

IMPACT OF TELEVISION ON RURAL DEVELOPMENT

Mohammad Reza Nazari

*Department of Media Studies, Faculty of Art and Social Sciences,
University Malaya, Malaysia*

Islamic Republic of Iran Broadcasting (IRIB) East Asia Center, Kuala Lumpur, Malaysia

Abstract

Television has proved to be a profound means of communication and potentially capable of leaving tremendous effect on the society. Undoubtedly, television is an influential and appealing medium, capable to draw the attention of too many viewers regardless of the literacy or illiteracy of its audiences. Although the cost and expenditure of television exceeds than that of radio, it is more effective and powerful from the educational viewpoint. The purpose of this study was to evaluate the role of television as an educational tool to enhancement of farmers' knowledge. This study was a randomized subject, pretest-posttest design among farmers who were working and residing in the province Kohgiluyeh va Buyer Ahmad, Iran. The subjects of the study including 161 farmers were selected randomly from rural area in Kohgiluyeh va Buyer Ahmad province. After determining educational goals of the study, a questionnaire was prepared as pre and post test. Based on educational contents, one TV program were produced which turn round fighting against agricultural pests, and correct method of using agricultural poisons. Participants responded to pre test one week before broadcasting television program through provincial Broadcast center of Kohgiluyeh va Buyer Ahmad. The post test was conducted after broadcasting TV program. Almost of the farmers in this study were male (90.1%) and married (80%). Mean age of the farmers was 41.65 ± 14.69 years. Among the respondents 37 people were illiterate (23%). The finding of the study showed that educational intervention through TV program resulted a significant knowledge enhancement from 3.73 to 6.26 out of 10 which was proven the effective role of television to improve awareness of farmers ($p < 0.001$). Media remains a vital part of development and farming systems and intervention of education in agriculture will be more fruitful if it is conveyed through television and will result in heightening the farmers' awareness.

Keywords: *Media, Television, Development, Agriculture*

INTRODUCTION

Education through media has created substantial changes in the traditional concept of education, has eliminated most of the deficiencies of the traditional systems of education and has created fundamental changes in education (Charlton et al., 2002). Using the mass media has caused an increase in the knowledge level and the output of educational system in recent decades. It seems the main reason for the popularity of television lies in its simplicity for the audiences. Since people intend to choose the easiest way for learning and the simplicity can be found in television educational programs (Buren, 2000).

Television has proved that is a strong communication means and can affect the society a great

deal. Television has been used for educational purposes after the World War II. In the beginning, Americans knew educational television similar to lesson television. Ekoja (2003) has mentioned that the information sources in different aspects of agriculture for the farmers are radio and television, the propagational publication, daily farm newspapers, agriculture exhibitions, practical education, and consultation services, respectively. Jenkins and his colleagues (2003) have conducted a research about the information technology used by the farmers of North California. Based on this research, newsletters are the most important ways of collecting information about major issues in agriculture. Among farmers, 60% use newsletters, and about 45% make use of magazines and bulletin articles. Learning from friends, meeting propagators and local leaders of the farm, reading newspapers, etc. are in other ranks. Among the media, utilizing scientific conferences, computer etc. are the last preferences, and few of the farmers use them. The study conducted by Laverack and Dap (2003) in order to access information, a great percentage of rural elites of Vietnam use single-page publications, posters and radio, and obtaining the necessary information through these media has been accompanied with a great success.

In Nigeria, the studies conducted by Arokoyo (2003) showed that although video, radio, and television are the major sources of information for the farmers of this country, in the case of establishing the foundations, it is also possible to use other developed equipment. In this country, the print media have a specific situation in agriculture transferring as well. Television is acknowledged as the most important medium for communicating with the rural populations of developing countries (FAO, 2001). The purpose of current study was to determine the role of television on the enhancement of farmers' agricultural knowledge.

METHODOLOGY

This study was a randomized subject, pretest-posttest design among farmers who were working and residing in the province Kohgiluyeh va Buyer Ahmad, Iran.

The location of study was Kohgiluyeh va Buyer Ahmad a province in South-West of Iran. Three towns were chosen randomly from province, and three villages were selected randomly from each town. Study population was all residents of Kohgiluyeh va Buyer Ahmad province among whom 161 people were selected randomly from selected villages in mentioned towns. Farmers are selected randomly based on the annual census taken by the agricultural organization in province.

At the first step, educational movie produced with various items including performer, experts, reports, educational rhythmic songs and short drama performances. The contents of this program turn round fighting against agricultural pests, and correct method of using agricultural poisons. This topic was an educational priority of the region based on prior studies. The research tool (questionnaire) designed based on TV program content. One week after the completion of the pre-test, TV program regarding the fighting against agricultural pests was broadcasted through local television centre of the Kohgiluyeh va Buyer Ahmad province. It was shown at 18:30 that was assumed to be the most appropriate time for people to listen to the television. One week after the broadcast of the TV program, post-test was completed. Software of SPSS and statistical tests of χ^2 , T-test, and ANOVA were used for the analysis and interpretation of the information.

RESULTS AND DISCUSSIONS

Among the participants there were 91.1% men and 9.9% women. Eighty one percent of the farmers in this study were married. 23% of the respondents were illiterate and most of the

participants had 6-10 members in their family (61.49%).

Table 1. Demographic profile of Respondents by sex, marital status, education level
Regarding possessing mass media, 96.27% of the population had television, 94.40% had Radio, 39.13% had fixed line telephone, 20.49% had cell phone, 5.59% had computer and 4.34% possessed video (Table 2).

Table 2. Distribution of respondents by access to Media at home

Media Respondents

F %

TV 155 96.27

Radio 152 94.40

Fixed Phone 63 39.13

Hand Phone 33 20.49

Computer 9 5.59

Video 7 4.34

Others 12 7.45

One week after the broadcasting of this program a post test was carried out. It turned out that 86.95% (140 farmers) of the participants had the opportunity to watch movie. Those who were not able to do so for any reason were excluded from the sample (13.05%).

In order to evaluation the efficacy of television to enhancement farmers' knowledge regarding selected topic, a pre and post-test was conducted which was including 10 question about fighting against agricultural pests and correct method of using agricultural poisons. The effect of television to improve respondents' information evaluated in Kohgiluyeh va Boyer Ahmad province and these findings were found.

Kohgiluyeh va Buyer

Ahmad

Characteristics

N %

90.1

9.9

100

9.3

80.1

3.7

6.8

100

23

35.4

22.4

14.9

4.3

100

145

16

161

15

129

6

11

161

37

57

36

24

7

161

Sex

Male

Female

Total

Marital status

Single

Married

Divorced

Widowed

Total

Education

Illiterate

Elementary

Secondary

High school

Degree

Total

Table3 illustrated level of knowledge of farmers regarding 10 questions before and after intervention which showed that in all questions level of their knowledge had increased significantly (P<0.05).

Table 3. Chi-square Test of Correct Response of TV viewer (Kohgiluyeh va Buyer Ahmad) in pre and post-test by questions

Item Correct Response

χ^2

df

P

value

Pre Test Post Test

No. % No. %

Q1 37 25.5 94 66.7 16.78 1 0.001*

Q2 38 27 91 64.5 24.49 1 0.001*

Q3 42 29.8 93 66 4.23 1 0.04*

Q4 60 42.9 101 72.1 31.42 1 0.001*

Q5 63 44.7 92 65.2 50.08 1 0.001*

Q6 54 38.3 97 68.8 35.12 1 0.001*

Q7 68 48.2 77 54.6 25.32 1 0.001*

Q8 67 47.5 82 58.2 23.02 1 0.001*

Q9 58 41.1 98 69.5 22.24 1 0.001*

Q10 37 26.2 58 41.1 33.05 1 0.001*

*. Indicated statistical significant at p<0.05

As the result show, the number of the correct answers has increased during the post test.

Chisquare

test employed in order to test the hypothesis which stated; H: There is a significant difference between level of farmers' knowledge before and after exposure to television program. The result indicated that the hypothesis accepted and the farmers' knowledge

improved significantly after watching “Khoda Ghovat Keshavarz” program through television in Kohgiluyeh va Boyer Ahmed province.

Al-Namlah (1998) reported that level of farmers’ knowledge increased in all the farming process due to the effect of watching television program. However the increase of farmers’ knowledge had different degree of strength.

The average of knowledge score has increased from 3.73 during the pre test to 6.26 in post test for the TV program. The result of the t-Test showed that there was significance difference between the result of the pre test and post test ($P < 0.001$), (Table 4). These results also supported the hypothesis which confirmed positive effect of television to improve farmers’ knowledge.

Table 4. t-Test for change in knowledge level from pretest to posttest by media(tv)

Media

n

Pre Test Post Test t p

M SD M SD

TV 140 3.73 2.11 6.26 1.67 19.63 0.000*

*. Indicated statistical significant at $p < 0.05$.

This study showed correlation between farmers’ knowledge level and educational level, age, marital status, family dimension, and monthly income of farmers which confirmed by some of the findings of the earlier studies indicating that educational level, age, marital status, family dimension, and monthly income of farmers has correlation with their knowledge level (Al-Namlah, 1998; Abdulrahman, 1998; Sadighiand Roosta, 2002; Sarwar, 2005; Chizari and Dinpanah 2005; Kolawole and Laogun, 2005; Hashemi et al., 2008; Kumar et al., 2009).

Most of the participants (68.3%) believed that producing suitable agricultural programs in accordance with the language and culture of the region could be very effective. The results of the study showed that producing and broadcasting local agricultural programs are the best form of producing programs. The use of the local language in this program would be effective in the degree of satisfaction of this program.

The results showed that the most appropriate time for broadcasting the programs was between 6 to 8 pm, according to the subjects’ views. Most of the respondents (86.86%) believed that the duration of the program (20 minutes) is enough and by increasing the duration of the program, the audience will be less and less interested to follow the program. The objective of the study was assessed the level of knowledge improvement among farmers who watched “Khoda Ghovat Keshavarz” program through television. The results demonstrated a significant increase in level of awareness among farmers from 3.73 to 6.26 which emphasized on effectiveness of TV to elevate farmers’ knowledge level. So the hypothesis of this study accepted indicating effectiveness of television to transfer agricultural knowledge to farmers. According to Ball-Rokeach and DeFleur (1976), television was able to increase farmers’ information regarding agricultural pests and correct methods of using poisons. In media dependency theory, the effect of message on knowledge and information has been emphasized. In this theory, the message influences the attitude, knowledge and behaviors of the people which were in agreement to the results of this study.

Similarly Al-Namlah (1998) reported positive effect of television to insemminate farmers’ knowledge in all farming process. The efficacy of TV to increase health and political information well stablished (Cohen, 1963; Kingdom, 1984; Linsky, 1989; Chang, 1991;

Pavlik et al., 1993; Alkalay, 1996; Kinnucan et al., 1997; McDivitt, 1997; Davis, 1998; Freels et al., 1999; Reger et al., 1999; Verbeke, 1999; Jenkins, 1999; Verbeke, 2000; Brodie, et al., 2001; Chew et al., 2002; Walle et al., 2002).

Broadcast media have the ability to disseminate information to large audiences efficiently and television can be a particularly important channel (Movius, et al., 2007). Nazari and his colleagues (2009) reported that educational intervention through television was effective and resulted in heightening the public awareness regarding environmental health.

A low level of education and an elder age are two crucial characteristics of the majority of farmers in Iran. Since these two characteristics are rather big barriers for farmers to develop their situations, it is extremely important for policy makers to address these issues in the future.

CONCLUSION

Mass media offer effective channels for communicating agricultural messages, which can increase knowledge and influence behavior of audience members. Broadcast media have the ability to disseminate information to large audiences efficiently; television can be particularly important channel.

Media scholars usually are more interested in producing programs that are of high commercial value. Most often, the few agricultural programs are not timed to suit the farmers. Consequently, most farmers are constrained to rely on third parties for agricultural information, which may often be biased. Considering the fact that rural population forms a great amount of population in any country, it seems indispensable to set up a particular TV network for this group to meet their needs. It is also suggested that producers include appealing and appropriate TV items such as, show, contest, comic plays, and etc in their programs under the supervision of the experts in agricultural organization.

ACKNOWLEDGMENT

The author is grateful to Islamic Republic Broadcasting, of Yasouj Center and Agricultural Organization of Kohgiluyeh va Boyer Ahmad Province for their valuable cooperation as well as all farmers who participated in the study.

REFERENCES

- Abdulrahman, M.A. (1998). A Study of Knowledge level of Extension Agricultural Research and Extension Network (AGREN). Network Paper No. 127 January.
- Alcalay, R. and Bell, R.A. (1996). Ethnicity and health knowledge gaps: impact of the California Wellness Guide on poor African American, Hispanic and non-Hispanic white women. *Health Communication*. 8(4):303-329.
- AL-Namlah, S.A.S. (1998). The Impact of the Agricultural Television Program on Knowledge, Skills and Attitudes of Farmers in Kharj Region in the Kingdom of Saudi Arabia. M.Sc thesis. Department of Agricultural Extension and Rural Sociology College of Agriculture, King Saud University.
- Arokoyo, T. (2003). ICT's for agriculture extension transformation. Proceeding of ICT's – transforming agriculture extension? CTA's observatory on ICT's. 6th consultative Expert Meeting. Wageningen, 23 – 25 September.
- Ball-Rokeach, S. J. and DeFleur, M.L. (1976). A dependency model of mass media effects, *Communication Research*, (3): 3-21.
- Brodie, M., Foehr, U., Rideout, V., Baer, N., Miller, C., Flournoy, R. and Altman, D. (2001). Communicating health information through the entertainment media. *Health Affairs*;

20:192-199.

- Buren, E.D. (2000). *Cultural Aspects of Communication for Development*. Translator: Falsafi, S. Tehran. IRIB Press. Iran.110-114.
- Chang, H.S, and Kinnucan, H.W. (1991). Advertising, information, and product quality: the case of butter. *American Journal of Agricultural Economics*; 73:1195-1203.
- Charlton, T., and Gunter, B. (2002). Background of the research project. In T. Charlton, B. Gunter and A. Hannan (Eds.) *Broadcast Television Effects In A Remote Community*. Mahwah, NJ: Lawrence Erlbaum Associates, 1-20.
- Chew, F. Palmer, S. Slonska, Z. and Subbiah, K. (2002). Enhancing health knowledge, health beliefs, and health behaviour in Poland through a health promoting television program series. *Journal of Health Communication*; 7:179-196.
- Chizari, M. and Dinpanah, G,h. (2005). An Investigation of Effective Factors Involved in Perception of Wheat Farmers Regarding On-Farm Demonstration in Esfahan Township, Iran. *Proceedings of the 21st Annual Conference AIAEE 2005, San Antonio, TX*.
- Cohen, B.C. (1963). "The Press and Foreign Policy". Princeton: Princeton University Press.
- Davis, C. Noel, M.B. Chan, S. and Wing, L.S. (1998). Knowledge, attitudes and behaviours related to HIV and AIDS among Chinese adolescents in Hong Kong. *Journal of Adolescence*; 21:657-665.
- Ekoja, I. (2003). Farmer's access to agricultural information in Nigeria. *Bulletin of the American society for information science and technology*; 29(6): 21- 23.
- FAO. 2001. Knowledge and information for food security in Africa from traditional media to the Internet. Communication for Development Group, Sustainable Development Department. Rome: FAO.
- Freels, S.A., Warnecke, R.B., Parsons, J.A., Johnson, T.P., Flay B.R. and Morera, O.F. (1999). Characteristics associated with exposure to and participation in a televised smoking cessation intervention program for women with high school or less education. *Preventive Medicine*; 28(6):579-588.
- Hashemi, S.M., Mokhtarnia, M., Erbaugh, J. M., Asadi, A. (2008). Potential of extension workshops to change farmers' knowledge and awareness of IPM. *Science of the Total environment*, 407:84-88.
- Islamic Republic of Iran Broadcasting. (2008).Research Center of IRIB available at: www.irib.ir
- Jenkins, C.N.H., McPhee, S.J., Bird, J.A., Pham, G.Q., Nguyen, B.H., Nguyen, T., Lai, K.Q., Wong, C. and Davis, T.B. (1999). Effect of a media-led education campaign on breast and cervical cancer screening among Vietnamese-American women. *Preventive Medicine*; 28(4):395-406.
- Kingdon, J.W. (1995). *Agendas, Alternatives, and Public Policies* (2nd edition), New York: Harper Collins, P. 165.
- Kinnucan, H. W. and Xiao, H. (1997). Effects of health information and generic advertising on U.S. meat demand. *American Journal of Agricultural Economics*; 79(1):13-23.
- Kolawole, O. D. and Laogun, E. A. (2005). Between Man and His Environment: Indigenous Knowledge approaches to Soil Fertility Conservation amongst Farmers in Ekiti State, Nigeria. *J. Hum. Ecol.*, 17(2): 109-115.
- Kumar, A., Godara, A.K., Yadav, V.P.S. and Mehta, S.K. (2009). Farmers' Knowledge about Photovoltaic Water Pumping System in Haryana. *Indian Res. J. Ext. Edu.*

9 (1), January 2009: 39-42.

Laverack, G. and Dap, D.H. (2003). Transforming information, education and communication in Vietnam. *Health Education*; 103(6): 363 – 369.

McDivitt, J.A., Zimicki, S. and Hornik, R.C. (1997). Explaining the impact of a communication campaign to change vaccination knowledge and coverage in the Philippines. *Health Communication*; 9(2):95-118.

Movius, L., Cody, M., Huang, G., Berkowitz, M., Morgan. S. (2007). Motivating Television Viewers to Become Organ Donors. *Cases in Public Health Communication and Marketing*. 2007 June. Available at:

http://www.gwumc.edu/sphhs/departments/pch/phcm/casesjournal/volume1/peerreviewed/cases_1_08.pdf

Nazari, M, R., Hasbullah, A. H., Parhizkar, S., Shirazi,A., Marioriad,R. (2009c). The impact of visuals: Using Television program to transform environmental health concepts to people. *Journal of Applied Science (JAS)*. 8 (2); 2619-24.

Pavlik, J.V., Finnegan, J.R., Strickland, D., Salmon, C.T., Viswanath, K., and Wackman, D.B. (1993). Increasing public understanding of heart disease: an analysis of data from the Minnesota Heart Health Program. *Health Communication*; 5(1):1-20.

Reger, B., Wootan, M.G. and Booth-Butterfield, S. (1999). Using mass media to promote healthy eating: a community-based demonstration project. *Preventive Medicine*; 29(5): 414-421.

Sadighi, H. and Roosta, K. (2002). Assessing Farmers' Sustainable Agricultural Practice Needs: The Case of Corn Growers in Fars, Iran. *J. Agric. Sci. Technol.* 4: 103-110.

Sarwar, M.J. (2005).An assessment of the relationship between the selected characteristics of farm forestry practitioners and their opinion on its effectiveness. *Journal of Applies Sciences*, 5(4):798-799.

Verbeke, W (2000). Influences on the consumer decision-making process towards fresh meat. Insights from Belgium and implications. *British Food Journal*; 102(7):522-538.

Verbeke, W., Viaene, J., Guiot, O. (1999). Health communication and consumer behaviour on meat in Belgium: from BSE until dioxin. *Journal of Health Communication*; 4(4): 345-358.

Walle, H.E.K., Cornel, M.C. and Jong-vanden Berg L.T.W. (2002). Three years after the Dutch folic acid campaign: growing socio-economic differences. *Preventive Medicine*; 35:65-69.