What Stakeholders Want From the Land-Grant University: A Case Study of the Oklahoma State University Forestry Department

Kathleen D. Kelsey, Ph.D., Oklahoma State University
Seburn L. Pense, Oklahoma State University

Abstract

The 1998 Farm Bill mandated that land-grant universities collect stakeholder input when setting research, education, and extension priorities. This qualitative case study sought to collect stakeholder perceptions regarding their needs and expectations from the land-grant university. The researchers interviewed sixty-five men and women for the study. Faculty identified this purposive sample as legitimate stakeholders of the Oklahoma State University Department of Forestry. Results indicated that stakeholders were generally underserved in five basic areas. Stakeholders reported that (1) their information needs were unmet, (2) they did not go to the land-grant university for information, (3) the land-grant university was physically and psychologically distanced from the forested region of the state, (4) no forestry-trained extension educators were employed in the forested counties of Oklahoma, and (5) a communication gap existed between faculty and lay audiences. Stakeholders perceived that the land-grant university has failed to address their needs in applied research, education, and dissemination of usable information; underscoring indications by theorists, faculty, and federal law that the land-grant university has deviated from its original mission of serving stakeholders. Not collecting stakeholder input at every land-grant university will continue the trend toward programs that are insensitive to emerging needs of constituents. More importantly, the land-grant university may risk losing community support, thus subjecting itself to the criticism of irrelevancy.

Introduction

> "Today's basic research may well be tomorrow's applied research. Although this may be true, there is no justification for removing applied research, teaching, and extension to second-class status. It is essential that we create respect and equality for research, teaching, extension, and youth programs, and recognize the importance of integrating all aspects of the land-grant university system into aggressive and timely programs that address the needs of commodity and societal clientele" (Reynnells, 1999, p. 648).

The Morrill Act of 1862 established the land-grant university system in the United States. For the first time in the young nation's history farmers, artisans, merchants, bankers, technicians, scientists, homemakers, and engineers had the opportunity to earn a college degree on the same basis as clergymen, physicians, and lawyers (Kerr, 1931). The Hatch Act in 1887 provided funding for agricultural experiment stations so that the many related fields of the working class could be further explored. In 1914, the Smith-Lever Act provided funding for the Cooperative Extension Service (CES) to disseminate knowledge generated at land-grant universities to tradesmen (True, 1929).

Stakeholders of the land-grant university system (those who have benefited from the knowledge produced through experiment station research) have gained much over the past century. Americans are generally free of disease and starvation. Currently, three-fourths of all productivity gains in agriculture are a result of public investment in agricultural-related research and development. For every tax dollar invested in research and development, the return is at least $1.35 (Lechtenberg, 1998).

Because of the technological advancements made over the past century the majority of Americans are no longer connected to their agricultural roots (Kirkendall, 1986). It is not surprising, then, that taxpayers have demanded increased accountability from publicly funded research and development institutions. The 1998 Farm Bill (AREERA, Public Law 105-185) stated that stakeholder input must be collected when setting research priorities. Section 102, titled "Priority Setting Process", specifically stated (italics added):

> Effective October 1, 1999, to obtain agricultural research, extension, or education formula funds from the Secretary, each 1862 Institution, 1890 Institution, and 1994 Institution shall *establish and implement a process for obtaining input from persons who conduct or use agricultural research, extension, or education concerning the use of the funds.*

Soliciting stakeholder input has several advantages such as adhering to society's core values of equity and justice. It can also lead to a democratic conversation among participants that may result in resource and power sharing (Guba & Lincoln, 1989). Stakeholder input may lead to greater intellectual and social transformation among the research community and those who benefit from the knowledge (Mathie & Greene, 1997).

Kelsey and Pense (2001) conducted a study to develop a model for gathering stakeholder input for the Forestry Department at Oklahoma State University (OSU). The findings from this study resulted in a qualitative model that identified stakeholders, solicited input, and reported the findings back to departmental researchers and administrators for the purpose of better serving stakeholders. As the process of developing a model for collecting stakeholder input has been previously reported (Kelsey & Pense, 2001), the present study will describe the findings collected from stakeholders of the OSU Forestry Department and what the land-grant university should do to meet stakeholder needs when they are inconsistent with faculty reward structures.

Purpose And Objectives

The purpose of the study was to collect stakeholder input for setting research, education, and extension priorities at an 1862 land-grant university to be in compliance with the 1998 Farm Bill (AREERA, Public Law 105-185). Specifically this study sought to:

1. Identify stakeholders of the OSU Forestry Department.
2. Solicit stakeholder input for departmental research, education, and extension activities.
3. Determine the extent to which the land-grant university was meeting its original mission of creating and disseminating knowledge to the public.

Methods

The study utilized qualitative case study techniques (Merriam, 1998; Stake, 2000) to collect, analyze, and interpret the data. When using the case study approach, researchers collect extensive data on individuals and programs under investigation. The data included observations, face-to-face interviews, and document analysis. The researchers also spent an extended period in the field and interacted with stakeholders at various meetings and within their homes and places of business.

Data were collected from January to December 2000 from 65 citizens engaged in forestry-related activities, from artifacts, and through participant observation techniques advocated by Patton (1990). The interviews were audio taped and transcribed for verbatim accuracy. All interviews adhered to a flexible interview schedule that was developed in conjunction with the purpose and objectives of the study. The researchers engaged participants in probing questions, which evolved during the interview process to explore claims made by participants. Data were collected until no new themes emerged from the interviews based on negative case analysis (Guba & Lincoln, 1989).

The population for the study consisted of all individuals who had a stake in research and education programs offered by the OSU Forestry Department. The purposive sample was selected by asking Forestry Department faculty who their stakeholders were, by attending a forest utilization conference in Wagoner, Oklahoma, and with the assistance of the Idabel Forest Resources Center Station Superintendent, Mr. Bob Heinemann. Sampling was also accomplished utilizing the snowball technique; that is, stakeholders were asked to identify additional peers when interviewed by the researchers (Babbie, 1989) (Table 1).

The data were analyzed and reported using commonly accepted qualitative procedures (Creswell, 1998):

1. Organization of data. Facts about the case were arranged in a logical order.
2. Categorization of data. Categories were identified and the data were clustered into meaningful groups (coded).
3. Interpretation of codes. Specific statements that fell into like clusters (codes) were examined for specific meanings in relationship to the purpose and objectives of the study.
4. Identification of patterns. The data and their interpretations were scrutinized for underlying themes and patterns that characterized the case and allowed the researchers to draw conclusions.
5. Synthesis. An overall portrait of the case was constructed where conclusions and recommendations were drawn based on the data presented.

Because of their focus on a particular situation, case studies may not be generalized beyond the specific research parameters of the study (Yin, 1994).

Sixty-five men and women agreed to be interviewed for the study. The connection of the stakeholders to the forest industry fell into 12 categories including: non-industrial private forest

landowners (NIPF) (n=15); state foresters (n=15); small forest industry employees (n=7); National Resource Conservation Service employees (n=5); private consultants (n=5); United States Forest Service employees (n=4); large forest industry employees (n=4); university employees (n=3); private land managers (n=3); employees of private organizations (n=2); an urban forester (n=1); and a forestry newswriter (n=1).

Table 1

Stakeholder Connection to the Forest Industry and Interviewee Number

Connection to the Forest Industry	n	Interviewee Number
NIPF	15	4, 7, 11, 12, 18, 20, 29, 30, 42, 44, 47, 48, 49, 61, 67
Oklahoma State Forester	15	5, 6, 8, 10, 14, 16, 17, 23, 25, 33, 35, 37, 43 (retired), 58, 68
Small forest industry	7	1, 3, 21, 54, 59, 60, 66
NRCS	5	19, 26, 26a, 26b, 38
Private consultant	5	36, 50, 55, 56, 57
USFS	4	26d, 28, 28a, 41
Large forest industry	4	9, 13, 39, 51
University employee	3	22, 27a, 27b
Private land manager	3	2, 24, 34
Private organization	2	31, 69
Urban forester	1	15
Journalist	1	45
Total	65	

Findings

In order to solicit stakeholder input and determine the extent to which the land-grant university was meeting its original mission of serving citizens with research-based knowledge, structured interviews were conducted face-to-face with participants in their homes and places of business. Five over-arching themes emerged from the content analysis of the interview data that pointed to the general perception among stakeholders that their land-grant university has underserved them. Stakeholders reported that (1) their information needs were unmet, (2) they did not go to the land-grant university for information, (3) the land-grant university was physically and psychologically distanced from the forested region of the state, (4) no forestry-trained extension educators were employed in the forested counties of Oklahoma, and (5) a communication gap existed between faculty and lay audiences.

Stakeholder Information Needs Remain Unmet by the Land-Grant University

Twenty-six participants (40%) stated that a lack of educational materials and experiences was a major problem for the forest industry. State foresters and private consultants most frequently cited problems under this theme. A lack of communication from OSU researchers, a lack of educational opportunities such as field days and demonstration plots, a lack of printed

information written at the appropriate level, and a lack of locally produced research such as regional stand and yield tables were specifically mentioned by stakeholders.

A major problem faced by NIPF was ignorance of best management practices and sources for obtaining needed information for decision making. The following dialogue between the researcher and a NIPF illustrates this dilemma:

- Interviewer: As far as any problems that might come up with your job in hauling or with your trees, what kind of information might you use?
- NIPF #3: I don't know how to go about... (getting information).
- NIPF's son: He doesn't know. He doesn't even know where to go to ask (for help).
- NIPF #3: I just don't know what to do. I mean, I'm just out here.

Foresters and large industry personnel confirmed that NIPF needed more information to assist with forest management decisions. The largest void in information included markets and marketing opportunities for forest products, economic models for forestry production, and silviculture techniques appropriate for small tracts of land.

The lack of information dissemination was a concern among many stakeholders. One person reported that information needed to be published in lay terms, while others indicated that many NIPF were not getting information at all. One absentee NIPF who was interviewed at the forest utilization conference said he owned 2,500 acres and periodically logged small tracts. He felt that the university did not have any new information that would be useful to him stating "I haven't seen anything new in the last ten years. I don't think there is anything new that makes a tree grow faster" (NIPF #30). A few hours later, after he had attended a workshop presented by a university extension agent, the same NIPF reported that he was previously uninformed of new research-based information and exclaimed, "I was wrong! There is much new information I can benefit from!"

The researchers noticed while visiting the OSU Forest Resource Center that the CES fact sheets on display were undisturbed, wilted, and dust covered. A large forest industry representative commented on this fact as well. "A lot of them (fact sheets) are dusty and you can tell people are not using what has already been supplied." An experiment station researcher believed that an imaginary barrier existed around the station. He reported that few local individuals came to the Forest Resource Center for assistance but were eager to engage him at other locations in the community.

Many Stakeholders Do Not Go to the Land-Grant University for Information

Fifty-two stakeholders were asked directly if they used the OSU Cooperative Extension Services. Thirty stakeholders (58%) claimed that they had used OSU extension services. Three individuals confused the OSU CES with another organization. The remaining 19 individuals (36%) reported that they did not use land-grant university information to solve their forestry-related problems.

Of the 30 stakeholders who had used OSU extension services, five participated in a one-year master woodlands program designed for retired individuals that had just acquired land. Six stakeholders indicated they used the extension services minimally. Of the 52 stakeholders who answered the question, 22 (42%) had used OSU extension services extensively.

The Land-Grant University Is Distanced from the Forested Region of the State

Several stakeholders reported that OSU Forestry Department faculty ignored the southeast Oklahoma forest industry. Stakeholders expressed that the geographic distance of the university from the forestlands (over 250 miles) created a physical and psychological barrier between university researchers and people in forest-related occupations. Professionals in the forest industry further stated that the research focus of the Forestry Department tended to be on other areas of the state. Stakeholders specifically asked for the following from the OSU Forestry Department:

- Large forest industry representative #39: Geographically specific and species specific research.
- NRCS employee #26a: I'd like to see an extension agent's handbook with more information on the use of herbicides on forests. It's mostly geared toward central Oklahoma.
- Large forest industry representative #9: Eastern Oklahoma is being ignored. Studies on both forestry and wildlife are needed for the forest region of the state.
- Private consultant #57: There is a genuine interest in stand tables for the local areas, volume tables, those types of things. A lot of people are relying on information from other areas.

Several stakeholders recommended that OSU conduct research on silvicultural practices that are specific to southeast Oklahoma (private land manager #2; state forester #37; USFS #41; private consultant #56; private consultant #57).

No Forestry-Trained Extension Educators were Employed in the Forested Counties of Oklahoma

Stakeholders clearly felt disenfranchised by the fact that their current extension educator was not trained in forestry, but rather traditional plant and animal sciences. One stakeholder discussed the need for OSU extension service to do a better job of educating the CES agents and the public about forestry (university employee # 27a) within the three-county area that produces the third largest agricultural commodity in the state, wood products.

Seven stakeholders recommended that funding and staffing for forestry extension services be increased in southeastern Oklahoma. The seven respondents represented three state foresters (#6, #10, #37), two NIPF (#7, #29), a university employee (#27a), and a large forest industry employee (#9). OSU's failure to fill a position for a forestry extension educator that had been vacated seven years prior was perceived as a message from the extension service that stakeholder needs were considered a low priority by the land-grant university.

A Communication Gap Exists Between Faculty and Lay Audiences

Stakeholders perceived many communication barriers between themselves and the land-grant university; including, the geographical distance between the forested region and the university, the failure to have an on-site forestry extension educator, the lack of field days and demonstration plots, and the failure of faculty to conduct adequate geographically specific research for southeast Oklahoma. In addition to these issues, stakeholders felt marginalized and distanced from the university by the academic rhetoric in the land-grant publications.

A common theme among respondents was that publications currently produced by the department were too technical. Stakeholders expressed a need for research-based publications written at a lay level. A large forest industry employee (#39) stated:

> Well, I know you can go out here on these racks (where the fact sheets were located), and most of these guys who wrote these things were my professors. When you pull out one of those scientific deals, it is hard to even get through the abstract. A private landowner, unless he is the scientific type, is not going to get through that. It is really a loss on me, like the articles. One of the best (publications) is Forest Landowner, and it is a nationwide publication. Just this last issue a lot of what they had was geared toward wildlife and it's written in layman's terms where anybody can understand it but they have the research to back it up.

An NIPF echoed these concerns and asked the university to write reports in more user-friendly terms. "Most of the reports are written at too technical a level, work on publications that are written for the lay audience" (#47).

When specifically asked by the interviewer, three stakeholders agreed that field days sponsored by the OSU Forestry Department would do much to help bridge the gap between faculty and stakeholders in terms of communicating research results and building relationships (private consultant #36; state forester #37; state forester #8).

Conclusions, Recommendations, And Implications

This study sought to collect stakeholder input for setting research, education, and extension programming priorities in one academic department at a land-grant university as mandated by the 1998 Farm Bill. Stakeholders reported that their needs centered on issues of agriculture production, business skills, and management practices. Stakeholders were interested in learning more about best management practices for timber production and marketing strategies for their products in southeastern Oklahoma. Stakeholders also reported that the majority of printed information provided to them through the OSU CES was too technical and of little use for their day-to-day problems. They requested more face-to-face interaction with CES employees who were knowledgeable about forestry production techniques and marketing possibilities.

What stakeholders want from the land-grant university is a flow of communication, both written and oral, that is easy to access, appropriately written for the lay audience, timely, and of

high quality that addressed their needs. What Forestry Department faculty have provided these particular stakeholders has been basic research that was conducted in regions other than the forested areas of Oklahoma, publications that were written for other scientists (which were never read by stakeholders), and absentee advice delivered through a county extension agent whose expertise was not in forestry (Kelsey, Pense, & Mariger, in press).

The OSU Forestry Department stakeholders perceived that the land-grant university has failed to address their needs in applied research, education, and dissemination of usable information; underscoring indications by theorists, faculty, and federal law that the land-grant university has deviated from its original mission of serving stakeholders at the most applied levels (Bavaro, 1995; Boyer, 1990; Cardozier, 1991; Fox, 1992; Hunt, 1993; Rice, 1991; Scott, 1993). Given the legislative mandate of the 1998 Farm Bill for including stakeholder input into research, education, and extension priority setting activities, stakeholder involvement should be implemented by individual departments of land-grant institutions nationwide. Implementation would result in increased accountability for publicly funded research, increased communications between land-grant faculty and their constituency, and would assist in identifying research and education topics that are valued by stakeholders.

During conversations with Forestry Department faculty, it was established that the current university reward structure was to blame for the misalignment between serving stakeholders and earning tenure and promotion (Kelsey, Pense, & Mariger, in press). Faculty reported that doing research on a local and applied level lead to few publication opportunities in prestigious venues. Given this situation, the faculty reward structure should be reconsidered to equally recognize faculty pursuits in research, education, and service as mandated by the original land-grant mission (Fugate, 1996).

Not collecting stakeholder input at every land-grant university will continue the trend toward programs that are insensitive to emerging needs of constituents. More importantly, the land-grant university may risk losing community support, thus subjecting itself to the criticism of irrelevancy and the loss of financial support from state and federal sources.

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