

Distance education for rural people in developing countries: YAYÇEP experience from Turkey

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Abstract: *Rural people especially in developing countries usually have less access to both formal education and extension services compared to the general population due to limited budget, insufficient infrastructure, lack of extension staff and increasing rural population. On the other hand, agricultural innovations and technology have been constantly changing and rural people need to learn more knowledge and skills in the globalized and competitive world. For that reasons, it seems that distance education is one of the ideal solutions. The objectives of this paper are fourfold. First is to present the role and importance of distance education, especially the utilization of rural distance education, and then to discuss its effectiveness and limitations. Second is to present the experience of YAYÇEP (The Project of Extensive Farmer Education through Television) in Turkey. Third is to make suggestions about how to develop and implement similar projects for developing countries which will be used in the future. Four is to present conclusions and implications about effective use of rural distance education. The experience of various distance education projects for rural people all over the world shows that multiple media approach which is the combination of television, printed materials and group discussion is more effective in changing rural people's attitudes towards modern technology and development. In particular, the effectiveness of rural distance education projects can be increased with the support of regular extension services and field demonstrations. These kinds of projects should also include motivational factors such as prizes and certificates.*

Keywords: *distance education, rural distance education, educational television, YAYÇEP, Turkey*

Introduction

Distance education is an important educational activity especially for developing countries. It has been serving as an alternative method for delivering information to those unable to attend traditional classes regularly for a long time. The application of distance education process goes back to the beginning of 20th century. Later, distance education was used in both formal and informal education such as teacher training, adult education, continuing education, open learning, higher education and so on. One of the commonly using areas of distance education are rural areas.

Likely, formal education in rural areas and the management of extension services have become difficult particularly in developing countries. To avoid these issues, distance education methods have been introduced in many developing countries and most of them have long experience (i.e. India and Turkey).

As compared with other fields, the use of distance education is more widespread in rural areas. This is the result of certain structural characteristics of rural areas in developing countries. Namely, rural people can not be benefited easily and extensively from education and training services, as compared to the other sectors of the society due to lack of infrastructure, investments and organization. Besides, geographical and social constraints, lack of staff, structural and budgetary insufficiencies. Thus, distance education systems are preferred to fulfill educational purposes and facilitate learning for decreasing educational costs and reaching more rural people.

This paper initially presents the concepts of distance education and then discusses the debate on the sufficiency and limits of distance education for rural people especially in developing countries. As a case study analysis, a specific example "The Project of Extensive Farmer Education through Television" (YAYÇEP) applied in Turkey is presented and the results of some empirical research about

the project are discussed. Finally, some suggestions and implications based on the experience of this specific case are developed for similar distance education projects in developing countries.

Distance Education

Distance education can be defined comprehensively by Perraton (2000) as: "an organised educational activity, based on the use of teaching materials, in which constraints on study are minimised either in terms of access, or time, and place, pace, methods of study or any combination of these". The learner is separated from the teacher in terms of time and/or place in distance education. It is a non-formal education, but can be institutionally accredited by some institutions. In addition, various and multiple mass media mediums (i.e. electronic and printed) can be used at the same time. Successful distance education programmes require regular two-way communications, but have not necessarily to introduce face to face; can be occasionally learner to learner and/or teacher to learner driven. Hence, distance education offers a number of advantages to both learners and instructors. However, problems such as lack of interactivity in learning and weakness in skill teaching cannot be overcome unless it is supported with regular advisory services.

Electronic media, such as radio, television, video and recently computer (with internet connection) are some major and suitable media for distance education. By the improvements in the diffusion of technology, information can be transmitted easily by the aid of television compared to other mass media due to its practicality and lower costs per person. Although the computer-based media have been recently developed and used in many developed countries, they are not widespread in developing countries due to lack of infrastructure and access (Gelb and Offer, 2005). In addition, the lack of computer skill and literacy are some critical barriers even for urban people. Koutsouris (2006) critically reviewed the literature on the role of information technologies in rural development and concluded that the Internet activities for rural development need to be approached with caution.

On the other hand, television is still more popular and relatively more accessible in many developing countries and does not need literacy to follow. Furthermore, the functions of television have become apparent and widespread due to its popularity, entertaining characteristics and capacity of audio-visual information transmittance.

Distance education is suitable for conducting agricultural extension and rural development activities because rural people are often isolated geographically and socially, work long hours, often alone and impractical to attend long term formal courses, generally cannot study alone and need motivation from extension staff and progressive farmers (Cook, 1998). It has also become indispensable in training directed towards rural people especially in developing countries due to excessive population, inadequacy in investments and qualified extension staff (Fraser, 1987).

In many developing countries distance education has been used and it has positive impacts in the transfer of information to rural people (Perraton, 2000). However, Oakley and Garforth (1985) point out that mass media used in distance education can not fulfill all the tasks like recommendation and support that is done by extension staff. The one way communication provided by mass media and the passive status of the procedures are some disadvantages of the system. On the other hand, van den Ban and Hawkins (1996) mention the positive impacts of distance education in rural development and stress that the effects of audio-visual media are higher when supported with printed materials and advisory services (i.e. multimedia approach). Batey and Cowell (1986) mention the importance of motivation factors like prizes and certificates as positive contributions to the results of distance education. In addition, distance education (especially with audio-visual media) relatively attracts more people's attention, supports learning and decision-making while reaching large audiences with lower cost per person reached (Leeuwis, 2004). Distance education with video and television can support and increase the effectiveness of applications of agricultural extension activities for developing the information transfer process (Waldron and Moore, 1994). Mass media have relatively motivating function towards behavioural change (McQuail, 1997).

Rogers (1995) elaborated the results of various research and found that the efficiency of mass media (or mass communication media) were very effective for introducing (the?) innovations. However, the efficiency of these media in other stages like decision making and adoption were not satisfactory. Demiryürek and Köprülü (2005) reviewed that there have been also several studies in Turkey supporting this later point of view.

The case of YAYÇEP in Turkey

Turkey has one of the largest established programmes on distance education among developing countries. The Open University (called Anadolu University) in Turkey has been leading distance education more than a million registered students currently (950.000 already graduated) at all levels and professional working people since 1982 (AÖF, 2010).

Although agricultural and rural radio and television programmes have been broadcasted for more than fifty years, the Project of Extensive Farmer Education through Television (YAYÇEP) was the first primary and widespread application of distance education for the intention of rural people. The main idea was to increase the number of farmers benefiting from agricultural extension activities and to support the traditional extension methods. The project has been mainly implemented by Turkish Ministry of Agricultural and Rural Affairs (MARA) with the cooperation of State Radio and Television Institution (TRT), Anadolu University and Ministry of Finance. This project based on the idea that distance education system was an important application of agricultural extension comprising agricultural television programmes, manuals, advisory services on village level, exams, certificates and awarding systems (Demiryürek, 2000). Television was chosen as the basic medium due to its basic function as being a mean of entertainment, and it offers the opportunity for reaching large numbers of people with a lower cost (Altınbıçak and Demiryürek, 1994).

The first phase of the project (YAYÇEP-I) was initially applied between the years 1991 and 1997 and comprising about 23 different agricultural and rural subjects (the total of 338 television programmes, each of them lasts about half an hour) concerning animal husbandry and breeding, crop production, plant protection, agricultural mechanization, farmers' organization etc. The television programmes were enriched with supplementary materials like agricultural manuals, related to the programmes, 800.000 books were printed and distributed to the participants. During the first phase of the project a total of 113.123 farmers registered for the project and the participants were examined by Anadolu University. The successful participants were awarded for encouraging their participation to the project. Among all participants, 33.205 successful farmers were qualified to obtain certificates and 2.005 of them were rewarded the total value of 3.376 US\$ with various prizes. Another crucial aspect of the project were the continuous advisory services in the area(?) and for this the local Agricultural Directorates were made responsible. The total cost of the project (YAYÇEP-I) is about 5 million US\$ and 44 US\$ per farmer. MARA decided to continue the project with additional topics. In the second phase of the project (YAYÇEP-II), the previous programmes were updated and broadcasted between 1999 and 2009 with some supplementary topics (253 television programmes). 413.400 farmers were registered to the second phase and 488.952 new manuals related to this programmes were distributed to them (MARA, 2010). In addition, the manuals can be downloaded from the Internet (TEDGEM, 2010a) and some of the programmes can be watched from the web page (TEGEM, 2010b) of MARA. Agricultural TV (Tarım TV, 2010) of MARA has also recently started test broadcasting of some YAYÇEP programmes. However, some important elements of rural distance education programmes such as exam, certification and prizes were not applied in the second phase (MARA, 2010).

Findings of research on YAYÇEP

YAYÇEP was very successful in widening the context of the extension work and reaching more rural people especially making them aware of various innovations on agricultural, social, cultural and health subjects. However, some issues were emerged related to the project. The lack of monitoring

and evaluation at every stage to spot these insufficiencies and the failure to do necessary adjustments are some of the critical weaknesses of this project.

In parallel with the previous research on distance education in the world, limited empirical research on YAYÇEP (Demiryürek, 1993; Gültekin, 1995; Öner et al., 1998) shows that the television programmes were very effective in increasing the awareness about agricultural techniques. However, their effectiveness was limited as to the process of adoption and field applications. This was mainly due to the lack of suitable advisory services and demonstrations at the field level necessary to support television programmes.

Specifically, a research on the evaluation of the first programmes (animal husbandry and breeding) of the project conducted by Demiryürek (1993) showed that, among the farmers who participated the project and applied one of the agricultural techniques suggested by the programmes had the following distinctive characteristics: They were relatively older, with a higher level of formal education and had higher income levels compared to the non-adopters. Those farmers also asserted that they were regularly watching the television programmes within the scope of the project and reading the printed materials and derived benefit from them. They had more frequent contacts with the extension staff about the project materials, and consulted with each other. These findings support the generalization of Rogers (1995) which there are positive relations between adoption and some variables such as more favorable socio-economic characteristics and communication behaviors.

Some research indicated similar findings that the television broadcasts fail to reflect the conditions of the farmers totally. In addition, the timing of the broadcasts is not in concordance with the time usage of farmers. It is also mentioned that the formal monotonous style of the programmes and the age limit set between 18 and 41 for the trainees would negatively decrease the level of contribution. Another important fact which influenced negatively the evaluation studies was the low participation to the exams made for measuring the benefit rates of the farmers. A major reason for this was observed as that the exams were not applied to the farmers in places close to their regions. In addition, this was also related with the certification obtained by previous successful farmers in the exams were not functional in terms of benefiting primarily from agricultural support (Demiryürek, 1993; Gültekin, 1995; Öner et al., 1998).

Lessons learned from YAYÇEP

YAYÇEP was one of the most extensive agricultural distance education projects applied in developing countries. It was one of the successful agricultural extension projects applied in Turkey and presented in the World Summit on Sustainable Development (in Johannesburg, South Africa, 2002) in terms of alleviating poverty and diffusion of innovations (MARA, 2010).

The project has been broadcast since 1991 and had distinctive properties compared to the other applications of farmer education and extension programmes in Turkey. Extensive population of people, both registered farmers and perhaps more unregistered audience not only rural but also urban people who are interested in rural and agricultural programmes, were informed about agricultural innovation by this project. The printed agricultural manuals distributed and electronically issued through the Internet were found to be simple and clear to understand by most of the farmers and are still being used as guidebooks. The television programmes of the project were also recorded as a videocassette format and distributed to the Agricultural Directorates in order to be used for farmer training and extension activities throughout Turkey.

Beside on these positive aspects, there were yet some crucial problems of the project. Based on the experience of YAYÇEP new distance education programmes targeting to rural people in developing countries, the following summary proposals can be made as a contribution to improve the application of similar projects in the future.

Initially, the preparation of programmes should be made with the active participation of farmers who reflects the conditions of average farms rather than taking place in state farms and research stations. In addition, the broadcasting time schedule of the programmes should be adapted with the request

of the audience to their freer time. Coordination among the actors in the distance education system such as rural people, policy makers, researchers, extension staff, the representatives of NGOs and private companies and so on should have been more structured with the continuous feedback taken into consideration. Pilot trials, monitoring and evaluation activities have to be conducted in order to manage and measure the impacts of programmes. Distance education programmes should be employed a combination of audiovisual media, printed resources and advisory services in order to facilitate learning. Advisory services and field demonstrations should be conducted in order to give more importance to the feedback of the participants and teaching skills. Printed materials related to television programmes broadcasted should be prepared and distributed to learners to answer their questions and provide self-study condition. Regular exams should be made to control the impact of distance education programmes and successful participants should be encouraged with prizes and certification which provides priority to be benefited various supports. The programmes should not only cover agricultural and technical subjects but should also focus on other rural issues such as environmental conservation, health, poverty alleviation, food safety, market orientation and knowledge management. It should be also gender-balanced. In other words, the roles of women in agriculture and rural development should be more considered.

Conclusions and implications

Recently major changes have been experienced in the world in terms of information and communication technologies. These should require most governments to pay more attention to education and make investment to human resource development in the globalised world where the information needs of people are constantly increasing to make more sound opinion and decisions. Although education has been considerably developed and become widespread for more than a century in the world, many developing countries are still struggling with limited access to and benefit from education especially for rural people. These are mainly rooted from lack of finance and investments, limited extension staff and increasing rural population.

Developments in information technologies serve both opportunities and challenges for education. These present easy access to information in developed countries while people (especially rural) who need more education in developing countries have less access to education. This increases the gap between developed and developing countries. This dilemma may be decreased with the use of distance education which serves more access and flexibility to education. In addition, distance education reaches more people, usually in a more cost-effective way.

It seems clear that distance education will be a substantial alternative for future education systems for governments in not only developed countries, but also developing countries. The emergence of new information dissemination technologies especially the Internet and World Wide Web has significant socio-economic implications in developed countries. These technologies have been also adapted to distance education. New forms of distance education based on these recent communication technologies seem to be more suited people in developed countries due to their available infrastructure and human resources. On the other hand, developing countries have still lack of investments and infrastructure about these technologies and people (especially rural) have less access to them due to their lack of computer literacy and skills.

Thus, television seems to be a more suitable and still substantial medium for distance education for rural people in developing countries. It is more accessible and reaches more people usually with a cost-effective way. In addition, it is still popular due to its entertainment characteristics and audio-visual capacity.

The experience of various distance education projects for rural people all over the world shows that multiple media approach which is the combination of television, printed materials and group discussion is more effective in changing rural people's attitudes towards modern technology and development. In particular, the effectiveness of rural distance education projects can be increased with the support of regular extension services and field demonstrations. These kinds of projects should also include motivational factors such as prizes and certificates, when practical.

In conclusion, rural distance education projects for developing countries will invariably have to be integrated whole with suitable television broadcasting, simple manuals and regular advisory services in order to achieve satisfactory success.

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