the public because of its significant impact on society and public health (Terry & Lawver, 1995). As important as agriculture and science information is, researchers argue that the media generally ignores this subject or covers it only minimally (Pawlick, 2001). As blogs have emerged as an alternative to traditional media sources (Robinson, 2006), agriculturalists and communicators must understand to what extent agricultural topics will be covered online. It is also important to understand who serves as "reporters" of agriculture in the blogosphere and what these blogs look like in relation to other blogs.

Blogging Characteristics

Blogs offer a service to their readers by serving as a filter of that day's news (Fannin & Chenault, 2005). Many conversations found on blogs contain discussions of current news topics or issues, accompanied by links to further information, the author's thoughts on the issue, and the facts the author feels are pertinent (Blood, 2002). Given the vast amount of information available online, blogs on specific topics offer "one-stop shopping" for prescanned Web information (Blood). While some blogs talk about the news of the day, other, more personal blogs simply discuss details of the writer's day; many of these blogs have smaller, community-like audiences (Trammell & Keshelashvili, 2005). Readers can interact about the topic through conversational exchanges with the blog author, or blogger, through the commenting function found on most blogs (Herring et al., 2004).

Filters, personal journals, k(nowledge)-logs, and mixed blogs are the four classifications of blogs developed by researchers (Herring et al., 2007). Personal journals, which resemble online diaries, are the most popular with traditional bloggers. In a longitudinal study of 457 blogs from spring 2003 to spring 2004, Herring and colleagues (2007) found that personal journals were the most common type of blog. Filter blogs, which Herring and colleagues (2007) found to be the second most common type, are described as blogs where the blogger surfs the Web and brings certain items to readers' attention while ignoring other information (Tremayne, 2007). Personal journals have more of an inward focus, while filter blogs have more of an outward focus (Tremayne). Filter blogs direct readers to other sites and tend to focus on politics or current events (Tremayne). Knowledge logs, or k-logs, typically come from organizations or institutions whose goal is to share knowledge (Herring et al., 2004). The last type of blog described by researchers is the mixed blog, which has qualities of all of the previous types (Herring et al., 2004; Herring et al., 2007; Trammell & Keshelashvili, 2005; Tremayne).

Most blogs are updated frequently. Herring and colleagues in 2004 found that the majority of blogs they studied were updated within a day. The blogs however, had a mean of 2.2 days between updates for the whole sample. Other popular blog features include archives of past entries, badges (small icons advertising products or group affiliations), images, advertisements, calendars, syndication services (such as RSS feeds), comments, blogrolls, links, and categories (used to organize blog entries into topics) (Herring et al., 2004; Herring et al., 2007; Sundar, Edwards, Hu, & Stavrositu, 2007; Trammell & Keshelashvili, 2005).

The Blogger and the Blog Reader

A recent Pew Internet study found that 8% of Internet users keep a blog and that 39% of Internet users, or 57 million Americans, read a blog regularly (Lenhart & Fox, 2006). The same study noted that bloggers tend to be under the age of 30 and Caucasian, and they tend to live in the suburbs (Lenhart & Fox). Only 13% of bloggers studied live in rural regions of the United States. However, according to the Pew Internet and American Life Project, only 16% of rural Americans use the Internet, indicating that those that do may be aware of blogging (Lenhart & Fox).

Several studies have found that bloggers tend to be male (Herring et al., 2004; Trammel & Keshelashvili, 2005); however, other authors have found women to be the dominant blogging gender (Sundar et al., 2007). The difference could be due to the genre of blogs studied by each researcher. Male authors tend to dominate blogs covering technology and politics

(Herring et al.), but Sundar and colleagues, in a study on health blogs, found that women bloggers dominated. In their Pew Internet study covering all bloggers (not just one genre), Lenhart and Fox (2006) found that the population of blog authors is almost evenly split in terms of gender (54% male and 46% female).

When it comes to self-presentation on their blogs, findings vary as to how much bloggers reveal about their identity to their readers. The Pew study noted that 55% of bloggers blogged under pseudonyms, while 46% used their own names when blogging (Lenhart & Fox, 2006). However, a study of A-list (or popular) bloggers by Trammell and Keshelashvili (2005) found that 83% were willing to reveal their full names and 89% shared contact information, such as an e-mail address. Trammell and Keshelashvili also noted that 68% shared personal facts, biographies, and/or social status with readers. In a study of 203 random blogs, Herring and colleagues (2004) found that 92% shared some form of name, and of those who shared a name, 28% used a pseudonym. Fifty-four percent shared some other form of personal information with readers (Herring et al.). Both studies found that only a small percentage of bloggers displayed a personal photograph. Two different studies found that females tended to disclose more personal information on their blogs than males (Sundar et al., 2007; Trammel & Keshelashvili, 2005), with Sundar finding that personal blog sites tended to provide more profile information than professional blogs.

In a study of blog readers, Kaye (2007) found that 16.8% are motivated to read blogs for the information presentation, while 16.1% find reading blogs personally fulfilling. Study respondents stated that they read blogs because the information is presented in a way not found in other media. Respondents also described blogs as an alternative to traditional media sources. Many readers find it attractive that bloggers admit their biases up front; indeed, many bloggers are turning to blogging for their news information for this reason (Kaye). In one study of blog readers, Johnson and Kaye (2004) found that 76.8% relied heavily on blogs as their source for information on the Iraq war.

Bloggers as Journalists

Because blogs serve as a source of "citizen journalism," several studies have analyzed users' opinions of the credibility of blogs. Johnson and Kaye (2004) found that blog users rated Weblogs as just as credible as traditional media sources, if not more credible. In a study of political blogs, Kaid and Postelnicu (2007) found that young adults believed information on a blog without question, regardless of whether the information came from a political expert, independent group, or a celebrity. Researchers also found

that blogs rated higher than other media in terms of depth of information, but rated lower in fairness of coverage (Johnson & Kaye, 2004). Johnson and Kaye stated that the more users relied on blogs, the higher their assessment of blogs' credibility. In contrast, however, they found that the majority of blog users (50.2%) consider blogs "somewhat" or "not very" accurate (Johnson & Kaye). The study concluded that many blog users tend to seek out information that supports their preexisting views.

While many users trust bloggers for information, many bloggers do not see themselves as journalists (Lenhart & Fox, 2006). However, 57% include links to original sources and 56% spend extra time verifying the facts they include in posts. "Citizen journalism," when a blogger serves as a one-person news crew and then publishes his or her impressions online, is currently a topic of much discussion in the world of journalism (Romano, 2005). Nowhere were citizen journalists acting as news crews more in evidence than at the political conventions in 2004, when an estimated 200 bloggers applied for press passes to the Democratic convention (Abrahamson, 2005).

The mainstream media has taken notice of this new form of journalism and has adopted it (Rosen, 2004). Many media organizations integrate journalism blogs (j-blogs) into their sites to compete with the independent "citizen journalists" (Robinson, 2006). Reporters see j-blogs as a way to compete with blogs that are trying to provide alternatives to the stories published in the mass media. Some reporters blur the lines of journalism in these blogs by being more relaxed in their reporting and their use of sources. However, many are trying to maintain their journalistic integrity by combining their traditional media articles and newscasts with their blogs. By referring to their traditional reports on their blogs, reporters feel they establish the credibility of their posts (Robinson, 2006).

Agriculture Blogging

Because most research conducted on blogs occurred after the 2004 "blogging explosion," this is still an understudied medium when compared to more traditional news venues, such as newspapers, television broadcasts, and even the Internet. Most studies thus far have focused on blogs in general (Herring et al., 2004; Papacharissi, 2007), political blogs (Meraz, 2007; Scott, 2007), j-blogs (Bentley et al., 2007; Robinson, 2006), or A-list blogs (Herring et al., 2005; Trammel & Keshelashvili, 2005). Few research studies have focused on the genre of blogs covering agricultural and rural life. Researchers and practitioners have published several pieces looking at how agricultural journalists and communicators are using, or should be using, blogging, but no researchers have looked at the exact make-up of these blogs (Fannin & Chenault, 2005; Mays, 2005; Zimmerman, 2005a; Zimmerman, 2005b). Until

now, it has not been known how and whether such blogs differ from blogs covering other topics.

Fannin and Chenault (2005) reported on the usage of blogging in 2004 by Texas A&M University's agricultural communications department to attract journalists and nonmedia consumers' attention to its beef cattle short course. According to the researchers, two communicators posted stories, images, and audio interviews to the site over the 3-day short course through a blog. Researchers asked select media professionals to monitor the blog and offer comments. Conclusions from the study indicated that blogging could become a useful tool for covering agricultural news events, and reporters appreciated the updated information and story ideas (Fannin & Chenault).

While no other research studies have focused on agricultural blogging, several professional organizations have discussed the use of blogging to reach rural audiences. The University of Illinois (2005) made use of blogging to reach farmers with information about crop marketing, financial management, and other topics from their Extension service. Mays (2005) described blogging, other new technologies, and their relation to new media in a past issue of *AgriMarketing*. Zimmerman (2005b) continued the conversation with agricultural marketers by describing blogs as a valuable business tool that can provide on-site event coverage to personal customer contacts. Zimmerman (2005a) further described the potential for blogs to allow a window of transparency into an agricultural organization. According to Zimmerman (2005a), this window can both bring credibility to a message and serve as a marketing and public relations tool to reach targeted audiences.

Theoretical Framework

Credibility and trust are extremely important in today's world of high-profile agriculture news. Because agriculture generally receives little attention from the mainstream media, it is important to understand how it is covered online. It is also important to understand how the media affects what is discussed on blogs as well as how blogs affect public perception. McCombs and Shaw (1972) described how traditional media have an agenda-setting function in society. By covering certain issues in their publications, they put those issues on the public's agenda and increase their importance. Relationships have been noted between the coverage an issue receives and the issue's importance to the public (Baran & Davis, 2003). Journalists serve as gatekeepers for information by determining what should be printed, thus signifying to readers what is significant. Bloggers do essentially the same thing by deciding what to publish on their blogs. In an experiment with college students, Trammell (2006) found that blogs had the same agenda-

setting effect on readers as traditional media. Drezner and Farrell (2004) noted similar results when looking at political blogs during the presidential election. They found that when popular political blogs discussed new or neglected political issues, it would set an agenda for large traditional media outlets to then cover.

Purpose and Objectives

The purpose of the study was to provide a general description of the current state of blogging on agriculture-related topics. The use of blogging in business and politics is well documented, but little to no research has looked into how agriculturalists, agricultural communicators, and rural citizens are adopting this new form of media to spread their stories. No research to date has examined what topics agriculturalists are blogging about and what topics they may be putting into the public agenda. Blogging has allowed many new voices to enter the communication arena, and it is important to understand who is using blogging and how. Researchers developed the following objectives to address this purpose:

1. Describe the basic characteristics of blogs covering agriculture issues.
2. Determine who is blogging about agriculture in terms of age, gender, and occupation.
3. Describe the topics covered in agriculture blogs and determine the level of formality of the writing in such blogs.

Methods

Study researchers used a quantitative content analysis of agricultural blogs in North America to collect study data. "Content analysis is the systematic assignment of communication content to categories according to rules, and the analysis of relationships involving these categories using statistical method" (Riffe, Lacy, & Fico, 1998, p. 2). Content analysis is seen as an effective and reliable method to explore the nature of blogs (Herring et al., 2004; Herring et al., 2007; Papacharissi, 2007; Trammell & Keshelashvili, 2005).

Due to the ever-changing nature of blogs, a complete directory of current blogs does not exist, making a random sample impossible to obtain (Trammell & Keshelashvili, 2005). Therefore, researchers pulled a purposeful sample using Technorati and Best of the Web directories. Researchers searched for agricultural blogs in both directories and then combined the resulting lists to develop the sample of agricultural blogs studied. Technorati currently tracks 63.2 million blogs (*About Technorati*, n.d.) and offers users the opportunity to search for discussions on specific topics or view a ranking of the top 100 blog sites (Herring et al., 2005). Developed in 1994, Best of the

Web provides an all-inclusive directory that classifies Web sites based on their usability and substantive content (*About Best of the Web*, n.d.). The study researchers cross-checked other popular directories used in research, such as blo.gs (Herring et al., 2004; Herring et al., 2005) and popdex (Trammell & Keshelashvili, 2005) to ensure the most complete sample possible.

Researchers excluded blogs that had not been updated in the 10 months preceding, since the primary interest of the study was active blogs. Also excluded from the study were active blogs originating outside of the United States or Canada. Researchers identified 58 blogs that could be classified as current. Five of these blogs were determined to originate outside of the United States or Canada, and one was not a traditional blog based on the definitions described earlier in this paper, leaving a sample size of 52 blogs for the study.

Given the lack of previous research on agricultural blogs, the focus of the study was descriptive and exploratory. The coders began by recording 108 categories, including blog title, blog tagline, primary blog topic, blog characteristics, blog purpose, blogging software used, blogger characteristics, and textual and interactive features of the most recent entry (Herring et al., 2004). The coders also documented the age of the blog and noted the date of the most recent entry. To calculate the age of the blog, researchers visited the archives to determine how long the blog had been active (Papacharissi, 2007).

Coders focused on the index page to analyze blog characteristics, including images, search features, comments, calendars, archives, advertisements, RSS feeds, blogging policies, ability to e-mail posts, ability to print posts, and badges (Herring et al., 2004). Coders also recorded the presence of and number of links to other blogs, news sources, and Web sites.

Coders categorized each blog as a filter blog, personal journal blog, k-log, mixed purpose blog, or other. The category to which each blog belonged was determined through analysis of the blog title, the blog description, and blog entry content. Blogs with equal numbers of entries falling into the filter, personal journal, and k-log categories were coded as mixed, and blogs with content that had a different purpose than those described were coded as other (Herring et al., 2004).

The formality of the language featured on the blogs was coded into one of three categories: formal, moderately formal, and informal. Coders characterized formal blogs as paying close attention to planning, organization, grammar, style, and tone (Papacharissi, 2007). Blogs with less organizational planning that were written carefully were defined as moderately formal. Informal blogs used incomplete sentences and did not pay much attention to grammar, syntax, and spelling (Papacharissi).

Coders measured topic area by coding each blog site for content categories discussed in entries on the index page. Categories included agriculture policy, media, blogging, Extension, politics, farm life, personal topics, farm bill, environment, farm equipment, farm shows, weather, agribusiness, and the World Trade Organization (WTO). Livestock topics coded included poultry, swine, beef, dairy, equine, sheep, goat, and other. The crop categories coded were corn, soybeans, wheat, hay, vegetables, fruits, cotton, and other. Specific agricultural issues also coded included urban sprawl, large livestock farms, energy concerns, diseases, biotechnology, biodiesel, and other.

Blogger characteristics coded included number of authors, author gender, author age, author occupation, and any identity indicators (e.g., full name, first name, pseudonym, inclusion of photo, personal information, link to personal information, biography). While researchers only utilized the index page while coding the other categories, they searched for this information throughout the blog pages if needed.

Researchers coded the most recent blog entry for date and time, number of links in the entry, number of comments, quotes used, and number of sources cited. Message length was also determined by counting the number of words in the entry.

Two coders completed all coding over a two-week period in early December. Coder training was conducted with a 10% sample of the population (6 blogs) to establish intercoder reliability. Holsti's coefficient of reliability (North, Holsti, Zaninovich, & Zinnes, 1963) was used to calculate a .97 agreement between coders. Coders equally divided remaining sites.

Results

Objective 1: Describe the basic characteristics of blogs covering agriculture issues.

The age of the blogs analyzed ranged from 1 to 48 months, with a mean of 16.31 months. The time between the last two entries posted on each blog was calculated and ranged from 1 to 126 days, with a mean of 11.86 days. The number of entries for the last full month was calculated to determine posting frequency. For the 41 blogs that had entries in November, a mean of 22.34 entries for that month was calculated; 5 blogs had their last entry in October and averaged 4.2 entries for the month; 1 blog was last updated in September with only 1 entry.

Researchers reviewed the number of categories listed on each blog index page and found the number ranged from 0 to 142, with a mean of 14.04. Some examples of categories included dairy, crops, markets, "divine bovine," the WTO, personal, and recipes.

Study results showed that the majority of blogs (75%, $n = 39$) had links to other blogs, while 84.6% ($n = 44$) of the blogs provided links to other Web sites (nonblog Web sites). Only 32.7% ($n = 17$) of the blogs had links to news sources. A search feature was available for identifying content on 86.5% ($n = 45$) of the blogs in the study. The majority of the blogs allowed readers to comment on entries (86.5%, $n = 45$); however, less than half (42.3%, $n = 22$) of the blogs allowed users to e-mail posts, with only 7.7 % ($n = 4$) of the blogs giving users the option to print posts. Of the blogs that allowed comments, researchers counted the number of comments present on the most recent entry and found a range from 0 to 12 comments, with a mean of .51.

Overall, the blogs had few multimedia elements (19.2%, $n = 10$). Of the blogs that provided multimedia, the most popular feature was audio (13.5%, $n = 7$). The majority of the blogs had archives (96.2%, $n = 50$), allowing users to read entries from the past. Few blogs had calendars (15.4%, $n = 8$) showing the days on which entries were posted or when events were happening. Only a few posted a blog policy (5.8%, $n = 3$). Table 1 further illustrates the characteristics associated with the analyzed blog sites. The presence of other features noted in the "other" category included items such as listservs, Web counters, contact forms, or Webrings.

Table 1. *Structural Characteristics of Agricultural Blogs* (n = 52)

Characteristic	*f*	%
Archives	50	96.2
Search feature	45	86.5
Comments allowed	45	86.5
Links to other sites	44	84.6
Links to other blogs	39	75.0
Images	33	63.5
Link to e-mail author	22	42.3
Links to news sources	17	32.7
Multimedia	10	19.2
Calendar	8	15.4
Print entry allowed	4	7.7
Blog policy	3	5.8
Other	37	71.2

Filter blogs accounted for 51.9% ($n = 27$) of the sample, while k-logs accounted for 21.2% ($n = 21$). Mixed blogs, which merge the functions of two or more blog purposes, accounted for 15.4% ($n = 8$), and personal journals were the least common at 11.5% ($n = 6$).

For better understanding of the characteristics of each entry, the header and footer information of the most recent entry was analyzed. The characteristics found most often in the entry header were the title (98.1%, $n = 51$) and the date (92.3%, $n = 48$). Characteristics that appeared less often in the header included time of posting (7.7%, $n = 4$), author's name (17.3%, $n = 9$), category filed under (5.8%, $n = 3$), and comments (3.8%, $n = 2$). Recurring characteristics found in the footer of the last entry included comments (88.5%, $n = 46$), author's name (61.5%, $n = 32$), and time of posting (57.7%, $n = 30$). Certain footer characteristics appeared less frequently in the study, including internal links to more information (32.7%, $n = 17$), footer date (30.8%, $n = 16$), and category filed under (21.2%, $n = 11$). The most frequently used software to post blogs was Blogger, with 24 blogs, followed by WordPress, with 10 blogs, and TypePad, with 4 blogs.

Objective 2: Determine who is blogging about agriculture in terms of age, gender, and occupation.

The majority of authors identified themselves as blogging primarily as individuals (56.8%, $n = 25$), as compared to media professionals (20.5%, $n = 9$), nonprofit associations (11.4%, $n = 5$), or university groups (6.8%, $n = 3$).

Many bloggers provided personal information on their blog sites. More than half (59.6%, $n = 31$) provided a full name, while 30.8% ($n = 16$) provided a pseudonym and 1.9% ($n = 1$) provided a first name only. A small percentage of blogs (7.7%, $n = 4$) provided a biography of the author, and 9.6% ($n = 5$) had a link to the author's personal information on another Web site. Bloggers identified their gender in only 30 blogs, with significantly more bloggers being male (86.7%, $n = 26$) than female (13.3%, $n = 4$). Age was only identifiable in 7 cases. Of those, 28.6% ($n = 2$) were under the age of 30. Those between the ages of 30 and 50 made up 42.9% ($n = 3$), and those 50 and older constituted 28.6% ($n = 2$). Bloggers mentioned their occupations in 51.9% ($n = 27$) of the blogs. The majority of blog authors studied (23.1%, $n = 12$) indicated they were journalists. Other occupations included farmer, agricultural economist, beekeeper, environmental and conflict management consultant, certified financial planner, university law professor, and Web designer.

Objective 3: Describe the topics covered in agriculture blogs and determine the level of formality of the writing in such blogs.

Blogs were analyzed to determine which topics received the most coverage (Table 2). The majority of blog entries (53.8%, $n = 28$) covered agricultural issues. Coders identified topics such as energy issues in 25.5% ($n = 13$) of blogs, while biodiesel and biotechnology appeared in 15.7% ($n = 8$) and 11.8% ($n = 6$) of blogs, respectively. Of the blog entries covering livestock issues (51.9%, $n = 27$), 18.8% ($n = 9$) covered dairy topics, followed by beef cattle topics (16.7%, $n = 8$). Crop-related topics were discussed in 38.5% ($n = 20$) of the blog entries analyzed, with corn (10.4%, $n = 5$) and wheat (8.3%, $n = 4$) being the most common. Other topics covered included farm life (30.8%, $n = 16$), the environment (28.8%, $n = 15$), agricultural policy (23.1%, $n = 12$), agribusiness (21.2%, $n = 11$), politics (21.2%, $n = 11$), media (17.3%, $n = 9$), and weather (15.4%, $n = 8$).

Table 2. *Topic Areas of Agricultural Blogs* (n = *52*)

Topic	*f*	%
Agriculture issues	28	53.8
Livestock	27	51.9
Crops	20	38.5
Farm life	16	30.8
Personal	15	28.8
Environment	15	28.8
Agricultural policy	12	23.1
Politics	11	21.2
Agribusiness	11	21.2
Media	9	17.3
Weather	8	15.4
Blogging	4	7.7
Extension	3	5.8
WTO	3	5.9
Farm equipment	3	5.8
Farm show	3	5.8
Farm bill	2	3.8

In terms of the formality of the writing, a majority of the blogs (76.9%, $n = 40$) fell into the formal category. Coders categorized 15% ($n = 8$) of blogs as moderately formal, while 7.7% ($n = 4$) were coded as informal. The number of quotes used in the most recent blog entry ranged from 0 to 8, with a mean of 1.0. However, bloggers cited an average of one source per entry with a range of 0 to 15. The average message length was 474 words, with a range of 32 to 3,632 words.

Conclusions

Little research has been done on agriculture blogs. This study aimed to describe the current coverage of agriculture in the blogging world and to determine who authors these blogs. The analysis of the 52 blogs studied indicated that these blogs had many of the same characteristics as blogs in health care, politics, and the mainstream public (Herring et al., 2004; Sundar et al., 2007; Trammell & Keshelashvili, 2005).

However, the blogs analyzed also had characteristics that were not in line with previous studies. Past research has shown that most blogs are updated frequently (Herring et al., 2004). This was not found to be the case in this study. While many of the blogs were relatively new (ranging from 1 month old to 4 years old), they were, in most cases, not updated frequently. The study found an average of 11 days between blog entries, whereas studies of other genres found that blogs were updated every 1 or 2 days (Herring et al., 2004). This finding could be due to the recent inception of many of these blogs; the authors may not yet be accustomed to updating the blogs frequently. Alternatively, one could argue that rural bloggers are farming and working during the day and may not have as much time to spend at a computer blogging.

Agricultural blogs differed from genres previously studied in other ways as well. Although this study found more agricultural blogs allowing comments than blogs in other genres (Herring et al., 2004), coders found an average of only .51 comments per entry on the agricultural blogs analyzed. Current blogging technology makes comments a set feature of blogs; this feature might not have been as common during past studies. It is important to note that while it is a standard feature today, a blogger can choose to remove it from his or her blog. The fact that there was a low occurrence of comments posted could be due to the researchers' practice of only counting comments made on the most recent post. Given the low incidence of comments, a visual inspection was performed on a random group of the blogs analyzed to see if this low occurrence of comments was a trend for all entries; this did appear to be the case. Herring and colleagues (2004) cited similar findings with a mean of only .3 comments per entry. They

also inspected older entries and concluded that entries do not continue to collect comments over time, and that most comments will occur shortly after posting.

Alternatively, these blogs may simply have few readers. Agriculture is a niche genre, and the readers of these blogs may not be accustomed to the blog format or comfortable with commenting yet. As noted earlier, only 13% of bloggers are in rural America, and only 16% of rural residents use the Internet, according to the Pew Internet Life Project (Lenhart & Fox, 2006).

Past research has indicated that personal journals are the most popular type of blog, followed by filter blogs and k-logs (Herring et al., 2007). However, this study found that 51% of the agricultural blogs analyzed were filter blogs. K-logs were the next most popular, followed by mixed blogs, and then personal journals. These findings indicate that bloggers in the agricultural genre are more interested in discussing the news and issues of the day and spreading agricultural information and literacy than discussing happenings in their personal lives. It may also be relevant that the overwhelming majority of bloggers in the sample were male. Research suggests that women tend to divulge more personal information in their blogs than men (Sundar et al., 2007; Trammel & Keshelashvili, 2005). Since the sample in this study had few women bloggers, this could be a contributing factor as to why there were fewer personal journal blogs.

One surprising finding of this study contradicts much of the previous research on other blog genres. The bloggers analyzed in this study were mostly over the age of 30 and male. While some previous studies found that males tend to blog more (Herring et al., 2004; Trammel & Keshelashvili, 2005), other studies indicated that females blog more (Sundar et al., 2007). All researchers agree, however, that bloggers tend to be under the age of 30 (Herring et al., 2004; Lenhart & Fox, 2006). The differences found could be due to the make-up of the rural population. The majority of individuals living in rural areas and involved in farming tend to be over the age of 30 (United States Department of Agriculture, 2006).

While individuals posted the majority of blogs, media organizations, nonprofit groups, and universities posted a small percentage. Of those individuals who indicated their occupations, the majority (23.1%) were involved in media and communications. These findings indicate that those blogging about agricultural topics tend to be well informed about communications and agriculture. It should be noted, however, that one individual, who indicated being a professional communicator, published four of the blogs studied.

Many blogs cover current topics and issues that are in the news (Blood, 2002). Blogs can also have an effect on the current news agenda (Drezner & Farrell, 2004). Current events and news were discussed in most blogs studied here. The majority of blogs covered agricultural issues such as energy and biodiesel. Discussion of livestock, crops, farm life, and agriculture policy was also common. The researchers feel that it is important to note that during the time of this analysis, the holiday season was approaching and travel and fuel were hot topics in the traditional news agenda. These news stories could have spurred conversations about energy and alternative fuels.

The blogs studied covered a wide range of issues and seemed to have a variety of purposes. With more readers turning to blogs for their news and information (Johnson & Kaye, 2004), it is important for blogs to provide discussions on a variety of issues related to agriculture. As "citizen journalists," these authors are covering the in-depth issues of the day. With the mean length of their entries being 474 words—almost 200 more words than found by Herring and colleagues (2004) in their study—these authors are offering up broad discussions. The majority of authors are also taking their blogging seriously, by writing in formal sentences and offering quotes and sources to back up their claims.

However, authors were not utilizing news links heavily in their communication. While links were prevalent on the home pages of the blogs studied, only 32.7% of the links went to news sources. These findings are similar to a study of general blogs that found only 36% linked to outside news sources (Herring et al., 2004). The literature states that many bloggers do not see themselves as journalists (Lenhart & Fox, 2006) and thus may not see a need to provide links to further information.

Recommendations

"How the blogosphere looked at the turn of the century is not, in many respects, how it looked five years later or how it will look 10 years from now" (Tremayne, 2007, p. vii). Continued research on the state of blogging in agriculture, its utility in reaching rural audiences, and its importance to telling the rural story must be conducted. Further studies should examine the various groups charged with communicating about agriculture and their use of blogging. Researchers must look at the users of such blogs to find out why and how they use the information in them. The bloggers themselves should also be analyzed to determine why they blog, how they decide what to include in their entries, and their perceptions of themselves as journalists. As stated earlier, due to the changing nature of blogging and the lack of a full blog directory, researchers should repeat this study frequently to see how the landscape is changing. Beyond research, these findings offer significant

implications for professionals and educators alike. The occurrence of these blogs and the fact that several of them have been online for a number of years indicate that there is a blogging audience interested in finding agricultural information in the blogosphere. As noted in other publications in the agricultural world, blogging is a new communication tool that should be closely considered and adopted to disseminate agricultural information and news. With more individuals using blogs to find information, agricultural communicators cannot ignore blogging.

Findings of this study indicate that agricultural blogs might have some similarities to blogs in other genres. However, the blogs also differ greatly from those studied previously. Communicators must take into account the demographics of the bloggers. Based on this study's findings on blogrolls and the presence of links to other blogs, if males over 30 are blogging about agriculture, one could assume that they are also reading other blogs. Communicators must take advantage of this and utilize blogs to reach these audiences. Extension can also capitalize on this trend by teaching rural audiences how to blog and get their information out to the thousands of blog readers in the world.

Educators must also take note of this new tool and integrate blogging into their journalism curricula. With a portion of the bloggers studied here describing themselves as journalists, it is obvious that the trend of "j-blogs" is not only in the mainstream news media. Students must be prepared to use blogging technology to communicate effectively. Future communicators need to be aware of who is blogging about agriculture and rural life if they are to ensure the accuracy of public perception about agriculture.

About Authors

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Keywords

blog, Internet, agriculture blogs, content analysis

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ACE Membership: A Benchmark Study

Judith McIntosh White and Gary J. Wingenbach

Abstract

This study continues inquiry into the reasons people join and retain membership in voluntary professional organizations. Expanding on a study of historical membership data (1991-2004) provided by the Association for Communication Excellence in Agriculture, Natural Resources, and Life and Human Sciences (ACE), 555 individuals who were dues-paying ACE members in 2006 were sent online surveys. Methodology was based on Dillman's Tailored Design Method. Sixty-four percent of the population responded. Analysis indicated that members were a fairly homogeneous group in terms of employment classification and regional membership status. Average membership tenure was 3.34 years, with 27% of members reporting a lapse in membership. Respondents valued and were satisfied with organizational communication, professional development opportunities, publications, networking, and annual meetings. However, they expressed dissatisfaction with some organizational components, including special interest groups, "cliquishness," lack of diversity, features of the annual meeting, and judging in the awards program. The findings support existing literature about workplace organizational loyalty and commitment and the extended application of such studies to voluntary organizations.

So What?

Organizations survive and thrive because they offer valuable networking opportunities, provide useful or needed information, and build loyalty among their members. Like other voluntary organizations, ACE must continue to adapt to the changing needs of its members if it is to build on its 95-year history of serving applied communicators. This research examines results of an online survey of ACE members, offering a picture of the value members derive from the organization and their attitudes toward it, as well as a demographic sketch of the organization's membership.

Research

Individuals join organizations—and remain in them—for many reasons. Minimal research exists with regard to professional agricultural communications organizations and their members' reasons for affiliation, participation, and retention. Such research must be extrapolated from research in sociology and applied psychology, primarily from studies centered on relationships between employers and their employees. An earlier study of historical membership data provided by ACE Headquarters attempted to expand our knowledge on the subject (White, 2005), and this study explored the matter further through data gathered with an online survey of ACE members.

Need Fulfillment and Motivation

All human behavior is driven by the desire to satisfy needs, which may be defined as "a person's conscious wants, desires, or motives" (Baard, Deci, & Ryan, 2004, p. 2046); the more needs a relationship satisfies, the more likely an individual is to value that relationship and to want to continue it (DuBrin, 2002). Baumeister and Leary (1995) found that humans' powerful and fundamental need to belong contributes to formation and maintenance of social relationships, even in the face of actual or perceived discrimination (Carvallo & Pelham, 2006).

Participation in organizations to fulfill needs can include attending meetings and communicating with other members (Catchings, 2004). Today's organizations emphasize communication. Members expect to be well informed about the organization; they also expect to take part in decision-making (Mai & Akerson, 2003).

According to the theory of planned behavior, individuals base decisions on information moderated by intention, which is determined by their attitudes and norms and by the amount of control they believe they possess over a situation. Functionalism, on the other hand, maintains that behavior results from evaluation of the benefits of such behavior (Greenslade & White, 2005). Both theories help predict participation in voluntary activities.

Individual Attributes and Organizational Cultures

Individuals do not have identical needs, so organizations cannot treat all their members identically. For example, people may differ in their need to know or in their desire to learn (Cacioppo, Kao, Petty, & Rodriguez, 1986; Tharenou, 2001). Etzioni (1964, 1968) noted that in our complex society, individuals belong to many groups, with the nature of their memberships determined by organizational characteristics and by individuals' attributes. Thus, individual psychological traits and motivations are important determinants of a person's level of organizational commitment. Singer

and Singer (2001) suggest that individuals' participation or continued commitment depends more on their individual characteristics than on what an organization provides.

All organizations have a distinct culture with characteristic structures and belief systems (Pepper, 1995), including symbols that members recognize and for which they construct shared meanings (Conrad, 1990). Organizations use these symbols (for example, the organization's name, seal, colors, etc.) to communicate with members (Maehr & Braskamp, 1986) and to involve members financially, temporally, and emotionally (Petty & Cacioppo, 1986; Rusbult, 1983). An individual's "buy-in" depends on his or her history, perceptions of self-efficacy, goal-directedness, expectations of peers, and degree of understanding of the organization (Maehr & Braskamp).

Organizational cultures help members meet their needs (Conrad, 1990) based on members' individual psychology, their individual need-fulfillment strategies, and their response to organizational cultures (deMan & Ephraim, 2001; Greene, Morrison, & Tischler, 1980; Mullin & Hogg, 1999; Pandey, 1979; Pelled & Xin, 1997; Solomon, Sneed, & Serow, 1979; van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004). Because American culture favors "self-enhancement," Americans gravitate toward personal-improvement activities (Kitayama, Matsumoto, Markus, & Norasakkunkit, 1997), such as membership in voluntary professional organizations that enhance professional knowledge, skills, and contacts. Individual reactions to such self-enhancement opportunities may, however, be influenced just as much by individuals' opinions of themselves as by their culture (Kwan, John, Kenny, Bond, & Robins, 2004).

Identification and Commitment

The greater a member's identification with, investment in, and commitment to an organization, the more positive are his or her perceptions of it (Collier, 2001). Organizational identification may focus on members' careers or occupations and comprises cognitive, affective, evaluative, and behavioral dimensions (van Dick, Wagner, Stellmacher, & Christ, 2004), but overall organizational identification prevents member alienation and reduces turnover (van Knippenberg & van Schie, 2000).

A member's investment or engagement in an organization includes affective components, and such engagement grows with positive perceptions of meaningfulness (May, Gilson, & Harter, 2004). Identification as a professional includes organizational loyalty to an employer and commitment to a larger peer group of other professionals (Brierley, 1996). Such commitments are psychological rather than structural and are based on subjective meanings; the greater a person's organizational commitment,

the greater his or her occupational commitment, and vice versa (Aranya & Jacobson, 1975).

Retaining one's membership in voluntary professional organizations may depend on both affective commitment and organizational satisfaction. Emotional ties to an organization may be enhanced by the personal relationships built in smaller divisions of a large organization (Eby, Freeman, Rush, & Lance, 1999; Randall & O'Driscoll, 1997), with initial socialization of new members building satisfaction; such socialization may be made easier if there are smaller subgroups within the organization (Helman & McMillin, 2001).

For a voluntary professional organization to thrive, members and recruits must embrace its purpose, values, leadership, and mission. Members must believe that an organization meets professional and personal needs; such belief, identification, and investment in the organization should produce loyalty in current members and increase recruitment of new members (Zuckerman & Kretovics, 2003).

Fuller, Barnett, Hester, and Relyea (2003) suggest that perceptions of organizational concern, which are based on social exchange and reciprocity concepts, and organization-based self-esteem, which is based on feelings of worth as a member, may influence loyalty to a group, as does a member's agreement with the group's values (Finagan, 2000). Most people seem to prefer association with others like themselves (Ray & Hall, 1995). But regardless of group makeup, responsive leadership and organizational willingness to change structures and procedures build member commitment (Turniansky & Hare, 1998).

Members' commitment to and decision to remain involved with a particular organization surely reflect their underlying satisfaction with the organization. According to Asadi-Lari, Tamburini, and Gray (2004), satisfaction may be defined as "the extent of an individual's experience compared with his or her expectations," with the caveat that there is no "standard approach to measuring satisfaction" with an organization (p. 4). Although researchers have attempted to construct empirical methods for verifying need fulfillment, exploration of the topic must also take into account members' perceptions about whether their needs are in fact being met by a particular organizational feature (Baard et al., 2004).

Distance Decay

Geographic proximity may predict involvement with activities and organizations. The closer an individual is to an activity, the more likely he or she is to become involved or stay involved with it. In most cases, as

proximity decreases, relatedness also decreases. This phenomenon is known as "distance decay" (Hagerstrand, 1952; Wheeler & Stutz, 1971).

Fotheringham (1981) viewed distance decay as a behavioral measurement of distance as it affects interaction, although such relationships may not necessarily be strictly linear. The idea has been used to identify the spatial locus of so-called central places (Olsson, 1970), although factors other than mere proximity may overcome any disadvantage of location and resulting distance.

Previous Study of ACE Historical Membership Data

A previous study of historical membership data provided by ACE Headquarters (White, 2005) analyzed 1,441 valid records from 1991 through 2004. Results indicated that while membership in the organization had increased, the rate of increase had not been constant. Fifty-four percent of those joining ACE at any time during this 14-year period remained members in 2004, but 86% had allowed their membership lapse at some time. Membership retention was found to be statistically significantly correlated ($p = .00$) with organizational involvement, as measured by holding a position of leadership in a special interest group (SIG), serving on a committee, holding an organizational office, or receiving an award. However, 68% of all members had no organizational involvement as measured by these indicators.

Membership retention was found not to be correlated with members' home base, but was found to be statistically significantly correlated ($p = .00$) with the location of the annual meeting and with members' institutional affiliation (employment at a land-grant institution).

The purpose of the previous study was to develop benchmark data to better understand ACE membership. The previous study did not gather individual ACE members' personal characteristics or their perceptions of ACE's organizational aspects. The current study sought to answer the following questions:

1. What are ACE members' personal characteristics (gender, employment, and region of residence)?
2. What are ACE members' organizational profiles in terms of years of ACE membership, lapses in membership, participation in the organization, and participation in the ACE mentoring program?
3. What organizational aspects are most satisfying to ACE members?
4. What organizational aspects are most dissatisfying to ACE members?
5. In monetary terms, what value do ACE members place on each of the organization's benefits, as apportioned from the annual ACE dues?

6. What are members' perceptions of ACE regarding leadership, SIGs, annual meetings, committees, workshops outside the annual meeting, outreach, and personal member services?

Methods

The population of interest for this census study was all dues-paying ACE members with viable e-mail addresses in 2006. The membership roster was supplied by ACE Headquarters in early April 2006. From this list, the population was determined to be 555 ACE members.

Dillman's Tailored Design Method (2000) was modified for this study. A Web site consisting of an information and consent page and the survey page was created to complete the study. The online method was chosen for survey delivery based on its ability to garner a rapid response at minimal expense (Ladner, Wingenbach, & Raven, 2002). Five contacts were made with the membership between April and May 2006.

ACE members were contacted via e-mail. A survey pre-notice was sent to the population ($N = 555$) three days prior to the actual survey, giving respondents the choice to opt out of the survey (28 members opted out). This reduced the target population ($N = 527$). Web surveys yield responses sooner than do postal mail surveys (Fraze, Hardin, Brashears, Haygood, & Smith, 2003), so a compressed time schedule was used for successive follow-up notices. All e-mail notices were sent as personalized e-mails explaining the study's purpose and included a survey hyperlink, the respondent's unique password, and the researcher's contact information.

Three follow-up notices were sent to nonrespondents after the initial notice. The second follow-up reminded nonrespondents to complete the survey and offered them the option of completing a paper version. This notice also gave members the option of not receiving more notices about participating in the study. No members asked to receive paper copies of the instrument in lieu of filling it out online. Data collection processes produced a response rate of 64% ($n = 336$), which is comparable to Dillman's expectations for e-mail survey response rates. Findings should be generalized only to the respondent group ($n = 336$).

The research instrument contained three sections. The first section allowed respondents to type responses into text boxes to indicate the top three most satisfying and dissatisfying organizational aspects of ACE membership. This section also asked respondents to list the top five benefits of ACE membership and assign dollar values to each. The second section allowed participants to record their perceptions of selected ACE attributes by answering 31 statements, using 4-point Likert scales (1 = *strongly disagree*... 4 = *strongly agree*), about ACE leadership, SIGs, annual meetings, committees,

workshops outside the annual meeting, outreach, and personal member services. Cronbach's alpha coefficient (Cronbach, 1951) was applied to the perception scales; the subscales alpha coefficients ranged from .36 to .81. Although the "workshops outside the annual meeting" perception scale had a low (.36) alpha coefficient, no inferential statistics were applied to the data set, as this was a census study. The third section allowed respondents to record their demographic information.

Demographic data were analyzed using percentages and frequencies. Descriptive statistics were used for all other sections of the instrument.

Results

ACE members (n = 336) completed an online survey in April 2006. The respondent group comprised 64% of the target population (N = 527). The survey established benchmark data about ACE members by determining members' personal characteristics, such as gender, employment classification, and regional membership status (Table 1). The respondent group was about evenly split between males and females. A majority (81%) of respondents indicated employment at a land-grant institution. The largest group (33%) hailed from the North Central region, followed by the Southern region (32%) (Table 1).

Table 1. *Demographic Profile of ACE Member Respondents* (n = *336)*

Variable	Categories	*f*	%
What is your gender?	Female	169	50.3
	Male	162	48.2
Are you employed at a land-grant institution?	Yes	273	81.3
	No	60	17.9
In which ACE region do you reside?	North Central	112	33.3
	Southern	107	31.8
	Western	63	18.8
	Northeast	30	8.9
	DC/USDA	11	3.3
	International	11	3.3

Note. Frequencies may not total 336 because of missing data.

Research

To establish an organizational profile of ACE membership, respondents recorded their years of ACE membership, indicated whether they had ever allowed their membership to lapse, described their participation in the organization (e.g., especially SIG listserv discussions and conference calls), and indicated whether they had participated in the ACE mentoring program. Table 2 shows that nearly 23% of respondents have been ACE members for 6 to 10 years, while just over 17% have been members for less than 2 years and just over 17% have been members for more than 20 years. Additional analysis revealed an average of 3.34 years as an ACE member ($SD = 1.70$) with a range of 1 to 6 years. For those members who have been in the organization more than 20 years, length of membership ranged from 21 to 60 years ($M = 33.73$, $SD = 9.99$).

Ninety-one (27%) members reported allowing their memberships to lapse since first becoming ACE members (Table 2). The most frequently cited reasons for these lapses were a change in career/employment and/or simply forgetting to renew the membership. Respondents participated actively in SIG-initiated listserv discussions (62%) and SIG-initiated conference calls (57%). Seventy-nine percent received funding from their employers to attend the ACE annual meeting. The vast majority (88%) of respondents did not participate in the ACE mentorship program; of those who did participate, 21 served as a mentor and 10 as a protégé.Respondents were asked to identify which top three organizational aspects of their ACE membership were most satisfying. Respondents cited professional development opportunities, networking, annual meetings, publications, and awards programs as the most satisfying aspects of ACE membership (Table 3).

In similar fashion, respondents listed which three organizational aspects were most dissatisfying about their ACE memberships. Respondents identified annual meetings, cliques, awards programs, communication, and a lack of local or regional activities as the most dissatisfying aspects of ACE membership (Table 3). Other areas of dissatisfaction included the cost of dues, professional development/workshop opportunities, publications, SIGs, and a lack of diversity in ACE membership.

Respondents were asked to consider their annual ACE membership dues ($100), list the top five benefits gained from their memberships, and assign dollar values to each benefit to equal an amount of the annual dues. Some respondents chose to use the term "priceless" instead of an actual dollar amount; in those cases, the maximum amount ($100) was assigned to that specific benefit. Twelve additional benefits were listed by at least 10 different respondents.

Table 4 shows that respondents most frequently ($f = 132$) listed networking, with an average value of $43.56 ($SD = 30.91$). The ACE annual

Table 2. *Organizational Profile of ACE Member Respondents* (n = *336)*

Variable	Categories	*f*	%
How many years have you been a member of ACE?	6-10 yrs	76	22.6
	< 2 yrs	58	17.3
	3-5 yrs	58	17.3
	> 20 yrs	58	17.3
	11-15 yrs	46	13.7
	16-20 yrs	32	9.5
Since becoming an ACE member, have you ever had a membership lapse, and then rejoined later?	No	240	71.4
	Yes	91	27.1
Have you ever participated in a SIG-initiated listserv discussion?	Yes	208	61.9
	No	126	37.5
Have you ever participated in a SIG-initiated conference call?	No	191	56.8
	Yes	141	42.0
Does your employer financially support your attendance at the ACE annual meetings?	Yes	266	79.2
	No	60	17.9
Have you ever participated in the ACE mentorship program?	No	297	88.4
	Yes	38	11.3
If "yes," were you a:	Mentor	21	6.3
	Protégé	10	3.0
	Both	1	.3

Note. Frequencies may not total 336 because of missing data.

Table 3. *Satisfying and Dissatisfying Organizational Aspects of ACE Membership* (n = 336)

Category	Aspects	*f*
Most satisfying aspects:	Professional development	298
	Networking	282
	Annual meetings	114
	Publications	57
	Awards programs	47
Most dissatisfying aspects:	Annual meetings	83
	Member cliques	69
	Awards programs	52
	Communication	52
	No local or regional activities	42
	Expensive dues	29
	Professional development/workshop opportunities	25
	Publications	20
	SIGs	19
	Lack of diversity in ACE membership	6

conference was listed by 15% of the respondents ($f = 101$) and was valued at \$37.52 ($SD = 25.59$). Special interest groups (SIGs) were listed by 14.5% respondents, with an average value of \$27.66 ($SD = 19.52$). The Critique and Awards program ($f = 83$) was the benefit listed fourth most often, with a value of \$25.95 ($SD = 21.03$). The fifth most frequently mentioned benefit was the *Journal of Applied Communications* ($f = 57$), which had an average value of \$26.40 ($SD = 23.71$) (Table 4).

To answer the final research question, respondents indicated their levels of agreement/disa greement (Likert scale: 1 = *strongly disagree*...4 = *strongly agree*) with 31 statements about ACE leadership, SIGs, annual meetings, committees, workshops outside the annual meeting, outreach, and personal member services. Each subscale contained equal numbers of positively and negatively worded statements to avoid pattern response sets.

Table 5 shows that no respondents selected *strongly disagree* (0.0-1.50) or *strongly agree* (3.51-4.00) with regard to any of the 31 statements about ACE attributes. When respondents considered ACE leadership, they agreed

Table 4. *ACE Membership Benefits and Dollar Values Per Benefit* (n = 336)

Benefits			Dollar Values	
	f	%	*M*	*SD*
Networking	132	19.4	$43.56	30.91
Annual conference	101	14.8	$37.52	25.59
SIGs	99	14.5	$27.66	19.52
C&A program	83	12.2	$25.95	21.03
Journal of Applied Communications	57	8.4	$26.40	23.71
Listserv	53	7.8	$21.94	21.08
Signals	50	7.3	$16.08	19.39
Publications	32	4.7	$20.16	19.65
Workshops	25	3.7	$30.00	31.56
Workshops and conferences	22	3.2	$35.45	22.09
Professional development	15	2.2	$40.00	29.52
Membership (i.e., fellowship, contacts, needed for résumé)	13	1.9	$25.00	27.00
Totals	682	100.0	$30.80	25.85

Note. Benefits were assigned a monetary value ranging from $0 to $100.

that communications from ACE Headquarters were timely and relevant to their professional development and that being an ACE officer was not important to professional development. Concerning SIGs, respondents agreed that communications from SIG leaders were relevant to professional development, that SIG membership was an important reason for staying in ACE, and that being a SIG leader was not important to professional development.

Respondents agreed that fellowship at the ACE annual meeting was an important reason to stay in ACE, that innovative ideas from the ACE annual meeting were important, and that the location of the annual meeting did not affect their membership. Concerning ACE committees, respondents agreed that committee service was not an important reason for remaining in ACE (Table 5).

Respondents perceived workshop attendance outside the annual meeting as important to professional development, while workshop location did not affect ACE membership, and attending workshops was an important reason to stay in ACE. Respondents were in agreement with two outreach

attributes: Interaction with various electronic lists keeps them in ACE, and publishing in the JAC is not important to their professional development. Likewise, respondents were in agreement with two personal member services attributes: The ACE mentorship program is not important to their professional development, and opportunities to receive ACE awards are important reasons to stay in ACE (Table 5).

Table 5. *Respondents' Perceptions of ACE Attributes* (n = *336)*

Attributes	*M*	*SD*
ACE leadership:		
Communications from ACE Headquarters are timely.	3.08	.57
ACE Headquarters' communications are relevant to my professional development.	2.90	.65
Being an ACE officer is not important to my professional development.	2.57	.80
Opportunities to be an ACE officer are important reasons to remain in ACE.	2.25	.78
State representatives are not important to ACE.	2.05	.78
Special interest groups (SIGs):		
Communications from SIG leaders are relevant to my professional development.	3.05	.59
SIG membership is an important reason for me to remain in ACE.	3.02	.73
Being a SIG leader is not important to my professional development.	2.52	.79
Opportunities to be a SIG leader are important reasons for me to remain in ACE.	2.33	.81
SIG membership is not important to my professional development.	1.99	.74
Communications from SIG leaders are not important.	1.68	.58
Annual meetings:		
The fellowship at the ACE annual meeting is important to my remaining in ACE.	3.19	.71
Innovative ideas from the ACE annual meeting are important for staying in ACE.	3.18	.70
Location of the annual meeting does not affect my ACE membership.	2.79	.79

Attributes	*M*	*SD*
ACE annual meeting attendance is not important to my professional development.	1.90	.74
Professional networking at the annual meeting is not a reason to stay in ACE.	1.68	.70
Committees:		
Opportunities to serve on an ACE committee are not important to remain in ACE.	2.57	.73
Being on an ACE committee is important to my professional development.	2.47	.73
Workshops (outside the annual meeting):		
Workshop attendance is important to my professional development.	2.79	.77
Workshop location does not affect my ACE membership.	2.72	.75
Attending workshops is important to my remaining in ACE.	2.66	.79
There are plenty of workshop opportunities.	2.26	.76
Outreach:		
Interaction with various electronic lists keeps me in ACE.	2.59	.69
Publishing in the JAC is not important to my professional development.	2.59	.80
I regularly check the ACE Web site for announcements.	2.25	.70
Contributing to the ACE *Signals* newsletter keeps me in ACE.	2.03	.64
Personal member services:		
The ACE mentorship program is not important to my professional development.	2.84	.66
Opportunities to receive ACE awards are important reasons to stay in ACE.	2.80	.82
I would like to learn more about the mentorship program.	2.45	.76
Opportunities for ACE awards are not important to my professional development.	2.18	.78
Opportunities to participate in the ACE mentorship program keep me in ACE.	1.95	.54

Note. *Strongly disagree* = 0.0-1.50; *disagree* = 1.51-2.50; *agree* = 2.51-3.50; *strongly agree* = 3.51-4.00.

Conclusions and Recommendations

In the first study of ACE, increased membership and the longevity of more than half of its members suggested that the organization was meeting some of the members' needs (White, 2005). Results from this study indicate a fairly homogeneous group. The numbers of men and women were nearly equal, with the majority of members employed at land-grant institutions. Two-thirds of those responding come from just two regions (North Central and Southern), where the largest land-grant universities are now located. This homogeneity is not surprising, given ACE's origins and traditional mission within the land-grant system.

Such homogeneity supports previous research showing that, although individuals' needs may vary, common personal characteristics bind people together and increase organizational loyalty, with most people gravitating to organizations made up of people like themselves (Cacioppo et al., 1986; Etzioni, 1964; Ray & Hall, 1995; Singer & Singer, 2001; Tharenou, 2001). Such considerations should be addressed in any attempt to recruit new members from institutions and organizations not traditionally served by an organization.

Although the average organizational longevity of ACE members was just 3.34 years, nearly 25% of respondents had belonged to ACE for 6 to 10 years, about 33% for 5 or fewer years, and almost 40% for 11 or more years. These figures indicate a high level of member commitment and retention. Although only 27% said they had let their membership lapse at some time, an earlier ACE study (White, 2005) indicated that fully 86% of members had done so, a discrepancy whose explanation falls outside the scope of this study, but which warrants further investigation. Withdrawal of institutional support, personal financial difficulties, and job changes were reasons cited most often for lapses, further supporting previous research that professional identification includes both loyalty to an employer and commitment to a larger peer group of other professionals (Brierley, 1996).

The high participation levels of ACE members in SIG-initiated listserv discussions and conference calls indicated a high priority for small-group communication within the larger organization, supporting the literature's emphasis on the importance of communication for building involvement and retention (Catchings, 2004; Mai & Akerson, 2003).

The fact that few respondents had participated in ACE's mentorship program was disconcerting, given previous findings about the importance of initial socialization of new members in building organizational satisfaction (Helman & McMillin, 2001). Low levels of participation in ACE's mentorship program may be due to its recent introduction or to uncertainty on the

part of its organizers as to how best to implement it. Participation in and success of the ACE mentorship program should be investigated to assess its effectiveness.

Respondents' inclusion of professional development opportunities, publications, networking, and annual meetings as the most satisfying organizational features supports the literature. Professional organizations perform best when they satisfy professionals' unique career development needs and their common concerns, as well as meeting basic human needs for belonging and social interaction (Aranya & Jacobson, 1975; Baard et al., 2004; Brierley, 1996; DuBrin, 2002; Eby et al., 1999; Greenslade & White, 2005; Kitayama et al., 1997; Pepper, 1995; Petty & Cacioppo, 1986; Randall & O'Driscoll, 1997; Rusbult, 1983). The findings as to which activities were cited as satisfying were also congruent with research indicating the importance of member communication in fostering organizational loyalty and retention (Catchings, 2004; Mai & Akerson, 2003). Inclusion of awards on this list supported previous research linking personal self-esteem based on organizational activity to membership loyalty and retention (Finagan, 2000).

Some respondents indicated dissatisfaction with annual meetings, indicating that their costs were too high, they were too long, and locations were not convenient, supporting "distance decay" concepts that link geographic location and participation (Fotheringham, 1981; Hagerstrand, 1952; Wheeler & Stutz, 1971). Such concerns should be investigated further to determine the importance of the location of the annual meeting, an event at which almost all face-to-face networking and professional development opportunities in ACE take place. Additional research should be conducted to determine whether distance decay concepts, which were formulated "at a time when people traveled primarily by automobile or train" (White, 2005, p. 50) hold true today when most people fly to their destinations, replacing concerns about actual distance with those about ease of access.

Also dissatisfying were special interest group organization, topics, and conduct; communication; awards program (judging was felt to be unfair); and the lack of regional or local activities, along with the limited availability of professional development/workshop activities outside the annual meeting. Such concerns highlight the importance of small groups within larger organizations and the continuing importance of member self-esteem and meeting proximity to participation; these factors have been identified as key to building commitment, and proximity was acknowledged as important in encouraging participation among members (Aranya & Jacobson, 1975; Brierley, 1996; Eby et al., 1999; Fotheringham, 1981; Fuller et al., 2003; Hagerstrand, 1952; Helman & McMillin, 2001; Kwan et al., 2004; Randall & O'Driscoll, 1997; Wheeler & Stutz, 1971). Further research should attempt

to pinpoint the precise reasons for ACE members' dissatisfaction with these organizational features, with a view to crafting organizational responses to them.

Many members mentioned dissatisfaction with "cliquishness" in ACE, while just 6 members expressed concern that ACE membership lacked diversity. The fact that "cliques" were cited as the second most prevalent cause of organizational dissatisfaction should concern ACE, in that certain structures, symbols, and practices may be consistently interfering with effective fulfillment of some members' needs (Asadi-Lari et al., 2004; Conrad, 1990; DuBrin, 2002; Finagan, 2000; Maehr & Braskamp, 1986; Pepper, 1995; Zuckerman & Kretovics, 2003). Further research is needed to discover the roots of such perceptions about ACE.

Concerns about diversity were minimal but may express the idea that humans' powerful and fundamental need to belong contributes to formation and maintenance of social relationships, even in the face of actual or perceived discrimination (Baumeister & Leary, 1995; Carvallo & Pelham, 2006). Nevertheless, in keeping with ACE goals of becoming more inclusive, this perception should be addressed.

The five benefits cited most frequently and valued most highly by ACE members in terms of their annual dues were networking, the annual conference, special interest groups, the C&A program, and the *Journal of Applied Communications*. These choices support previous research about the importance of communication and professional development to members of voluntary organizations (Catchings, 2004; DuBrin, 2002; Eby et al., 1999; Greenslade & White, 2005; Helman & McMillin, 2001; Randall & O'Driscoll, 1997). Members' citation of the Critique and Awards program supports the idea that individual self-esteem derived from organizational activities increases member commitment (Kwan et al., 2004).

Responses indicating member perceptions of key ACE features support the literature emphasizing the importance of communications from organization leadership and with fellow members as well as professional development opportunities provided by the organization (Catchings, 2004; Kitayama et al., 1997; Maehr & Braskamp, 1986; Mai & Akerson, 2003; Petty & Cacioppo, 1986; Rusbult, 1983; Turniansky & Hare, 1998).

Responses also shed light on results from the earlier study of ACE records, which indicated that although serving as an ACE officer, SIG leader, or committee member was positively correlated with member retention, such positions were held by only one-third of the total membership (White, 2005). Respondents to this survey concurred that being an ACE officer or a SIG leader was not important to their professional development, although

SIG membership and the Critique and Awards program were important reasons to stay in ACE. These findings support previous studies about the importance of small-group involvement and organization-based self-esteem to membership retention (Fuller et al., 2003; Kwan et al., 2004; Singer & Singer, 2001).

Neither the location of the annual meeting nor of professional development outside the conference impacted commitment or retention, according to respondents, contradicting distance decay theory (Fotheringham, 1981; Hagerstrand, 1952; Wheeler & Stutz, 1971).

This study's findings largely support those of McGovney-Ingram, Irani, & Telg (2006), who also surveyed ACE members. These researchers found the organization's membership to be fairly homogeneous, with a demographic profile similar to those seen in other communication fields.

In general, members' responses support Collier's (2001) findings that the greater an individual's identification with, investment in, and commitment to an organization, the more positive his or her perceptions of it, with overall organizational identification preventing member alienation and reducing turnover (van Knippenberg & van Schie, 2000; Zuckerman & Kretovics, 2003).

Results of this study support existing literature on workplace organizational loyalty and commitment and extend the application of such studies to voluntary associations. Study findings are applicable to ACE and suggest fruitful avenues for additional research about this organization, including advanced statistical analyses (e.g., construction of composite scales, correlations) on existing data from this survey. Such research can help shape ACE's future.

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Keywords

voluntary professional organizations; membership; demographics; Association for Communication Excellence in Agriculture, Natural Resources, and Life and Human Sciences; Dillman's Tailored Design Method; online surveys; need fulfillment; motivation; organizational cultures; identification; commitment; distance decay

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ACE is dedicated to the professional development of its members. International meetings aim to help members develop communications strategies and plans and to increase their technological knowledge and skills.

Most of ACE's nearly 650 members are faculty and staff members at land-grant and sea-grant universities throughout the United States and in similar institutions in other nations. Some are employed by the federal government, others by associated agribusinesses. Others are employed at international agricultural development centers around the world.

ACE members are the communications backbone of a research and teaching network established in the United States more than a century ago. They plan, prepare, and disseminate research results and extension teaching materials. Their stock in trade is scientific information for scientists and technicians and practical, problem-solving information for people who can put it to work: farmers, families, foresters, food processors, news media, ranchers, homemakers, young people, marine businesses, main street businesses, and many others.

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