

Relative Effectiveness of Selected Extension Teaching Methods and Their Combinations in Teaching Rural Aquaculturists

J.S. Ojha and P.M. Sinha

College of Fisheries

Dholi, Muzaffarpur, Bihar-843 121, India

The present study revealed that among three individual extension methods (personal contact, group discussion, bulletin), personal contact was most effective in convincing the rural aquaculturists about the utility of an innovation. Bulletin occupied the last position in the order of effectiveness. Among the combinations of two, personal contact and group discussion resulted in maximum conviction regarding the merit of a new idea. The combination of group discussion and bulletin appeared to be least effective. The combination of personal contact, group discussion and bulletin proved significantly more effective than any of the three extension methods either individually or in combinations of two. The effectiveness of extension methods and their combinations was influenced by the level of education of the people. It may be concluded that in making aquaculture innovations popular with rural aquaculturists, better results can be achieved if the innovations are first exposed to the fish farmers with high level of education who can act as key communicators and multiply extension efforts.

Key words: Extension methods, aquaculture

The most important role of aquaculture extension workers is to communicate useful and practical research findings to fish farmers in such a way that they understand, accept and adopt these to attain a status of social and economic well-being. Adoption is a complex decision-making process involving a sequence of thoughts and actions. Before an individual tries out an innovation or actually adopts it, he weighs its merits in terms of his own situation. Unless fish farmers are convinced about the utility of an innovation in their own situation, there is little scope for its adoption. It is essential, therefore, that aquaculture extension workers use such extension teaching methods which help people make correct evaluation of an innovation. The present research project was designed to study the relative effectiveness of personal contact, group discussion bulletin and their combinations on fish farmers and to assess the effectiveness of these teaching methods.

Materials and Methods

The study was carried out with twenty farmers in two villages namely Deopar and Mahmada of Community Development Block, Pusa of Samastipur District in Bihar. Out of ten respondents from each village, five belonged to high education group (graduates) and five to low education group (non-graduates). The innovation selected was induced breeding of Indian major carps. The following extension teaching methods and their combinations were used: (i) personal contact, (ii) group discussion, (iii) bulletin, (iv) personal contact + group discussion, (v) personal contact + bulletin; (vi) group discussion + bulletin and (vii) personal contact + group discussion + bulletin.

Each of the seven selected extension teaching methods and their combinations was exposed to two villages, and one village (Malinagar) was taken as control where no extension teaching method was used. The

data on the respondents, (fish farmers) attainment of evaluation and conviction stage were collected sixty days after initial exposure to the innovation using the selected methods and their combinations. The behavioural characteristics enunciated by Singh (1965) were considered to determine whether a respondent had reached the evaluation or conviction stage. A three-point conviction scale was developed to study the respondents' evaluation of the innovation of induced breeding technique. For this, a large number of items reflecting favourable and unfavourable opinions about induced breeding technique were initially collected. These items were carefully scrutinized to eliminate vague and duplicate ones. Finally, five positive and five negative items were selected. Thus, the conviction scale consisted of ten items. For each item in the scale, the respondents were asked to select any one of three response categories: agree, undecided, or disagree. For positive items, the agreed response was given a weight of one and the disagreed response was given a weight of minus one. In case of negative items, the scoring system was reversed, with the disagreed response given a weight of plus one and the agreed response a weight of minus one. The total score of a respondent reflected the nature and intensity of his overall conviction about the utility of induced breeding technique. The total score was worked out by adding the scores of the individual items.

The total conviction scores of the individual respondents were subjected to analysis of variance (ANOVA) to see if there was any difference in their degree of conviction about the utility of induced breeding technique due to the selected extension methods and their combinations and levels of education.

Results and Discussion

The results of analysis of variance of conviction scores are presented in Table 1. The 'F' value for extension methods and their

Table 1. Analysis of variance of conviction score due to extension methods and levels of education

Source of variation	D.F.	S.S.	M.S.S.	F
Extension methods	6	207.15	34.52	27.39**
Education	1	28.42	28.42	22.55**
Interaction	6	50.90	8.48	6.73**
Error	50	63.14	1.26	
Total	63	349.61		

** Significant at 1% level

combinations was found to be highly significant. This reflected significant variation in the degree of conviction of the respondents who were exposed to the innovation through different extension methods and their combinations, irrespective of their levels of education. The F value for education was also found to be highly significant, indicating that the respondents having high and low level of education differed significantly in respect of their degree of conviction about utility of the innovation, irrespective of the extension methods and their combinations through which they were educated. This situation may be explained in terms of better ability on the part of the respondents belonging to the high education group to weight an innovation based on their specific farm situations.

The significance of difference between each pair of mean conviction scores of respondents exposed to the innovation through different extension methods and their combinations, irrespective of their levels of education, have been shown in Table 2. It is evident from the data that among individual extension methods, the mean conviction score of personal contact was signifi-

Table 2. Mean conviction scores of respondent subjected to different extension methods. The means, which do not differ significantly at 1% level, are underlined

$T_1T_2T_3$	T_1T_2	T_1T_3	T_1	T_2T_3	T_2	T_3
8.0	<u>6.82</u>	<u>6.62</u>	<u>5.38</u>	<u>5.30</u>	<u>3.20</u>	<u>2.33</u>

T_1 = Personal contact; T_2 = Group discussion; T_3 = Bulletin

cantly higher than those of the other two. The difference between the mean conviction scores of group discussion and bulletin was not statistically significant. It is further revealed that when personal contact was associated with group discussion or bulletin, the mean conviction score was significantly higher than that of the combination of group discussion and bulletin. The mean conviction score of the combination of personal contact and group discussion did not differ significantly than the combination of personal contact and bulletin. It was observed that the combination of personal contact, group discussion and bulletin resulted in significantly higher mean conviction scores than any individual extension method or the combination of any two. Thus, among the selected individual extension methods, personal contact was found to be most effective in developing positive conviction about the utility of the innovation. Among the combinations of two, group discussion and bulletin appeared to be least effective. There was no significant difference in the effectiveness of personal contact plus group discussion and personal contact plus bulletin. The combination of personal contact, group discussion and bulletin proved to be most effective than any other individual extension method or other combinations.

Personal contact was found to be the best method to convey new ideas in the local situation. The aquaculturists, in general,

considered this source of information dependable. In group discussion, the communication is formal in nature in which the specific farm situations of individual participants are not thoroughly discussed. Similarly, the information provided through bulletin is very general. The potential adopters are sceptical about some printed information because they feel that the information is tempered to cater business interests. It is, therefore, not hard to find why group discussion and bulletin either individually or in combination were not so effective in convincing the respondents about utility of induced breeding technique as personal contact or its combinations with the other two methods could do. The reason why the combination of all three extension methods resulted in most positive conviction is quite obvious. In this case, the respondents were exposed to the same innovation through three different extension methods including personal contact. Naturally, they had greater opportunity to understand the details and dispel their doubts and misgivings about the innovation.

References

- Singh, Y.P. (1965) *A study of Communication Nets in Sequential Adoption and Key Communications*, Ph.D. thesis, Division of Agricultural Extension, Indian Agricultural Research Institute, New Delhi, India