

Evaluation of a County Extension Office's Use of Mass Media: A User Perspective

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A random sample of 399 adults in a single county were phone surveyed to measure their use, preference and satisfaction with various sources of Extension information. The findings support those of other studies that show that large audiences can be reached with Extension information via the mass media, and that for most people mass media represent their only contact with Extension. The study also showed that using mass media was very attractive from a cost/benefit standpoint.

Introduction

County Extension agents have over the years steadily increased their use of mass media to reach clientele. In part this reflects technological advances and mass media growth. It also results from a changing clientele served by Extension and greater time constraints on this clientele.

Extension has greatly expanded the range of topics it deals with, leading to a greater number and diversity of audiences. In addition, its audience has shifted from a rural to an urban majority. This, coupled with the increasing number of employed women, means that a growing percentage of Extension clientele are working in jobs with set hourly schedules. In many states, restrictive Extension budgets

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are forcing cutbacks in travel and personnel. All of this makes it more difficult for Extension agents to reach audiences through interpersonal means, particularly meetings and workshops.

Costs of reaching audiences through bulletins and personal methods continue to increase, while costs of distributing information through most mass media channels used by Extension remains low. Increased mass media use also results from growing evidence that Extension is reaching a substantial percentage of the population through the mass media. For many, mass media represent their only contact with Extension. Warner and Christenson (1984) found in a nationwide survey that 99 percent of the people who used Extension as an information source received information through printed materials, including newspapers. Over 90 percent had listened to a radio program or watched a television program presented by Extension personnel. By contrast, only 39 percent had attended an Extension workshop or meeting in the last year.

In a statewide random sample of 659 Wisconsin residents, Steele (1979) found that 80 percent had some contact with Extension during the previous two years. Of these, 98 percent had received Extension information through the mass media. For 60 percent of those using Extension, mass media were their only means of Extension contact. By contrast, 26 percent of those aware of Extension had one-on-one contact with agents through phone calls, visits, or letters. Nineteen percent had interpersonal contacts through meetings and workshops.

While mass media may be efficient in terms of numbers reached at relatively low cost, interpersonal sources are nearly always judged most effective when considered on a per-contact basis. Evidence from practice adoption and campaign research shows that while mass media can create widespread awareness and interest, two-way interpersonal channels are most apt to be crucial in bringing about subsequent attitude and behavioral changes. (Rogers, 1983; Lionberger and Gwinn, 1982; O'Keefe, 1985).

A User Perspective

This study looked at the kind and size of audience reached with mass media messages produced by a county Extension staff. But in doing so, it took a user perspective. That is, it examined the uses audiences made of messages produced by the county staff and asked users to indicate their preferred channels for receiving Extension information.

This approach, however, does put a limitation on the study. A valid user perspective requires gathering data from a substantial

number of people, all of whom are responding to the same messages. This led to limiting the study to a single county. This does not rule out drawing generalizations from the findings, but it does call for caution in extrapolating specific findings to other settings.

The Study Setting

Brown County, Wisconsin, was selected for the study because it has a diverse population, a large urban center and a wide range of Extension agents, most of whom use a number of mass media.

According to the 1980 census (the most recent available at the time of data collection), one-half of the county's 175,280 residents lived in the city of Green Bay. Eighty-one percent lived in urban areas; less than 1 percent were farmers.

At the time of data collection, Brown County had two daily and five area weekly newspapers, 13 radio and four television stations. Brown County's Extension staff consisted of eight agents: two in home economics and one each in agriculture, horticulture, 4-H/youth, and resource/community development. One worked part-time with the educational telephone network.

Annual county reports showed that mass media use by the Brown County Extension staff was higher than that of an average Wisconsin county Extension office. Agents sent an average of two news releases each per month to area papers. Three agents wrote weekly newspaper columns, and one wrote a biweekly column. Four agents used radio regularly and four made regular appearances on television. Agents also produced six monthly and one quarterly newsletter. The selection of a county making above-average use of mass media was by design. We wanted to measure the effects of mass media use in a county making fairly extensive use of a range of media, not media impact in an average county.

Methodology

There were two main data collection methods. First, each Extension agent was interviewed in depth using a structured questionnaire. Second, using random digit dialing a random telephone survey was conducted of all post-high-school-aged adults in the county. A total of 399 interviews were completed, representing a response rate of 81 percent. The sampling error is plus or minus 4.9 percent.

Findings

Forty-two percent of the respondents recognized Cooperative Extension's name, and an additional 22 percent recognized an

agent's name. Of the 64 percent aware of Extension, 85 percent had received Extension information through the mass media the previous year. For 34 percent, mass media constituted their only Extension contact. Only one respondent had received Extension information solely through personal sources.

Table 1 separates these data into specific types of mass media and interpersonal channels. The data reinforce the major role played by mass media. Sixty-one percent of those aware of Extension had contact through newspapers. About one-third were reached by radio; a like number by television. The only source with a higher contact was family and friends, which no doubt mainly represented secondary diffusion of messages initially received from the mass media.

Phone calls and office visits came in next with 31 percent. This was followed by bulletins, dial-a-tip, and newsletters, all of which can be considered forms of mass media.

Although many more people receive Extension through mass media than interpersonal sources, it could be argued that they prefer interpersonal sources. After all, mass media messages tend to be relatively short and provide almost no opportunity for feedback. The data, however, do not support this view.

Respondents were asked what they considered their most important source of Extension information (Table 1). Forty-two percent mentioned newspapers as their most important source of Extension information. Newspapers, radio, and television combined accounted for 75 percent of the first place rankings. This does not necessarily mean that people are getting more out of a news article than a workshop. Frequency of contact with a particular source may well account for some of the results. On the other hand, it is apparent that mass media messages are filling information needs well beyond merely creating awareness and interest.

One-half of the respondents who read Extension information in newspapers did so on a weekly basis. Nearly three-fourths of those receiving Extension information from newspapers never searched for Extension articles or columns, but only read them when they came across them. Some of the agents used a useful technique for capturing both the avid and casual reader. They identified their columns with a standard heading (such as Horticultural Notes), their name, title, and Extension identification. Some also included a half-column photo of themselves to draw in the regular readers. In addition, the newspaper would top the column with a regular news headline. This would pull in the casual reader attracted by the subject.

Those who reported they were specifically looking for articles and columns were significantly more apt to also receive Extension

TABLE 1:

Individual Sources of Extension Contact in the Last Year by Respondents Aware of Extension (N=255)

Most Important Source of Extension Information in the Last Year by Respondents Having Extension Contact (N=207)*

Source	Used the Source	Ranked Source as Most Important
Newspaper	61%	42%
Family and friends	40	4
Radio	34	18
Television	31	15
Phone or visit office	31	7
Bulletins	24	2
Dial-a-tip	22	2
Newsletters	18	6
Workshops	10	1
Educ. tel. network	4	0
Total		97%

* 12 respondents did not answer the question.

information through office visits, workshops, and dial-a-tip. The latter two are regularly announced in columns and articles. For the remaining six sources of Extension information we studied, the relationships were not statistically significant.

About one-half (48%) of all Extension article and column readers reported that they had clipped and saved Extension items. When cross tabulated with information use, readers who clipped articles were significantly more likely to report having applied Extension information within the previous year than those who did not. Over 80 percent who clipped Extension articles reported having applied Extension information within the previous year.

In general, newspapers appeared to be a particularly effective way to reach audiences with useful Extension information. Not only did a higher percent of respondents receive Extension information from newspapers than radio or television, but a higher percent of newspaper users put this information to use than did those who received Extension information from radio or television (Table 2).

TABLE 2:

Application of Extension Information Received from the Mass Media During the Previous Year by Respondents Who Used the Mass Media to Receive Extension Information

	Newspaper (N=152)*	Radio (N=86)	Television (N=80)
Information was used	65%	47%	36%
Information usefulness (N=151)*		(N=85)*	(N=77)*
Very useful	54%	45%	45%
Somewhat useful	42	51	52
Not useful	3	5	3
Total	99%	101%	100%

*Question not answered by all qualified respondents.

Table 2 also shows that mass media users gave fairly high marks for the usefulness of Extension information in the mass media. More than one-half reported using the information. However, most respondents had difficulty indicating the precise instances when they used the Extension information. This does not negate the data in Table 2; it is difficult to remember use of specific kinds and sources of information. However, it may also mean that the numbers contain some upward bias due to respondents giving socially acceptable answers.

Extension newspaper readership was lowest among the youngest respondents (Table 3). This was particularly true for readership of home economics columns and articles, where 99 percent of the readers were over 25 years old.

The findings from Extension newspaper readership by income are consistent with most studies of newspaper readership. As income goes up, so does newspaper readership. Extension newspaper readership by education data are also as expected. The typical association of increased readership with higher education prevailed.

Radio listenership among respondents getting Extension information from radio is not quite as frequent as is the corresponding case for newspaper readership. Twenty-nine percent listened to Extension programs at least once a week. Thirty-one percent listened two or three times a month and 27 percent listened once a month. The lower use of radio than newspapers is no doubt partially explained by the fact that Extension information appeared in newspapers more

TABLE 3:

Percent of All Respondents (N=399) Who Received Extension Information from Newspapers, Radio, and Television Readership by Age, Income, and Education

	Newspapers	Radio	Television
Age			
19-34	23%	14%	16%
35-54	49	28	24
55+	44	24	20
Income			
< \$20,000	29%	18%	21%
\$20,000-\$39,999	40	25	23
\$40,000+	52	25	13
Education			
< High school	32%	21%	17%
High school	37	22	23
Tech school and/or some college	41	28	20
College graduate	43	16	16

often than it was broadcast over radio. The convenience of taking in the message at the time preferred by the audience also undoubtedly accounts for some of this — particularly when you consider that the "Ag Agent Report" aired at 5:30 a.m. Nevertheless, although few respondents would fall into a "never-miss-a-program" category, there does seem to be a substantial amount of listener loyalty.

Extension radio listenership by age shows a pattern opposite from that normally found for radio listenership (Table 3). This is not surprising because radio is basically an entertainment medium. It is rock music that attracts young listeners to radio, not messages about pruning roses. However, something more is operating here because the youngest category goes up to age 34 — beyond the rock and roll phase for most. For radio, as with newspapers and television, Extension is having the most difficulty reaching 19- to 34-year-old groups.

Fewer lower than medium or high income people are reached by Extension radio. In part, this may be just another reflection of age — younger people have lower incomes. However, the Pearson correlation of age and income was .12, but the association may be curvilinear. Extension radio listenership increased very slightly by education through high school and technical school or some college. However,

there was a substantial drop-off among college graduates. It is not readily apparent why.

The major, although not only, television outlet for Extension was "The Noon Show" on WBAY-TV—the leading station for agricultural programming in the Greenbay/Appleton metropolitan area of Wisconsin. The show had an interview format, covering topics of area interest. Extension agents did not have a set appearance schedule on the program. Rather, they were invited for five-minute interviews on particular topics. Typically this amounted to at least one Extension interview per week on the program.

The pattern of Extension television viewership was somewhat similar to that for radio. Most were occasional viewers, while about one-fourth were regular, weekly viewers.

Extension television viewership by age was similar to that for radio (Table 3). Those in the 19- to 34-year-old category were most difficult to reach. The pattern differs from radio and newspapers when we look at income. Those with high incomes were significantly less likely to watch Extension television programming. This may be because much of the Extension television programming was on at noon when many in the high income group are unable to watch. It may also be because income correlates with education.

The pattern of Extension television viewing by education roughly follows that of television viewing in general. Television is the one medium where use generally correlates negatively with education. However, the usual explanation for this is that television is mainly an entertainment medium. In this study we are dealing with educational programming that is part of news and public affairs broadcasting.

As was the case with income, it may well be that those with higher education are employed in jobs where it is inconvenient or impossible to watch Extension programming at the time of broadcast. The reason for the relatively low viewing by those who have not completed high school is not readily apparent, although we might speculate that this is a group with less interest in educational programming. Fifty-two respondents were in this category, so the results cannot be explained by vagaries caused by a low N.

The sample data were extrapolated to the entire county population aged 19 or older (130,000) to estimate the number of people reached per hour of Extension agent effort (Table 4). A full cost/benefit analysis of Extension efforts would have to factor in some qualitative measures of contacts. On such a measure, interpersonal contacts would probably fare better than media contacts, although data presented earlier show respondents rate mass media as the

TABLE 4:

*Number of County Residents Reached and Number of Contacts Through Newspapers, Radio, and Television Per Hour of Agents' Efforts**

	Newspapers	Radio	Television
Received extension information	50,830	28,015	25,740
Reached per hour of agent effort	149	136	277
Total number of contacts per year	1,982,370	887,515	728,957
Contacts per hour of agent effort	5,796	4,226	7,788

*Table figures are generated by extrapolating the sample data to the county population.

most important source of Extension information. In any case, Table 4 presents impressive efficiency figures supporting media use.

Extension is occasionally criticized for reaching audiences that tend to be above average on socio-economic variables. These groups are typically better able to assimilate and make use of information received. Unless a conscious effort is made to avoid this, Extension generally tends to serve the better off (Roling, 1988).

All Brown County agents indicated that they wished to reach a broad audience with their media messages. In some cases, messages were aimed specifically at those of low socio-economic status. Yet other than adjusting messages to particular audiences, agents have little control over who pays attention to their articles and programs.

Chi squares were run on readers versus nonreaders, listeners versus nonlisteners, and viewers versus nonviewers of Extension information. The independent variables were gender, age, education and income. Ten of the 12 Chi squares showed no significant difference between users and nonusers. The other two were significant at $p < .05$. Readers of Extension information tended to have higher incomes than nonreaders, and Extension radio listeners tended to be older than nonlisteners. The overall conclusion, however, is that residents receiving Extension information from mass media were typical of the county population as a whole.

Conclusions

The results support the findings of other studies in showing that many people can be reached with Extension information via the mass media. Indeed, for most people the mass media provide their only contact with Extension.

Even though mass media represent one-way communication with little opportunity for feedback, those receiving Extension messages like what they are getting. Respondents clearly indicated mass media channels as the most important sources of Extension information, and gave the Extension messages high marks for usefulness.

Extension agents can do a limited amount of audience targeting by preparing messages for specific audiences and by selecting particular media. However, the final audience that receives mass media messages is self selective. According to this study, that audience is similar to the general population. It is not weighted toward socio-economic elites.

Most who receive Extension information from the mass media are best described as casual readers, listeners, and viewers. Few specifically search for the information. The probability of getting a specific question answered via Extension mass media messages would be low. Here is where mass media sources need to complement interpersonal sources. The Brown County mass media messages did this by announcing meetings and bulletins, listing topics for the dial-a-tip phone service, and inviting people to contact the Extension office.

The mass media looked very attractive from a cost/benefit standpoint. There were nearly 6,000 contacts for every hour of agent effort. Furthermore, the mass media bear nearly all of the message delivery costs. However, mass media messages can lead to increased demands for interpersonal contacts.

Because mass media provide only limited feedback, agents need to find some mechanism for keeping messages tuned to user needs. That normally is no problem. As was the case with Brown County Agents; letters, phone calls, and office visits largely set the agenda for mass media messages. Call-in radio programs also provided feedback. Across the country, Extension is paying much attention to using new communication technologies to spread its messages. In making decisions as to where to put its dollars, Extension should not overlook the traditional mass media, which can still provide low-cost methods of reaching large audiences across the socio-economic spectrum with useful information.

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