



A Regional Comparison of Scholarship and Service in Cooperative Extension

Richard P. Vlosky
Director and Professor Louisiana Forest Products Development Center
School of Renewable Natural Resources
rvlosky@agcenter.lsu.edu

Michael A. Dunn
Associate Professor
Department of Agricultural Economics and Agribusiness
mdunn@agcenter.lsu.edu

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**School of Renewable Natural Resources
Louisiana State University Agricultural Center**

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Abstract

In this study, we surveyed U.S. Extension professionals on their employment experiences and personal perceptions about scholarship and service. Further, we segmented the results by U.S. census region to identify similarities and differences between regions. Results indicate that overall, respondents receive more satisfaction from service and believe that it is more important than scholarship in their jobs. Conversely, they believe that scholarship is more important to their institutions and that they are rewarded more for exhibiting scholarship. Finally, respondents do not believe that their host institutions have adequately defined scholarship which creates confusion for employees.

The U.S. Cooperative Extension Service

Cooperative Extension in the United States has been a successful institution for many years. Forerunners of extension education as we know it began in the early 19th century (Richter, 1962). The installation of the Land-Grant system was in full swing by the end of the 19th century with the passage of two national legislative acts, the first in 1862 and the second in 1890. With passage of the Smith-Lever Act in 1914, Land-Grant campuses were extended beyond their borders into all areas of the states in which they resided. Thus was born the institution of Cooperative Extension as we know it.

Scholarship in Extension

The Cooperative Extension System has long sought to delineate scholarship as it applies to extension activities and as it seeks to gain a suitable stature within the realm of academia. With growing stakeholder demands of university accountability came a multitude of introspections by academic institutions into their institutional arrangements, including the place and role of extension. As a result, new discussions and debates centered on the role not only of extension and extension scholarship within the university, but indeed the role of the land-grant itself in the context of fulfilling its legislative mission and the scholarly activities it undertakes to achieve that mission. The result has been a reorganization of some land-grants into different institutional structures whereby extension is considered a part of and wholly integrated into academic units. Their faculty is, therefore, evaluated using newly developed peer-review systems in which the scholarship of extension is identified and used as a criterion for success. Though these efforts have been undertaken throughout land-grants in the United States to a greater or lesser degree, the discussion regarding whether or not, or the degree to which, this reorganization has been successful continues.

Much of the literature regarding scholarly efforts associated with extension activities centers around the debate of defining what it is and how it occurs. Some of the relatively more recent discussions of scholarship in extension arise from the work of Boyer (1990). Boyer's opinion is that academia needs a view of scholarship that is more inclusive and delineates four equally important categories of scholarly activities: discovery, integration, application, and teaching. He states that although these are distinguishable, they are nonetheless inseparably bound. Boyer argues that a scholarly community as well as a scholarly person is able to accommodate all four of these functions. Rice (2003), who collaborated with Boyer in the early 1990s, argues that the current thinking of what constitutes scholarship is too narrow, the result of what has been coined the "academic revolution." The "academic revolution," according to Jenks and Reisman (1968), began around 1957 and continued until approximately 1974. During this period, scholarship was considered very narrowly to be cutting edge research published in a peer-reviewed journal. This definition, argues Rice (2003), is far too narrow and outdated, given the changing demands for knowledge existing in today's information dependent society.

Bushaw (1996) applied Boyer's work to the extension institution itself, arguing that extension activities include all four areas of scholarship. Campbell (1991), in a review of Boyer's exposition on scholarship, also applies Boyer's model to extension and stresses that the act of application itself in Extension can lead to new intellectual understanding.

Norland (1990) examines the Cooperative Extension System's role in the Land-Grant university system and argues that there is no language in any of the governing legislation that labels the Cooperative Extension System as "the service part of the land-grant mission." The notion of Extension being the "service component" of the land-grant university mission limits not only Extension's role but also can narrowly designate who in the university system engages in professional service to their communities. Norland contends that the core mission of extension is teaching, not service, in that teaching is carried out by those in Extension as part of their mission of extending the university beyond its borders to the people where they live and work.

Extension Scholarship in Application

This new line of inquiry into what is scholarship and how Extension contributes scholarly work to the academic body as a whole, combined with new demands for different methods for learning as well as new technologies for teaching and extending knowledge beyond a university's traditional boundaries, has led some land-grant universities to re-configure how the Cooperative Extension Service at their institution is organized and how Extension faculty are evaluated in terms of job performance and productivity. As Norman (2001) points out, these new institutional settings have required some administrators and faculty to strive to develop new models for what constitutes scholarly contributions.

For example, at Oregon State a faculty group formed for the discussion of the implications of scholarship defined it simply: "scholarship creates something new that is validated and communicated" (Weiser, 1996). This group developed a matrix of scholarship forms and distinguished four such forms: discovery of new knowledge; development of new technologies, methods, materials, or uses; integration of knowledge leading to new understanding; and artistry that creates new insights and interpretations. Teaching, research, and extended education were defined as vital university missions and vital faculty activities but did not, in and of themselves, constitute scholarship.

In 1998, The Pennsylvania State University developed what they termed as a "...multidimensional model of scholarship in general, of which outreach scholarship is a key component..." (Gurgevich, Hyman, & Alter, 2003). Coined as UniSCOPE (the University Scholarship and Criteria for Outreach and Performance Evaluation), Penn State's representative learning community is one of the models Penn State as a whole is utilizing to re-define scholarship for an engaged 21st century academic institution and develop new ways for valuing and evaluating all forms of university scholarship.

What Constitutes Scholarly Activities?

Extension is not just composed of on campus, Ph.D. educated specialists. It is also composed of agents that comprise the "front line" of a university's extension system. They can be and often are the face of the university, particularly in outlying areas. How, then, might an agent's scholarly activities be identified and evaluated? Do they even engage in scholarly activities in the course of performing their duties? Schaubert et al. (1998) report that such considerations were made in one county in Oregon for that county's extension faculty. Oregon State uses a modified Boyer model of scholarship with the exception that teaching is not

included. This could be a problem for agents since much of their activities center around the activity of “teaching.” Schaubert et al. (1998) point out that, although by Oregon State University’s criteria for teaching in and of itself doesn’t constitute scholarly activity, certain activities within the realm of teaching can constitute scholarly activities, particularly the categories of “development” and “integration.” They also discuss the original meaning of “service” within the mission of the land-grant system and how that has evolved over time.

To summarize, how scholarship is defined and what constitutes scholarship has evolved over time, particularly since the early 1990s with the publication of *Scholarship Reconsidered* by Boyer (1990). Academic scholars continue to search for a more inclusive, meaningful, and substantive definition, one that more accurately reflects the diverse pursuits that occur within a university environment and one that fosters cohesiveness and unity among scholars as they fulfill academic missions in the 21st century.

The Study

In August, 2006, a study was conducted using an online web-based survey. The objectives of the study were to understand: 1) Cooperative Extension employee perceptions about scholarship and service; 2) their perceived importance of each facet of extension and; how scholarship and service are perceived and rewarded at the respondents’ institutions.

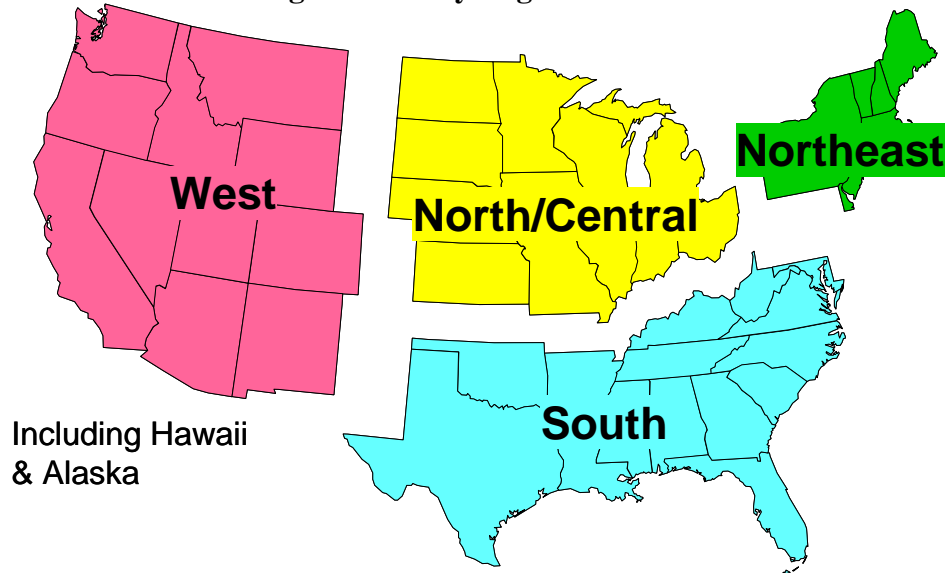
Over 18,000 1862 Land Grant University-based Cooperative Extension Service employees from the United States were sent an email and an invitation to take the survey. The list of email recipients was compiled by going to each state’s Extension website and copying/pasting emails into a master database. For states that did not have employee emails listed on their websites, Extension upper administrators were contacted directly. At the end of the process, four states declined to have their employees participate. In addition, all 1890 Extension administrators were contacted via email and invited to have their employees participate. We received no responses from this population. Therefore, the study is limited to 1862 universities.

Two emails with a description of the study and the link to complete the questionnaire were sent three weeks apart. We received 2,749 useable responses. Accounting for undeliverable emails and emails sent to non-Extension employees, the adjusted response rate was 20 percent.

Non-response bias is often a common concern in survey research. Non-response is a problem in any survey because it raises the question of whether those who did respond are different in some important way from those who did not respond. In mail surveys, the bias associated with non-response is generally due to two factors (Dillman, 2000). First, individuals with an interest in the subject matter are more likely to respond than uninterested individuals. The second major bias is that well-educated individuals usually return questionnaires faster than less-educate individuals. Bias due to non-response can be evaluated by comparing those who responded to the initial mailing to those who respond as a result of subsequent mailings and other follow-up efforts (Armstrong & Overton, 1977). Research has shown that late respondents typically respond similarly to non-respondents (Donald, 1960). Accordingly, second mailing respondents, as a proxy for non-respondents, were compared to first mailing respondents for the 86 questions in the survey instrument. Differences were detected at $\alpha=0.05$ for 14 questions (16 percent) so non-response bias was not considered to be a problem with the responses.

The remainder of this article conveys results segmented by U.S. Census region (**Figure 1**). Forty-three percent of respondents were from the South followed by 26 percent from the North Central region. The West accounted for 19 percent of respondents and the Northeast was represented by 11 percent.

Figure 1. Study Regions



Results

Demographics

Table 1 summarizes demographic characteristics of respondents by region. Using one-way analysis of variance (ANOVA), significant differences (at $\alpha=0.05$) were found between regions for age ($p=0.00$), income ($p=0.00$), and size of respondent community ($p=0.00$). No difference was found for education level ($p=0.71$). On average respondents from the West were oldest and those from the South were youngest. With regard to income, respondents from the West ranked highest and those from the North Central were lowest. Finally, Western respondents tended to live in larger communities while Southern respondents live in the smallest average size communities. The majority of respondents across regions have an advanced degree, ranging from 78 percent in the Northeast to 83 percent in the West.

Using Pearson Chi-square tests for categorical data, significant differences were found for both race and gender frequencies, both with χ^2 values of 0.00. With regard to race, the West had the lowest percentage of Caucasian respondents (89 percent) and the highest percentage of both Hispanic and Asian respondents (5 percent for each category). The South had the highest percentage of African-American respondents (8 percent) and the West had the lowest (1 percent). Regarding gender, the North Central region had the highest percentage of females (54 percent) while the South had the lowest (43 percent).

Tables 2 and 3 convey information regarding respondent extension employment. Using ANOVA, a significant difference (at $\alpha=0.05$) was found between regions for percent of extension appointment ($p=0.00$) (**Table 2**), while no statistical difference was found for years employed in extension ($p=0.14$) (**Table 3**).

Table 1. Respondent Personal Demographics by Region

	West	North Central	Northeast	South
Age				
21-30	6%	9%	8%	11%
31-40	15%	15%	11%	19%
41-50	30%	30%	32%	29%
51-60	43%	36%	42%	35%
61-70	7%	8%	6%	6%
71-80	0%	1%	0%	0%
Older than 80	6%	9%	8%	11%
Education Level (highest attained)				
High school graduate	1%	0%	1%	1%
Some college	4%	4%	2%	2%
College graduate (B.A./B.S.)	12%	16%	19%	16%
Graduate degree (M.S./Ph.D.)	83%	80%	78%	80%
Pre-tax Income (2005)				
Less than \$20,000	2%	2%	4%	2%
\$20,000-\$29,000	4%	4%	6%	6%
\$30,000-\$39,000	14%	17%	12%	20%
\$40,000-\$49,000	17%	25%	16%	22%
\$50,000-\$59,000	19%	18%	24%	16%
\$60,000-\$69,000	18%	11%	14%	10%
\$70,000-\$79,000	13%	7%	12%	9%
\$80,000-\$89,000	6%	5%	4%	5%
\$90,000-\$99,000	5%	3%	5%	4%
\$100,000 or more	4%	6%	5%	6%
Race				
Caucasian	89%	97%	96%	91%
African American	1%	2%	2%	8%
Hispanic	5%	1%	2%	1%
Asian	5%	0%	0%	0%
Gender				
Female	49%	54%	53%	43%
Male	51%	46%	47%	57%
Type of Area Where Respondent Lives				
Very Large City (1,000,000 or more).	7%	2%	5%	2%
Large City (250,000-999,999)	14%	6%	7%	15%
Medium-sized City (50,000-250,000)	26%	30%	17%	22%
Small City (10,000-50,000)	31%	24%	22%	28%
Very Small City, Town, or Village (2,500-9,999)	12%	16%	26%	17%
In a Rural area (less than 2,500)	10%	23%	22%	16%

Table 2. Percent Extension Appointment by Region

	West (n=520)	North Central (n=721)	Northeast (n=293)	South (n=1,202)
10% or less	1%	0%	1%	1%
11%-20%	1%	1%	1%	1%
21%-30%	3%	2%	1%	2%
31%-40%	3%	1%	1%	1%
41%-50%	4%	5%	2%	2%
51%-60%	3%	3%	2%	2%
61%-70%	3%	3%	4%	1%
71%-80%	6%	4%	5%	5%
81%-90%	3%	2%	2%	1%
91%-100%	72%	78%	81%	83%

Table 3. Years Employed in Extension by Region

	West (n=519)	North Central (n=724)	Northeast (n=295)	South (n=1,202)
0-5 years	28%	25%	24%	25%
6-10 years	21%	21%	20%	19%
11-15 years	13%	14%	13%	13%
16-20 years	11%	12%	14%	12%
More than 20 years	27%	28%	29%	32%

Extension Scholarship and Service

In order to ensure that all respondents had the same basis to respond to questions regarding scholarship and service, the following definitions were included in the questionnaire.

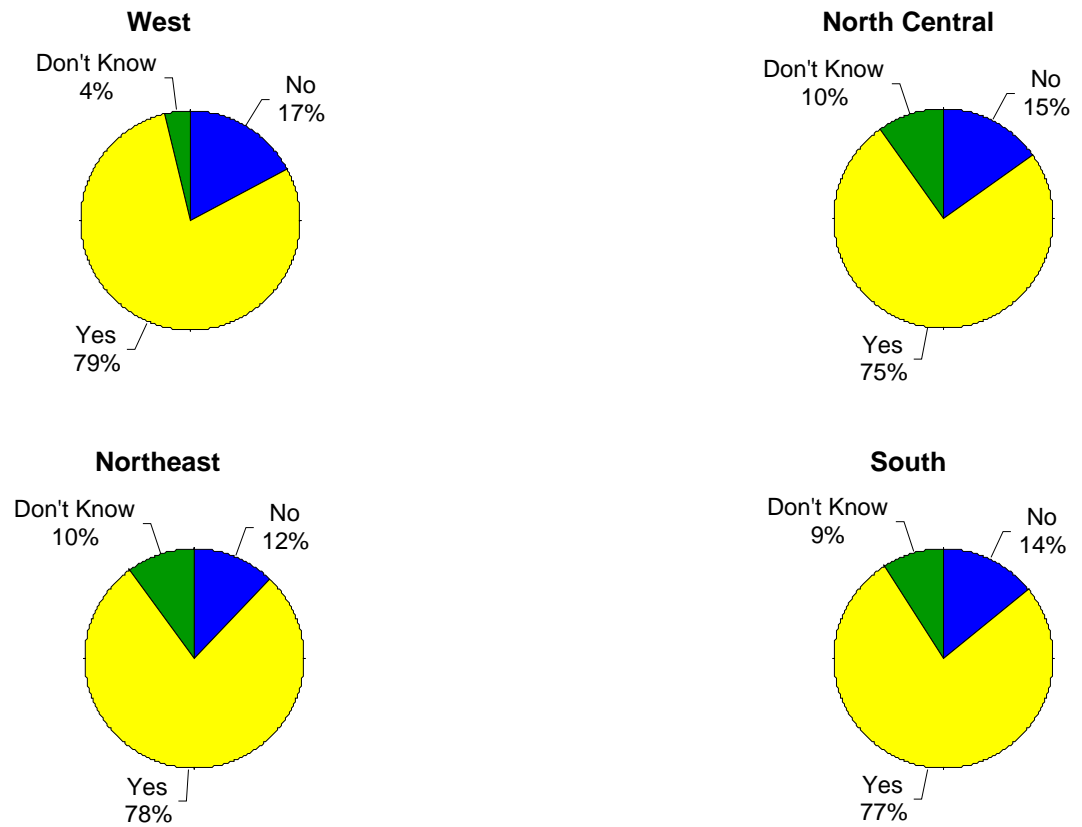
Scholarship: the body of principles and practices used by scholars to make their claims about the world as valid and trustworthy as possible, and to make them known to the scholarly public. In its broadest sense, scholarship can be taken to include the scientific method, which is the body of scholarly practice that governs the sciences. Scholarship can also cover rational inquiry in other areas such as history, the creations of the human mind in the form of art, music, literature, religion, philosophy, and cultural beliefs. Scholarship includes program creativity, discovery, delivery, initiative, and evaluation activities that contribute to the existing body of knowledge and improve the understanding, communication, delivery and adoption of ideas or concepts based on technical findings (Wikipedia, 2006; Louisiana State University Agricultural Center, 2006).

Service: an act of helpful activity; the supplying of information required or demanded by the public; the duty or work of public servants; the performance of any duties or work for another; helpful or professional activity; providing aid; contribution to the welfare of others (Webster, 2006).

Respondents were asked if they were expected to exhibit scholarship as part of their extension appointments. As seen in **Figure 2**, results are fairly consistent with a range of responses answering in the affirmative from 75 percent (North Central) to 79% (South).

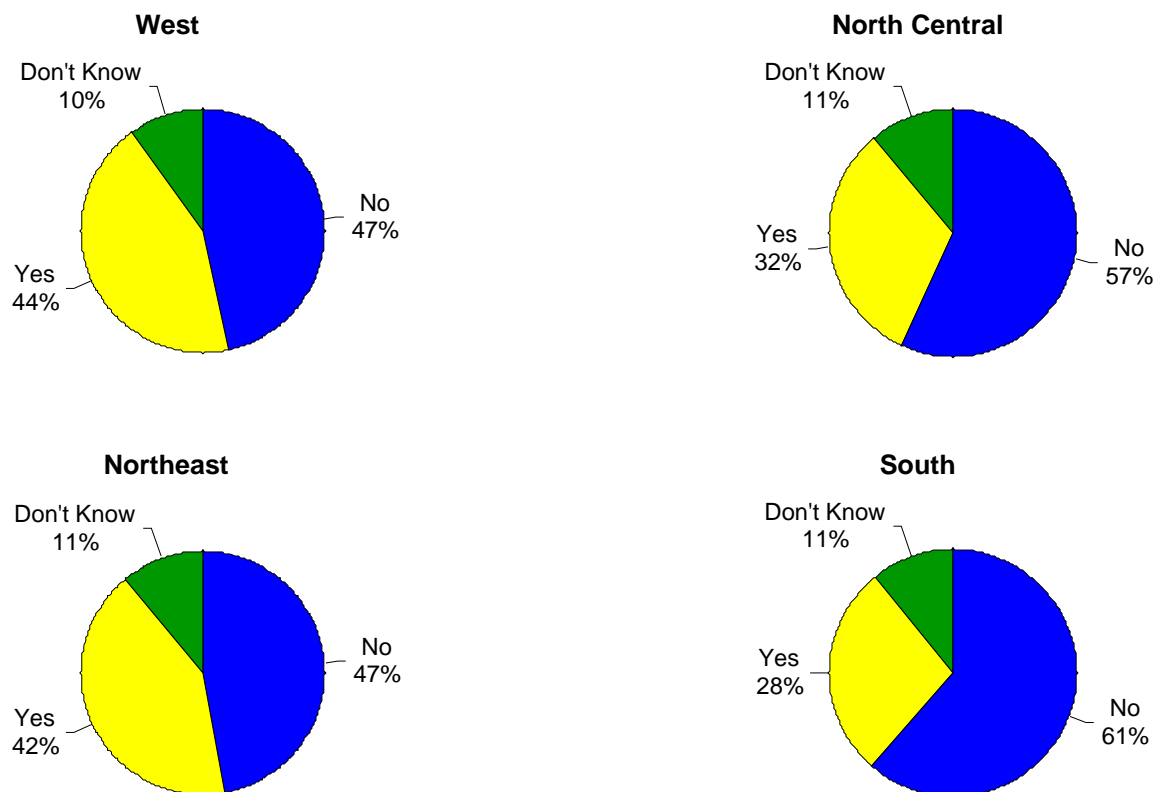
Interestingly, between 4 percent (West) and 10 percent (North Central and Northeast) of respondents said they did not know if scholarship was part of their job.

Figure 2. Are you expected to exhibit scholarship as part of your Extension job?



A follow-up question asked if scholarship has been defined clearly to respondents by their institution's administrators. **Figure 3** indicates that for a majority of respondents in all regions that this is not the case from a low of 47 percent of respondents in the West to as high of 61 percent in the South. Ten percent of respondents in all regions said that they did not know.

Figure 3. Has scholarship been defined clearly to you by your institution's administrators?

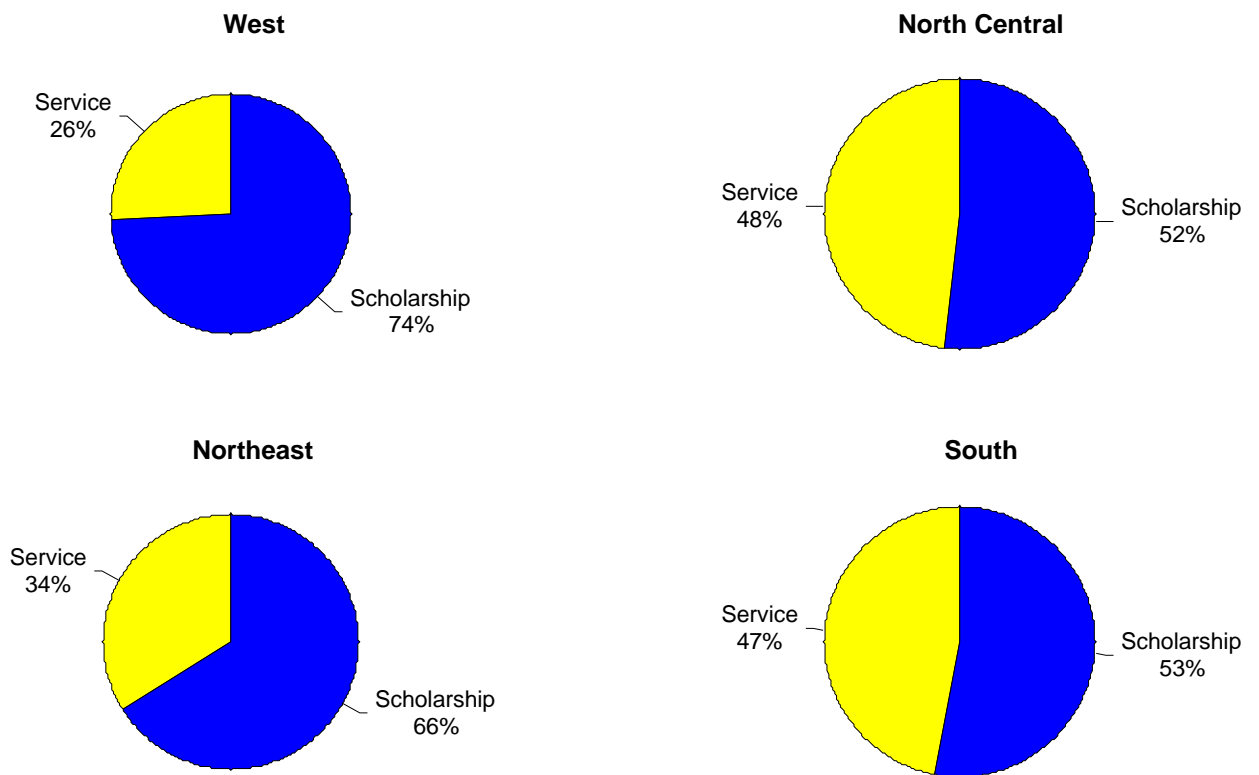


We probed this issue further by asking respondents to compare the relative importance of scholarship and service to them and their perceptions of the relative importance of each to their institutions (**Table 4**). Respondents in all regions feel that service is more important to them. With regard to scholarship, 65 percent and 66 percent of respondents in the West and Northeast regions, respectively, believe that scholarship in extension is more important to their institutions than service. Conversely, 56 percent of respondents in both the North Central and South regions believe that their institutions value service more. Consistent with these perceptions, respondents in the West and Northeast believe that they are more rewarded for scholarship (74 percent and 66 percent of respondents, respectively); while respondents in the North Central and South regions believe that they are rewarded almost equally for scholarship and service (**Figure 4**).

Table 4. Regarding scholarship and service: a) Which do YOU think is more important in your job in Extension and; b) Which do you think YOUR INSTITUTION feels is more important in your job in Extension? (percent of respondents)

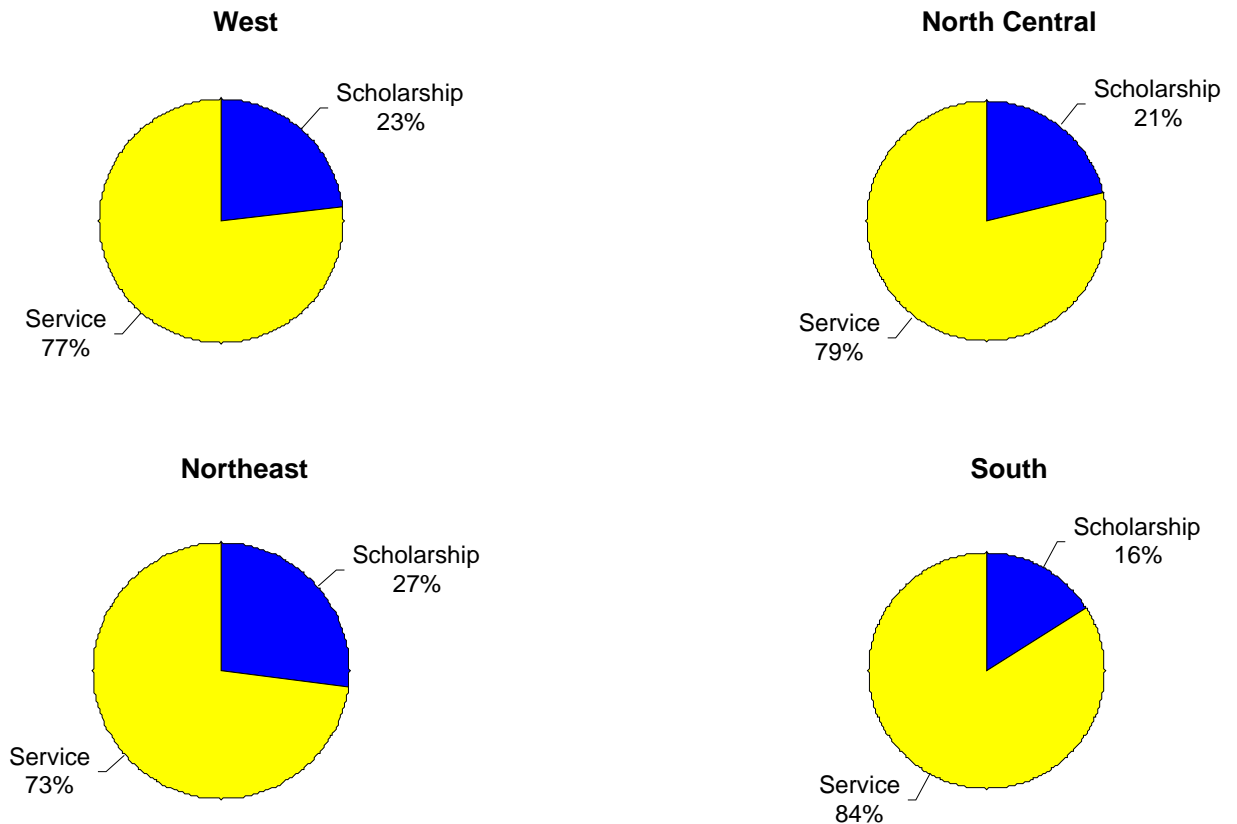
	Scholarship				Service			
	West	North Central	Northeast	South	West	North Central	Northeast	South
More important to you	24%	21%	24%	15%	76%	79%	76%	85%
More important to your institution	65%	44%	66%	44%	35%	56%	34%	56%

Figure 4. For which of the following do you think you get rewarded more by your institution?



Regardless of what they believe are the priorities for their institutions, respondents from all regions were consistent in stating that service gives them a greater sense of satisfaction and accomplishment (**Figure 5**).

Figure 5. Which of the following gives you a greater sense of satisfaction and accomplishment in your Extension job?



The final bank of questions probed respondent perceptions of the validity of a variety of activities as being examples of scholarship (**Table 5**). Using Factor Analysis with maximum likelihood extraction and varimax rotation as a guide, the 26 examples posed can be roughly segmented into the following categories: Media, Knowledge and Teaching, Research, Client Contact, Extracurricular Participation, Funding, Receiving Awards, and Interaction with Children. However, we present results with the activities in the order that they appeared in the survey instrument. The ordering was random to eliminate response bias. Using one-way ANOVA, the items resulting in significant differences between regions (at $\alpha=0.05$) are indicated in **Table 5** by identifying the highest and lowest average scores by region.

Table 5. What is your opinion on the validity of the following as examples of scholarship for Extension employees in your organization? Scale: 1=not valid at all; 2=somewhat valid; 3=extremely valid. Lowest and highest means indicated for statistical significant differences at $\alpha=0.05$ level of significance.

	Region	N	Mean	p value	
Documentation of major program areas and initiatives	West	510	2.28	0.033	Lowest
	North Central	698	2.32		
	Northeast	291	2.40		Highest
	South	1189	2.35		
Advising on critical issues	West	511	2.33	0.017	
	North Central	699	2.33		
	Northeast	287	2.32		Lowest
	South	1184	2.41		Highest
Innovative teaching methods	West	506	2.48	0.372	
	North Central	699	2.46		
	Northeast	290	2.51		
	South	1184	2.50		
Knowledge and application of new technology	West	509	2.54	0.001	
	North Central	699	2.52		Lowest
	Northeast	289	2.53		
	South	1180	2.62		Highest
Program delivery effectiveness demonstrated by evaluation, change, and adoption	West	511	2.56	0.035	
	North Central	700	2.56		
	Northeast	290	2.66		Highest
	South	1181	2.55		Lowest
Development and presentation of research-based materials	West	509	2.69	0.015	Highest
	North Central	701	2.58		Lowest
	Northeast	290	2.59		
	South	1184	2.64		
Website development	West	507	2.06	0.000	
	North Central	697	2.00		
	Northeast	286	1.95		Lowest
	South	1182	2.11		Highest
Cooperation/collaboration with other faculty in your institution	West	509	2.29	0.000	
	North Central	699	2.37		
	Northeast	290	2.25		Lowest
	South	1186	2.41		Highest
	Region	N	Mean	p value	
External funding	West	511	2.38	0.002	
	North Central	693	2.27		Lowest
	Northeast	290	2.40		Highest

	South	1181	2.29		
Refereed journal articles	West	509	2.39	0.000	Highest
	North Central	690	2.14		
	Northeast	289	2.34		
	South	1182	2.05		Lowest
Writing newspaper articles	West	502	1.99	0.000	
	North Central	693	2.02		
	Northeast	287	1.94		Lowest
	South	1179	2.17		Highest
Being mentioned in newspaper articles	West	507	1.66	0.000	Lowest
	North Central	694	1.85		
	Northeast	290	1.68		
	South	1175	1.91		Highest
Presentations at professional meetings	West	505	2.51	0.000	
	North Central	697	2.43		
	Northeast	288	2.59		Highest
	South	1179	2.42		Lowest
Participation in and leadership of professional organizations/committees	West	510	2.30	0.071	
	North Central	693	2.31		
	Northeast	288	2.35		
	South	1174	2.37		
Participation in public policy and community issues	West	505	2.25	0.165	
	North Central	696	2.32		
	Northeast	291	2.26		
	South	1186	2.31		
Awards and recognition	West	510	2.12	0.006	
	North Central	692	2.03		Lowest
	Northeast	291	2.05		
	South	1183	2.13		Highest
Radio interviews	West	506	1.76	0.000	
	North Central	694	1.89		
	Northeast	286	1.69		Lowest
	South	1179	1.93		Highest

	Region	N	Mean	p value	
Television interviews	West	504	1.74	0.000	
	North Central	694	1.86		
	Northeast	288	1.71		Lowest
	South	1179	1.95		Highest
Multi-institution, agency, and state collaboration	West	507	2.41	0.574	
	North Central	690	2.39		
	Northeast	291	2.37		
	South	1179	2.42		
Number of workshops developed	West	506	2.10	0.001	
	North Central	693	2.04		
	Northeast	288	2.06		
	South	1183	2.16		Highest
Number of workshops given	West	505	2.09	0.000	
	North Central	693	2.04		
	Northeast	289	2.07		
	South	1178	2.19		Highest
Number of client contacts	West	507	1.99	0.000	Lowest
	North Central	690	2.08		
	Northeast	290	2.03		
	South	1172	2.21		Highest
Developing patents	West	499	1.94	0.000	Highest
	North Central	681	1.70		
	Northeast	282	1.87		
	South	1161	1.72		
Teaching children about your area of expertise	West	507	1.89	0.000	
	North Central	689	1.91		
	Northeast	283	1.88		Lowest
	South	1170	2.09		Highest
Conducting original research	West	503	2.47	0.000	Highest
	North Central	694	2.17		
	Northeast	288	2.40		
	South	1174	2.13		Lowest
Being nationally recognized for your work	West	503	2.44	0.000	Highest
	North Central	690	2.23		
	Northeast	280	2.41		
	South	1167	2.27		

Summary

The scholarship and service discussion will undoubtedly continue in the future particularly as Extension employee goals and performance are increasingly gauged on both. This study is the first of its kind to examine scholarship and service issues from the Extension employee perspective on a national scale. By dividing respondents into census regions, it is possible to compare regional responses and identify differences and similarities between regions.

Overall, 75 percent or more of respondents from all four regions said that they are expected to exhibit scholarship as part of their job although an average of 50 percent across regions said that scholarship has not been clearly defined to them by their institutional administrators. There were also significant differences between regions in what respondents believe constitute scholarship for many of the activities presented to them.

This gap is likely causing dissonance in Extension employee ability to perform to established (but not clearly articulated) standards. This is further complicated by respondent perceptions in all regions that they get rewarded more for scholarship than service but their consistent opinion that service gives them a much greater sense of accomplishment and satisfaction.

We suggest that both Extension employees and Extension administrators should be “on the same page” with regard to expectations and performance goals and objectives. This congruence would lead to greater job satisfaction, the subject of the second article from this study which will appear in a future issue of the Journal of Extension.

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