

Bangladesh Open University Transferring Agricultural Technologies through Media

Md. Farid Hossain

School of Agriculture and Rural Development, Bangladesh Open University, Gazipur-1705, Bangladesh

Corresponding author e-mail: faridhossain04@yahoo.com

ABSTRACT

This article aims to explain the role of Bangladesh Open University (BOU) transferring agricultural technologies and dissemination education through media to the farmers and learners. Bangladesh Open University is providing higher education and professional training in wide areas such as agriculture, business, education, arts, science and technology. The university delivers all levels of education in different fields through tutorial services, printing materials, radio-television and using other suitable Information Communication Technology (ICT). Bangladesh is an agricultural country with an area of 147,570 sq. km having a population of 160 million. Over 50% of the total land areas in Bangladesh are cultivated. The vast majority of the population depends on agriculture and natural resources for their food and income. The need for transfer of updated agricultural technology is at the top of the agricultural policy of the country. Research institutes usually generates technology; it is transferred through different extension approaches and mass media to the learners and farmers. Agricultural extension is the process of carrying the technology of scientific agriculture to the farmers in order to enable the farmers to utilize the knowledge and a better economy. The School of Agriculture and Rural Development (SARD) is to impart education through distance and blended mode comprising formal and non-formal programs in the field of agriculture and rural development to boost up production of different agricultural commodities including crops, poultry, dairy and fish. Media programs are a very effective way for dissemination of technology in presence of scientists, extension workers and farmers. Improved practices are most effective to affect adoption behavior of farmers. So, Bangladesh Open University able to play an important role in the dissemination of agricultural education and technology through media.

Keywords: Agriculture Extension, Extension approaches, ICT, Mass media, Bangladesh

INTRODUCTION

Bangladesh is an agricultural country with an area of 147,570 sq. km having a population of 160 million. The majority of the population depends on agriculture and natural resources for their food and livelihood. This country is situated in the north eastern part of South Asia between 20°34' and 26°38' north latitude and between 88°01' and 92°41' east longitude bordered by India and Myanmar. It is located at the apex of the Bay of Bengal (Rashid, 1991). The country is particularly vulnerable to climate change because of its geographic location at the north the Himalayan mountains and southern edge of the Bay of Bengal (Nasreen, 2009). Crops, livestock, poultry and fisheries are the main components of agriculture. More than half of the people are based on agricultural and livestock farming. The poultry sector is an integral part of farming systems and contributing country's economic growth and reducing poverty level in

rural and urban areas of Bangladesh (Hamid et al., 2017). Fisheries are one of the major components of agricultural activities, playing a significant role in nutrition, employment and income generation. Bangladesh has become the fourth largest inland freshwater fish producer in the world and will soon be meeting the major protein source of the people (Chowdhury and Maharjan, 2000). Forest is a very important renewable resource in Bangladesh accounting 17.37% of the total area. It provides materials like timber, fuel wood, food and primary base for biodiversity. Over one million people directly or indirectly depend on the forest for their livelihood. 'Sundarban' is the world's largest contiguous natural mangrove forest in Bangladesh covers an area of 4.07% of total area of Bangladesh. The mangrove forest has been declared as 'World Heritage site' by the UNESCO in 1997. It provides important ecosystem services in the region as well as protects coastal people from many natural disasters. Climate change posed multiple threats on the

communities and affected people are unable to perform their agro-based productions and face other occupational risks (Nasreen *et al.*, 2016). The international community recognizes that Bangladesh ranks high in the list of most vulnerable countries (Climate Change Cell, 2008). Besides the frequent disasters like drought, flooding, tornado, cyclone and tidal surge, Bangladesh is also susceptible to sea-level rise and large scale inundation of its low lying land due to global warming (MoEF, 2005). The impact of climate change on agricultural production is global concerns including Bangladesh, where lives and livelihoods depend mainly on agriculture. In view of these changes, it is necessary to build up awareness and transfer mitigating techniques of climate change effect in the rural areas of Bangladesh through mass media. The Bangladesh Open University is to expand all levels of education in different fields. The School of Agriculture and Rural Development (SARD) of BOU is to impart education through distance mode comprising formal and non-formal programs in the field of agriculture and rural development. Field trails or demonstration is a very effective way for dissemination of technology. Field demonstrations on improved practices through media programs are most effective to affect adoption behavior of farmers. Traditional commodity oriented agricultural research does not necessarily consider these realities. As a result, many of the technologies developed by different research institute have not been adopted by the farmers or else they have not been successful in promoting equitable socioeconomic development. Transferring new findings and technologies to rural farmers remain a promising strategy for increasing agricultural productivity. The new idea must reach farmers' farms and homes through effective extension the technologies and put them into use (Ekoja, 2003). Using the mass media has caused an increase in the knowledge level and the output of educational system. 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 the simplest way can be found in television educational programs (Buren, 2000). The objective of broadcasting media programs produced by SARD to transferring the crop, livestock, fisheries and forest based technology among the learners and interested persons.

Tutorial service of BOU

The BOU follows curriculum based courses which are offered through different tutorial centre's located in different geographical districts. Actually tutorial centers are the well-reputed institutions located outside of Bangladesh Open University main campus. There is a memorandum of understanding between Bangladesh Open University and the said institutions for tutorial services. Remuneration is paid to the tutorial centre for tutorial services. The tutor's qualification, training especially training in distance learning and experience play an important role in the learning process (Rahman and Sadat, 2010). Modules are handed over to the learners and tutorial support is provided for each subject by experienced tutors from the localities where the TCs are situated. Theoretical classes are held in the traditional class rooms. Practical classes are held in the field laboratories of the tutorial centre's. Strict regulations are followed during enrolment, tutoring and evaluation for quality assurance of the learners. Print and electronic media are used to support students. Books are printed in modular formats. Various methods are in trial to identify the better methods of practical demonstration with interactive approach (Faruque, 1998).

Mode of delivery

The BOU has a rich media centre where video and audio teaching aids are produced for broadcasting through national TV and radio channels. As such student support in print forms as well as through TV and radio are provided to the learners. In conventional system of education, learning is greatly influenced by the dynamic interaction process that goes on between a teacher

and students. The learning procedure also includes tutorial supported audio and video programs (Kirkwood, 1998). Besides the use of electronic media for delivering lectures, Bangladesh Open University supports with face to face interaction between learners and tutors at the tutorial centers located outside of the main campus. Several factors like conditions and infrastructure of the tutorial centers, tutor's qualification, experience and training in distance learning, teaching style and strategies are of importance in the process of acquiring education through distance mode (Rahman and Sadat, 2010). Importance of ODL has recently been focused as a useful tool for transfer of agricultural technology from the researchers and academics to the farmers who are the end users. BOU has taken full advantage of the modern ICT to facilitate and support its students all over the country, e.g., provision of student-related information through web (with data bases at back end), Learning Management System (LMS), Interactive Virtual Class Rooms (IVCR), Mobile Technology, pre-recorded Video Programs and Live Programs (Live Streaming) through the use of National TV channel (BTV) as well as Satellite TV Channel, Radio Programs for both formal and informal academic course in collaboration with Bangladesh Radio.

School of Agriculture and Rural Development of BOU

School of Agriculture and Rural Development (SARD) is one of the six academic schools of BOU. SARD is actively engaged in educating people of the rural areas of the country with the help of modern technology of agriculture to boost up production of different agricultural commodities including field crops, poultry, dairy and fish. The main objective of the school is to impart education through distance mode comprising formal and non formal programs in the field of agriculture and rural development. It offers degree, diploma and certificate programs. SARD is also going to offer Bachelor of Science in Agriculture

(BScAg), Master in Sustainable Agriculture and Rural Livelihood, MS and PhD programs very soon.

Formal programs

1. Bachelor of Agricultural Education (BAgEd)
2. Diploma in Youth in Development Work (DYDW)
3. Certificate in Livestock & Poultry (CLP)
4. Certificate in Pisciculture & Fish Processing (CPFP)
5. Master of Science (MS) in Agricultural Sciences

MS in Agronomy

MS in Entomology

MS in Soil Science

MS in Irrigation and Water Management (IWM)

MS in Aquaculture

MS Fisheries Biology and Genetics

Upcoming formal programs

1. Bachelor of Science in Agriculture (BScAg)
2. Master in Sustainable Agriculture and Rural Livelihood (MSARL)
3. Doctor of Philosophy (PhD)

Field of non formal program

Seed Production Technology, Production of field Crops, Horticulture, Plant Protection, Animal Science, Afforestation, Fisheries, Farm Machineries and Rural Development.

Media programme and agriculture

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; and television can be a particularly important channel (Nazari and Hassan, 2011). There is no doubt that information and

communication technologies (ICT) have influenced educational circumstances more than any other categories (Asnafi and Hamid, 2008). Many researchers and educators have tested the understanding of farmers and other clients toward the delivery of educational information (Gamon et al., 1992; Caldwell and Richardson, 1995; Laughlin and Schmidt, 1995; Trede and Whitaker, 1998; Suvedi et al., 1999; Akar-Vural, 2010; Faiola et al., 2010). The outcomes of their studies indicate that extension educators to communicate new and emerging technologies to farmers use different media and methods. The information sources in different topics of agriculture for the farmers are radio and television, the propagation publication, daily farm newspapers, agriculture exhibitions, practical education and consultation services, respectively (Ekoja, 2003). North California, newsletters are the most important information source in the agricultural sector. Among the media, utilizing scientific conferences, computer and other new media are the least preferred; so, few of the farmers use them (Jenkins et al., 1999). Video, radio and television are the major sources of information for the farmers in Nigeria, and print media have a specific situation in transferring agricultural information as well. Among the mass media, regarding informal education, radio and television have a specific situation. Due to the vast use, the media are among the best educational and cultural instruments (Arokoyo, 2003). The success of agricultural development programs in developing countries largely depends on the nature and extent of use of mass media in mobilization of people for development. The planners in developing countries

realize that the development of agriculture could be hastened with the effective use of mass media (Salleh et al., 2010). Radio and television has been acclaimed to be the most effective media for diffusing the scientific knowledge to the masses.

CONCLUSION

Broadcast media have the ability to disseminate information to large audiences efficiently. Mass media offer effective channels for communicating agricultural messages, which can increase knowledge and influence behavior of audience (Nazari and Hassan, 2011). The need for transfer of updated agricultural technology is at the top of the agricultural policy of the country. Agricultural extension is the process of carrying the technology of scientific agriculture to the farmers. The School of Agriculture and Rural Development (SARD) of Bangladesh Open University is to impart education through distance and blended mode comprising formal and non-formal programs in the field of agriculture and rural development to boost up production of different agricultural commodities including crops, poultry, dairy and fish. BOU authority takes initiatives to enhance professional skilled of the teachers of SARD and should emphasize on research and updating the materials for ensuring quality of the media programs.

Now, it is essential to introducing more radio, television, internet and mobile phone based technologies for rapid dissemination of information on agriculture.

Received : July 02, 2018

Accepted : August 04, 2018

REFERENCES

1. Akar-Vural, R. 2010. How rural schoolchildren and teachers read TV dramas: A Case Study on Critical Media Literacy in Turkey. *Urban Educ.* 45(5): 740-763.
2. Arokoyo, T. 2003. ICT's for agriculture extension? CTA's observatory on ICT's. 6th Consultative Expert Meeting, Wageningen, 23-25 September.
3. Asnafi, A. and Hamid, A. 2008. The role of ICT in developing of knowledge centre of Iran information and scientific evidence. *E- Journal*: 3(2).
4. Buren, E.D. 2000. *Cultural Aspects of Communication for Development*. Translator. Falsafi, S. Tehran. IRIB Press. Iran, pp.110-114.

5. Caldwell, A.E. and Richardson, J.G. (1995). Performance of a traditional extension audience for selfdirected delivery methods. *J. Appl. Commun.* 79(1):31-40.
6. Climate Change Cell. 2008. Economic Modeling of Climate Change Adaptation Needs for Physical Infrastructures in Bangladesh Department of Environment, Ministry of Environment and Forests. Component 4b, Comprehensive Disaster Management Programme, Ministry of Food and Disaster Management, Bangladesh.
7. Chowdhury, M.H. and Maharjan, K.L. 2000. Increasing Efficiency of Pond Fish Production in Rural Bangladesh. *IIFET 2000 Proceedings*.
8. Ekoja, I. 2003. Farmer's access to agricultural information in Nigeria. *Bull. Am. Info. Sci. Technol.* 29(6):21-23.
9. Faruque, A.M. 1998. How Effectively We can Teach Agriculture in Distant Mode. *Proc. of the International Conference on Collaborative and Networked Learning*. New Delhi. 1998.
10. Faiola, A.; Davis, S.B.; Edwards R.L. (2010). Extending knowledge domains for new media education: integrating interaction design theory and for new media education: integrating interaction design theory and methods. *New Media Soc.* 12(5):691-709.
11. Gamon, J.A.; Bounaga, L. and Miller W.W. 1992. Identifying information sources and educational methods for soil conservation information used by landowners of highly erodible field. *J. Appl. Commun.*, 76(1):1-5.
12. Hamid, M.A.; Rahman, M.A.; Ahmed, S. and Hossain, K.M. 2017. Status of Poultry Industry in Bangladesh and the Role of Private Sector for its Development. *Asian Journal of Poultry Science*, 11: 1-13.
13. Jenkins C.N.H.; McPhee, S.J.; Bird, J.A.; Pham, G.Q.; Nguyen B.H.; Nguyen, T.; Lal 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 Med.* 28(4); 395-406.
14. Kirkwood, A. 1998. New media mania: Can information and communication technologies enhance the quality of open and distance learning? *Distance Education* 19(2):228-241.
15. Laughlin, K.M. and Schmidt, J.L. 1995. Maximizing program delivery in Extension [Online]:33(4) [<http://joe.org/joe/1995august/a4.html>].
16. MoEF (Ministry of Environment and Forest). 2005. National Action Programme (NAP) for Combating Desertification. Department of Environment, Ministry of Environment and Forest Government of the People's Republic of Bangladesh.
17. Nasreen, M. 2008. 'Sustainable Development and Impacts of Climate Change: A Gender Perspective'. ITN, BUET.
18. Nasreen, M.; Hossain, K.M. and Azad, M.A.K. 2016. Climate Change and Livelihood in Bangladesh: Experiences of People Living in the Coastal Regions. *Climate Change Vulnerability: Cases from CIRDAP Member Countries*. Published by: Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP), Dhaka, Bangladesh.
19. Nazari, M.R. and Hassan, M.S.B.H. 2011. The role of television in the enhancement of farmers' agricultural knowledge. *African Journal of Agricultural Research*. 6(4): 931-936.
20. Rahman, K.M.R. and Sadat, A. 2010. Analysis of Tutorial Services for Distance Learners: A Case of Bangladesh Open University. School of Science and Technology, Bangladesh Open University (http://wikieducator.org/images/3/37/PID_265.pdf).
21. Rashid, H. 1991. *Geography of Bangladesh*. The University Press Limited, Dhaka, Bangladesh
22. Suvedi, M.; Campo S. and Lipinski, M.K. 1999. Trends in Michigan farmers' information seeking behaviors and perspectives on the delivery of information. *J. Appl. Commun.* 83(3):33-50.
23. Salleh, H.; Hayrol Azril, M.S.; Abu Samah, B.; Shahkat Ali, M.S. and Ramli, N.S. 2010. Agriculture Communication in Malaysia: The Current Situation. *Amer. J. Agric. Biol. Sci.* 5(3):389-395.
24. Trede, L.D. and Whitaker, S. 1998. Perceptions of lowa beginning farmers towards delivery of education. *J. Appl. Commun.* 82(4):22-33.

.....