

Communication Strategies Used in Fisheries and Wildlife Extension in the Southeast

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Abstract: Representing the land grant institutions, extension fisheries and wildlife specialists contribute to management of fish and wildlife resources through education. In a telephone survey, 17 state specialists ranked their audiences by time spent working with each and ranked 10 communication methods by frequency of use in reaching each audience. In order of priority, the audiences served were extension agents, commercial interests, private landowners, youth, general public, faculty and students, natural resource agencies, and conservation organizations. The most frequently used communication means was the telephone call. Other heavily-used methods were personal letters, extension publications, on-site visits, workshops, and conferences. Least used were magazine articles and research publications. Moderate use was reported for newsletters, and radio and television programs. Although extension specialists communicated more frequently and by more personal methods with high priority audiences, no audience was neglected. Consistency in audience and communication rankings by specialists supports the concept that extension specialist communication strategies are similar from state to state, even though administrative styles of state cooperative extension services vary greatly. Extension specialist programs and state fish and wildlife agency programs should be complimentary and should be enhanced by cooperative agreements.

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Representing the land grant institutions, extension fisheries and wildlife specialists contribute to management of fish and wildlife through education. Other professionals, particularly those in fish and wildlife agencies, also conduct educational programs for the public. Information on how extension

specialists in the Southeast rank the audiences they work with and, more specifically, data on the methods used by specialists to reach their audiences, should increase appreciation and understanding of extension programs and encourage expansion of cooperative and complementary programs. Furthermore, a profile of extension programs analyzed by audience served across the southeast should help new specialists appropriately satisfy the multiple demands that come with the position.

A system to identify and serve fish and wildlife extension audiences within the state was proposed by Bromley et al. (1981). The concept was that the specialist can multiply the effectiveness of his programs for citizen and professional audiences by using the resources of the Cooperative Extension Service, incorporating, wherever feasible, the efforts of other professionals, citizen leaders, and volunteers. Although specific educational needs were thought to vary from state to state, it was proposed that the same audiences would be important and would receive similar service. In the past year, we tested these ideas and the results for the Southeast are presented here.

We thank each of the 17 extension specialists who diverted from their busy schedules to study the questionnaire and candidly respond to our telephone interviews. Early drafts of this paper were constructively reviewed by Mr. James E. Miller, USDA Extension Service, and Dr. Robert H. Giles, Jr., Department of Fisheries and Wildlife Sciences, VPI&SU.

Methods

Questionnaires were mailed to 17 state fisheries and wildlife extension specialists in the southeastern United States. The sample included 10 fisheries extension specialists representing Alabama, Arkansas, Georgia, Louisiana, Mississippi (2), North Carolina, Tennessee, Texas, and Virginia. Seven wildlife extension specialists were selected randomly from 11 southeastern states, representing Arkansas, Florida, Georgia, Louisiana, Oklahoma, South Carolina, and Tennessee. Individuals were selected from the USDA Directory of State Extension Specialists in Fish or Wildlife 1982.

Specialists were asked to rank eight primary extension audiences (extension agents, private landowners, youth, university faculty and students, natural resource agencies, commercial interests, general public, and conservation organizations) by the amount of time spent serving each. Commercial interests included all businesses that either profited from or experienced losses due to fish or wildlife resources. Specialists were also asked to rank, by frequency of use, 10 communication methods: telephone calls, personal letters, extension publications, on-site visits, workshops, conferences, newsletters or releases, radio and television, magazine articles, and research publications. On-site visits included all sorts of meetings involving just a few people with the

specialist. Workshops included in-service education programs and demonstrations.

Approximately 4 weeks after the questionnaires were mailed, individual responses and background information were collected through telephone interviews. Telephone interviews were used to ensure a high response rate and to further define potentially confusing categories. The interview format was not rigid; nevertheless we insisted that the categories were distinguished appropriately and ranked with deliberate care. Each interview averaged about 45 minutes.

Mean, median, and modal ranks for each audience and communication method were calculated arithmetically. In the case of identical means, integral ranks were determined using median and modal scores. Ranks for communication methods were determined only for those methods cited by 11 or more of the 17 specialists responding. Specialists were requested to exclude from ranking audiences they did not serve and communication methods that they did not use.

Results and Discussion

Thirteen of the 17 specialists interviewed had 100% extension appointments. The remaining 4 specialists conducted some research and teaching in addition to extension responsibilities. The specialists polled averaged 5.1 years of prior professional experience and 8.9 years experience as extension educators. The majority of specialists had Ph.D.'s in fisheries or wildlife management. Ten specialists were assistant (2), associate (5) or full (3) professors, while seven specialists had solely extension rank. This distinction is paralleled by housing arrangements. Nine specialists had offices within academic departments, 6 were located with extension colleagues on the main campuses, and 2 were housed in cooperative extension offices off the main campus. This split between academic and extension service placement of specialists was dictated by the administrative philosophy for cooperative extension at the state level.

Extension Audiences

Nearly 90% of the respondents ranked all of the 8 audiences, and no other audience categories were suggested during the interviews (Table 1). As expected, extension agents were the primary audience served by specialists. Of the specialists surveyed, 94% ranked extension agents as their most frequently served audience. We believe this reflects the "grass roots" nature of the extension system, where most requests for information and assistance reach specialists through county extension agents. Other relatively high priority audiences included commercial interests, private landowners, youth, and

Table 1. Audiences Reached by 17 Extension Specialists Ranked by Time Spent with Each Audience. Audiences Not Served Were Omitted from Ranking by Respondents

Audience	Number of Specialists Who Reported Contact	Average Rank	Net Rank
Extension Agents	17	1.5	1
Commercial Interests	17	3.4	2
Private Landowners	17	3.6	3
Youth	17	4.4	4 ^a
General Public	17	4.4	5
Faculty & Students	16	5.9	6
Natural Resource Agencies	17	6.1	7
Conservation Organizations	16	6.8	8

^a The median rank for youth was greater than for general public.

the general public. The relative importance of commercial interest and private landowner audiences is probably due to the increasing number of clients establishing aquaculture enterprises and the high level of requests for advice on wildlife damage control from homeowners and farmers. Public enthusiasm for developing commercial aquaculture operations was particularly evident from our interviews with fisheries specialists who extensively serve commercial producers of catfish, trout, baitfish, bass and bluegill, crayfish, and other aquatic organisms. Nearly 50% of the fisheries specialists ranked commercial interests as their first or second priority audience. Similarly, Benson (1977a) found that fisheries and wildlife specialists spent the highest proportion of their time with rural producers requiring assistance with damage problems, and wildlife-based commercial operations. Frequently, individual operators contacted their county extension agent who, then, called on the specialist to assist.

In general, specialists spent more time serving citizen audiences than the professional community. With the exception of conservation organizations, specialists consistently ranked natural resource agency and university faculty-students audiences lower than citizen audiences. These results do not suggest necessarily that professional audiences are less important than citizen audiences to extension specialists, but may simply reflect the amount of time spent with each. In fact, all specialists interviewed recognized the critical importance of reciprocal sharing of public problems and concerns between specialists and the professional community. Specialists spent the least amount of time serving conservation organizations. We speculate that the relatively low rating for conservation organization audiences may, in part, reflect the inherent political nature of these organizations.

Communication Methods

To effectively serve a wide variety of audiences with a diversity of needs, specialists used an array of communication methods ranging from personal contacts (telephone calls, letters, on-site visits) and group presentations (workshops and conferences) to mass-media techniques (radio and television, extension publications, newsletters, magazine articles, research publications) (Table 2). Although the most appropriate communication method depends largely on the specific audience addressed and the nature of the subject matter being disseminated (Fazio and Gilbert 1981), our respondents apparently attempted to communicate with most extension audiences in as personal a manner as possible. For example, more than 80% of our respondents ranked telephone calls and letters as their primary methods of communication with most extension audiences. Group presentations were the next most frequently used. Generally, mass-media methods, both written and oral, were used least frequently. An exception to this generalization was the ranking of the newsletter, "Tennessee Tips," estimated to be the most frequent communication technique used to reach 7 of the 8 extension audiences (Byford, pers. commun.). These results are consistent with those of Benson (1977) who concluded that wildlife extension specialists use personal and group contacts more frequently than printed or electronic media methods. The heavy reliance by specialists on telephone calls and, to a lesser extent, letters undoubtedly reflects the cost-effectiveness and rapid response characteristics of these modes of communication as well as the ability to address specific individual needs.

Specialists tended to use a greater diversity of communication methods with higher priority audiences (extension agents, commercial interests, private landowners) than lower priority audiences (natural resource agencies and conservation organizations). In addition to providing educational and technical information to these various audiences, specialists use the frequency of telephone calls and letters to determine the magnitude of public demand for publication and media programs on a particular subject, and to justify the associated costs.

Conclusion

The information presented here supports our belief that the communications strategy of the extension specialist is similar from state to state. Although we gathered no specific data on the subject matter covered by the programs of specialists in the Southeast, we believe, from our interviews and other communications with specialists, that subject matter may well vary more from state to state than the general identity and priority of the audi-

Table 2. Communication Methods Used by 17 Extension Specialists. Respondents Ranked Each of the Methods to Reach Each Audience by Frequency of Use. Unused Methods Were Not Ranked by Respondents

Communication Method	Audience															
	Extension Agents		Commercial Interests		Private Landowners		Youth		General Public		Faculty & Students		Nat. Res. Agencies		Conservation Organizations	
	% Freq	Rank	% Freq	Rank	% Freq	Rank	% Freq	Rank	% Freq	Rank	% Freq	Rank	% Freq	Rank	% Freq	Rank
Telephone Call	100	1	94	1	100	1	47	*	88	1	59	*	100	1	82	1
Letter	94	2	100	5	94	3	53	*	88	4	24	*	94	2	76	3
Extension Publication	88	3	100	3	82	2	82	1	94	3	41	*	53	*	24	*
On-Site Visit	88	6	100	2	94	4	35	*	35	*	76	*	59	*	35	*
Workshop	88	5	88	4	82	5	59	*	47	*	47	*	65	4	24	*
Conference	47	*	53	*	35	*	76	2	47	*	59	*	71	3	94	2
Newsletter or Release	71	4	71	6	41	*	30	*	47	*	18	*	35	*	30	*
Radio or Television	24	*	76	7	65	6	30	*	94	2	12	*	6	*	12	*
Research Publication	18	*	53	*	12	*	6	*	6	*	53	*	41	*	18	*
Magazine Article	12	*	47	*	47	*	18	*	41	*	6	*	18	*	12	*

* Less than 11 specialists reported using this technique to reach this audience.

ences reached by extension programs. Specialists worked through extension agents more often than any other of the 7 audiences we identified (Table 1). How the collected specialists used various communication devices to reach their audiences (Table 2) may serve as a general communications framework for the new specialist. Of course, differences in audience needs vary from state to state, as will the communications strengths of specialists. Consistency of audience priority and communication methods used to reach each audience existed, even though about half of the specialists were housed in an academic setting and half were administered entirely within an extension setting.

Similarities in specialist audiences and communication methods across state lines pave the way for cooperative projects among specialists. The recently published series of 4-H bulletins on wildlife and fisheries science and management by the National 4-H Council for the Southeast is an example of a cost-effective joint effort. In this instance, a committee of extension specialists recognized the collective need, the economy of scale provided by shared publication, and other benefits of cooperation. Another area under consideration for a mutual effort among specialists is wildlife damage control, since many of the animal pest problems and species are similar throughout the eastern United States.

It is difficult, perhaps impossible, to discuss communication strategies of extension specialists without commenting on their educational objectives and on how extension education interfaces with agency information and education programs. As has been pointed out by Benson (1977b), Miller (1981) and Smith and Berryman (1962), one of the primary objectives of extension education is helping people solve their wildlife and fishery problems. Frequently these problems are of the nuisance variety. Rather than merely telling the landowner how to live-trap and remove an offending animal, the specialist is apt to provide an ecological explanation for the problem and to encourage positive resource management steps to reduce the incidence of animal damage while simultaneously encouraging good land use. If our perception is valid, extension education in wildlife and fishery management should complement agency efforts, as was pointed out by Miller (1981b). Interagency agreements calling for annual or more frequent planning sessions involving extension wildlife and fisheries specialists, the state wildlife and fisheries agency personnel, and those of other natural resource agencies will facilitate cooperative efforts and lead to better stewardship of our natural resources.

Literature Cited

- Benson, D. H. 1977a. Role of extension wildlife specialists. *Wildl. Soc. Bull.* 5: 56-60.
- . 1977b. Cooperative Extension Service aids wildlife management. *Trans. N. Am. Wildl. Nat. Resour. Conf.* 42: 295-299.

- Bromley, P. T., L. A. Helfrich, and G. H. Cross. 1981. Audiences served by fisheries and wildlife extension. *Proc. Annu. Conf. Southeast. Assoc. Fish & Wildl. Agencies* 35:681-684.
- Fazio, J. R., and D. L. Gilbert. 1981. Public relations and communications for natural resources managers. Kendall/Hunt Publishing Co., Dubuque. 375pp.
- Miller, J. E. 1981. Increasing educational programs in fish and wildlife. *Trans. N. Am. Wildl. Nat. Resour. Conf.* 46:199-207.
- Smith, E. H., and J. H. Berryman. 1962. Wildlife extension—past, present and future. *Trans. N. Am. Wildl. Nat. Resour. Conf.* 32:211-227.