IMPACT: International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJRANSS)
ISSN(E): 2321-8851; ISSN(P): 2347-4580
Vol. 1, Issue 6, Nov 2013, 27-34

4 P'S MODEL FOR EFFECTIVENESS OF FISHERIES BASED TELEVISION PROGRAMMES

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ABSTRACT

Central and State Governments have dedicated television programmes based on agriculture, animal husbandry and fisheries which are telecast via public (Krishidarshan) and private television channels like ETV. Fisheries is a sunrise sector but there are not many studies on fisheries based television programmes. Accordingly, a study was carried out to assess viewers' preference and develop a model for effective fisheries based television programmes. Study was undertaken in West Bengal as it has highest fish production. Viewers were asked to rank their preference of fisheries based television programmes. Aquaculture based topics had a Rank based Quotient (RBQ) value of 80.56 followed by fish processing (71.67) and fish health management (53.89). Fisheries scheme scored least (27.36). Hypothesis that viewers were applying same standard in ranking topics was accepted as value of Kendall's Coefficient of Concordance (W) was 0.63. As $X2 \geq 118.8$ with df = 9 has probability of occurrence under Ho of $p < 0.001$ it could be concluded that agreement among viewers is higher than it would be by chance. Based on the findings 4 P's model for effective fisheries based television programmes consisting of presentation, programme content, programme telecast timing and policy issues was developed.

KEYWORDS: Fisheries, Model, Presentation, Content, Television, Programmes

INTRODUCTION

Aquaculture is a growing sector with an ability to have significant impact on economic development of the country. According to FAO (2012) capture fisheries and aquaculture supplied the world with about 148 million tonnes of fish in the year 2010 with a total value of US$ 217.5 billion which implies the importance of this sector in global economy. With sustained growth in fish production and improved distribution channels, world fish food supply has grown dramatically in the last five decades. World per capita food fish supply increased from an average of 9.9 kg (live weight equivalent) in the 1960s to 18.4 kg in 2009, and preliminary estimate for 2010, points to a further increase in fish consumption to 18.6 kg. It is reported that the growth in the global inland aquaculture production is wholly attributable to the Asian countries, carps being the flagship species of culture. With remarkable increase in production by India (up 0.54 million tonnes in 2009), China and Myanmar (up 0.1 million tonnes each), Asia's share is approaching 70% of the global production.

India is an important aquaculture country and is one of the major maritime nations in the world. Being home to more than 10% of global fish biodiversity, Indian fisheries occupy the second position in global fish production with a combined annual fish and shellfish production from capture fisheries and aquaculture of about 8 million metric tonnes (Ayyappan et al., 2011). Out of the total fish production, inland fish production in India contributes 4.930 million metric

tonnes and the state of West Bengal (W.B.) ranks first in this regard among the Indian states. As per the Annual Report of Department of Fisheries, Government of W.B. 2010-11, the total fish production of W.B. comprising both inland and marine production was 15.38 lakh tonnes (Department of Fisheries, Government of W.B., 2011).

Central and State Governments have dedicated television programmes based on agriculture, animal husbandry and fisheries which are telecast via public (Krishidarshan) and private television channels like ETV, which is a powerful communication tool and very popular mass media in urban as well as rural areas. Primary reason for popularity of television lies in its simplicity and animation. Buren (2000) has reported that among different mass-media, television gains a special status because of its potential to communicate to two sense organs simultaneously and to reach a large section of population residing in isolated and remote regions.

Television programmes are considered most effective mode in providing agricultural information and technological know-how to the farming community and help them to bridge the gap between scientists and the farmers. The main objective of these programmes is to create awareness among the rural viewers and to acquaint them with the latest technical and scientific knowledge. Besides this, in the live-phone-in format of such programmes, the farmer can get instant suggestions from the expert panel with regards to disease management and mitigation, pond preparation, feeding, nutritional and other management aspects of their farming through a phone call.

With short discussions on particular problem with the expert panel members by the caller farmer which is live and instant. Fisheries based programmes are telecast on DD-Bangla (Krishidarshan- in Bengali) and other private channels like ETV Bangla (Annadata- in Bengali). DD-Bangla and other private channels telecasting these television programmes keep a record of viewers watching the show and to some extent the television rating points. The extent of record keeping depends on the type of channel and the funding agency (sponsors).

Though, a number of studies have measured effectiveness of advertisements in audio-visual media like television in terms of contents, reach, viewers rating points and viewer's profile but there is lack of studies regarding effectiveness of agri/fisheries based television programmes among the viewers in general and fishers in particular (Ghosh, 2013). However, a study by Sharma and Kishore (1970) attempted to study the effectiveness of radio as a mass communication media and found that radio was very effective in bringing significant change in knowledge and attitude of the farmers of various socio-economic strata. Farmers also significantly retained the communicated knowledge even after 15-30 days of broadcast. But similar studies in case of television based programmes are scarce.

With this background, the present study has been carried out to to assess the viewers' programme preference by ranking technique and to test whether agreement existed among viewers as regard to this ranking. The study also had the objective of designing a model for effective fisheries based television programmes based on the viewers' responses and responses from the experts.

METHODS

To achieve the objective an inventory of probable fisheries based programme topics was prepared after having preliminary discussions with selected viewers. Ranking technique was adopted wherein viewers were asked to rank the programme topics as per their preference. In a study, Mohanty et al. (2011) had used RBQ method for ranking perception of constraints. In the present study Rank Based Quotient (RBQ) method as given by Sabarathnam and Vennila (1996) was used.

$$\text{Rank Based Quotient (RBQ)} = \sum [Fi\ (n+1) - i] / (N \times n) \times 100$$

Where,

Fi = Number of viewers giving the particular point at ith rank

i = ith rank

N = Total number of viewers

n = Number of topics

Non parametric test i.e., of Kendall's Coefficient of concordance (W) was used to test the hypothesis that there was agreement among the viewers as regard to the ranking of the programme topics. Association among the viewers by using Kendall's Coefficient of concordance 'W', which expresses the degree of association among the viewers, was calculated. It is reported by Siegel and Castellan (1988) that such measure may be particularly useful in studies of inter judge or interest reliability. The degree of agreement among the 'k' judges is reflected by the degree of variation among the N sums of ranks. The coefficient of concordance 'W' is a function of that variance. For computing W following formula as given by Siegel and Castellan (1988) was used which is as follows:

Where,

W = The degree of association among viewers in ranking the programme topics

Ri= Average of the ranks assigned to the topic

R = The average (or grand mean) of the ranks assigned across all topics

N = Number of topics being ranked

k = Number of viewers

N (N2-1) /12 = Maximum possible sum of the squared deviations, i.e. the numerator which would occur if there were perfect agreement among the k viewers.

To achieve the second objective, suggestions were collected from viewers on the basis of interview. These suggestions were validated by experts' opinions from different State Agricultural Universities (SAUs) in West Bengal. Based on this, a model for effective fisheries based programmes i.e. presentation, programme content, programme telecasting timing and policy issues was developed.

RESULTS AND DISCUSSIONS

With reference to profile of viewers, all viewers had their own television set and 89.20% had mobile phone. Majority of them reported that they used Direct to Home (DTH) connection (54.20%) followed by 45%, who used cable connection and 0.80 used analogue mode. As far as internet and social networking sites were concerned only 2.5% of viewers reported about usage of Gmail whereas, 1.7% accessed face book. Others did not have internet connectivity. Information related to preferred fisheries based television programmes by viewers is presented in table 1.

It is evident from table 1, that majority of viewers preferred aquaculture based programme topics wherein the calculated RBQ value was found to be highest (80.56) which indicates higher degree of weightage in preferential ranking.

As aquaculture is a growing sector and has an inherent ability to have significant impact on the economic development of the state of W. B., majority of the viewers expressed their willingness to watch programmes on it and get acquainted with this topic followed by fish processing (71.67), value addition of fishery products (62.78), fish health

management (53.89) and success stories (45). Programmes related to different fisheries based schemes were least preferred with RBQ score of 27.36.

The hypothesis that viewers were applying the same standard in ranking the topics was tested. To test this, testing of the significance of W using test of large samples as given by Siegel and Castellan (1988) was done. The value of Kendall's Coefficient of Concordance (W) can be between 0 to +1. It was found that W was 0.63 which expresses the degree of agreement among the viewers in ranking the programme topics.

With this, value it can be interpreted that viewers were applying the same standard in ranking the topics. Besides, $X2 = k (N-1) W = 118.8$. Referring to statistical table it was found that $X2 \geq 118.8$ with $df = 9$ has probability of occurrence under Ho of $p < 0.001$. With this it can be concluded with considerable level of confidence that the agreement among the viewers is higher than it would be by chance had their ranking been random or independent. The very low probability under Ho associated with the observed value of W enables to reject the null hypothesis that the viewer's rankings were unrelated to each other and concluded that there was good consensus among viewers concerning the programme topics which they mostly preferred.

Suggestions were taken from viewers for improving fisheries based television programmes on various parameters related to presentation, programme content and programme telecasting timing and this is presented in table 2.

It is evident from table 2, that majority of the viewers suggested 8-10 PM as preferred time slot for telecasting these programmes. They opined that it is difficult for them to watch programmes in early morning (6.30 AM) as well as in afternoon (5.30 PM) which are existing telecast time slots of Annadata and Krishidarshan respectively.

They also mentioned that they have less work load in the suggested time slot and during this time majority of them returned back to home from their work places. Similarly, a study Hassan et al. (2010) suggested that the main things to be considered in producing agriculture based television programs are the suitable air time. Repeat telecast time slot was preferred to be scheduled on the next day at noontime (12-4 PM). Similarly, a study by Bajaj and Nayak (1987) revealed that most of the farmers wanted the important points to be repeated.

A total of 80% of viewers expressed higher discontent over the duration of present telecasting which is 30 minutes. They suggested it must be 30 minutes to one hour by which adequate information on programmes content would be covered properly. Bellurkar et. al. (2000) conducted a study on preferences and suggestions of tele viewers towards various television programmes in Maharashtra state where it has been suggested to increase the time of farm programmes and presentation of information in a more comprehensive manner for making the farm programmes more effective.

Besides, all of them wanted prior information programme content through telecasting of programme promos in between gaps of other popular programmes to make awareness of the viewers. In a study by Bates (1983) revealed that re-broadcasting or repeat telecast of episodes or programs that were previously shown has been demonstrated to enhance the likelihood that learners will view the program, and may allow slower learners to review difficult material. Also, this will ensure prior attention on the programme to be telecast.

In addition to suggestion provided by the viewers, suggestions were also taken from the experts. For validating the suggestions given by viewers, experts from different State Agricultural Universities (SAUs) were interviewed and their opinions were collated with the suggestions received from the viewers. These are discussed under the heads presentation, programme content, programme telecast timing and policy issues.

Presentation

As any audio-visual programme starts with its own montage which happens to be the 'first look', it has a great impact upon the viewers. In this aspect fisheries based programmes of Krishidarshan and Annadata should have definitive type of montage having clear digitized visuals and animations with fairly agrarian sounds of music.

Programme Content

- The farm innovations practised by farmers should be included.
- In the live-phone-in programme, there is scope of on-line mixing of appropriate visuals related with the topic of discussion to be made ready well in advance from the studio archive so as to make the programme more attractive and lively rather continuously being focussed to the panel members.
- Voice of incoming phone calls should be very clear and noise free.
- Video conferencing with live outdoor visuals be included.
- Fisheries based quiz also be included.
- Use of local language in programmes viz. when there is a discussion on brackish water farming terminologies like 'mocha', 'jhanti', 'pochpocha' etc. instead of 'Galda', 'Bagda' (Tiger prawn), soft shell respectively be used. If adopted, farmers (viewers) will feel that the experts are well known about their local dialects and literary and artistic materials are very close to their customs. In a study, Kubde and Chaudhari (1992) also found that about 92.88% of farmers disclosed that they could fully understand the language of agricultural telecast. However, 72.38% farmers suggested to use local language and about 43% farmers wanted to avoid the use of technical words.

Programme Telecast Timing

- The topic of telecast under fisheries based programmes should not only be need based but also timely viz. nursery pond preparation of IMC should be discussed during 2nd – 3rd week of May, not any time during winter.
- Duration of the programmes should be at least 1 hour. Similarly, suggestions were given by viewers also.

Policy Issues for Programming

- Telecasting time of both the programmes as indicated by the viewers should be reallocated to suit the timing of the particular community of viewers for whom the programme has been intended. This is more pertinent particularly with Annadata, ETV-Bangla, where the telecasting time coincides with the beginning of fishery activities of the day (6.30 AM) by the fishers in their farms. This is also applicable with reference to repeat telecast timing of Krishidarshan, DDK-Kolkata at 6.05 AM.
- Anchors/comperes should have some basic understanding regarding the topic of discussion so as to make the programme more lively, vivid and knowledgeable.
- Regarding experts in any programme, personnel should be invited from different fields like fisheries financing, banking, insurance, SHGs, NGOs, etc.to generate and transmit wide range of information to the farmers. Also, frontline farmers with their exclusive success stories may be invited to take part in the discussion to create motivation among the viewer farmers.

Based on the responses from the viewers and experts' opinion common points were collated and these were clubbed in a 4 P's model for simplification purpose, best suited to telecast effective fisheries based television programmes.

Table 1: Programme Topics Preferred by Viewers of Fisheries Based Programmes

Preferred Programme Topic	RBQ Value	Rank
Aquaculture	80.56	1
Fish Processing	71.67	2
Value addition of fishery products	62.78	3
Fish Health management	53.89	4
Success stories related to fisheries	45.00	5
Fisheries Schemes	27.36	6

Table 2: Suggestions for Improving Fisheries Based Programmes

Category	Variables	Sub-Groups	Percentage
Presentation	Telecast timing	4-7 PM	20.0
		8-10 PM	70.0
		10-12 PM	10.0
	Duration of programme	20-30 min	20.0
		30 min-1 hr.	80.0
Programme telecast timing	Repeat telecast timing	5-6 AM	20.0
		12-4 PM	50.0
		10-12 PM	30.0
		Same day	40.0
		Next day	60.0
Programme Content	Programme content promotion	Yes	100
	Combination of audio-visual	Equal and simultaneous	100

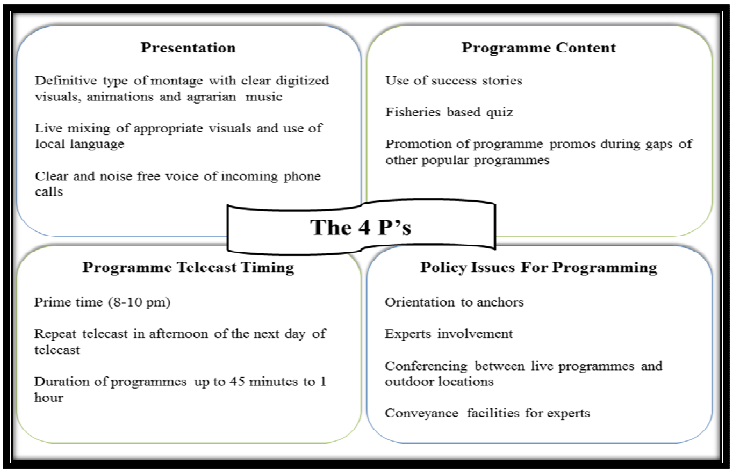

Figure 1: The 4 P's for Effective Fisheries Based Television Programmes

CONCLUSIONS

The study has revealed that most viewers have DTH and cable connection and preferred aquaculture based programmes followed by fish processing and fish health management. Statistically too it was found that viewers were in agreement. Suggestions were taken from viewers and experts for designing a model of effective fisheries based television programmes on the basis of findings of the present study the 4 P's model consisting of 4 segments namely presentation, programme content, programme telecasting timing, policy issues for programming can be used effectively not only in the fisheries based programmes but also in similar farm based programmes. Though, the study was limited for fisheries based programmes but this model can be applied in other sectors as well.

ACKNOWLEDGEMENTS

The authors would like to thank Dr. W.S. Lakra, Director and Vice Chancellor, CIFE, Mumbai for his support and guidance. Acknowledgements are due to Deputy Director (Audience Research Unit), Programme Executive, Production Assistants and staff of Krishidarshan at Doordarshan Kendra Kolkata and respondents for their cooperation.

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