WBL TO PROMOTE LIFELONG LEARNING AMONG FARMERS FROM DEVELOPING COUNTRIES: Key Strategies

Dr. Pradeep Kumar MISRA
Reader (Educational Technology)
Faculty of Education and Allied Sciences
M.J.P. Rohilkhand University, INDIA

ABSTRACT

In times of liberalization, privatization and globalization (LPG), countries are looking to establish effective systems of lifelong learning to prepare farmers for changing agricultural sector. But offering lifelong learning to farmers in developing countries) is a vital challenge as majority of them are residing in remote and rural areas and have low educational qualification and lower socio-economic status. Web Based Learning (WBL) can support us in this cause because world over it is increasingly recognized as a viable and learner-friendly approach. In this background, the present paper attempts to discuss about need and challenges of lifelong learning for farmers and proposes key strategies for providing Web based lifelong learning to farmers of developing countries.

Keywords: Web based learning, lifelong learning, farmers

BACKGROUND

Agriculture, vitally important for most developing countries, must change to meet today's needs of sustainable food production while at the same time raising the living standards of rural poor and avoiding environmental degradation. This situation can be clearly understood by taking the example of India. Agriculture is the mainstay of the Indian economy (Agriculture and allied sectors contribute nearly 22 per cent of Gross Domestic Product of India), as about 65-70 per cent of the population is dependent on agriculture for their livelihood. Majority of this rural population is involved in farming sector and accounts for around 12.2% of the world's population. Farmers are core component of this population.According to McElwee (2004) 'farmers are defined as those employed on a part or full time basis in a range of farming activities; they are primarily dependent on the farm and agriculture in the practice of cultivating the soil, growing crops and raising livestock as the main source of income.' Farmers particularly in low-income countries are facing different socio-economical challenges, as observed by Latchem et al. (2004) 'there are five billion people in low-income countries, most of whom still depend on the land for their livelihood.

Seventy-five per cent of the world's poor live in rural South Asia and sub-Saharan Africa and half of these are in regions where land is degraded and essential infrastructure is lacking.... Agriculture may still constitute a large percentage of the GDP, export earnings and employment of low-income countries, but crop yields and farmers' incomes are exceedingly low.'

FARMING SECTOR: Existing Challenges

Some years ago, the skills a farmer needed were related in the first instance to the production of good quality food and operational management. Today, with the changes in the political and market environment, farmers need additional skills in the fields of marketing and selling, strategic management, networking and, above all, skills in finding and realising new business opportunities – in other words: in addition to production skills, farmers nowadays need entrepreneurial skills (Rudmann, 2008, p.13).

Majority of farmers in developing countries are relying on traditional (generational) learning to carry-out their occupations. They are less aware about recent trends and techniques of farming and lacking latest knowledge about opportunities presented by agriculture sector. This situation is making them less productive and installing their economic and social progression. Latchem et al. (2004) observes that 'In low-income countries, however, smallholders must still depend on basic methods and ancient tillage tools. They lack access to research and advisory and information services, and they are unable to afford modern technology or improved crop and livestock varieties.

They have to cope with failed land reforms and corrupt development schemes, climatic and environmental damage, and new pests and diseases that are encroaching into previously uncultivated areas. And they are unable to take advantage of markets beyond their local communities. All of these circumstances lead to a food crisis, a decline in real income and increased human morbidity'. The other vital challenge is that youths are no more interested to join agricultural occupations. In many developing countries, large numbers of educated youths are unemployed or significantly underemployed. Instead of their unemployment, these youths deter to join agriculture sector and majority of them prefer to migrate from villages to cities to pursue other occupations. Rudmann (2008, p. 21) warns us 'Community changes in the rural economy are also becoming more evident, as the sector does not appear to regenerate its ageing population. The lack of younger farmers entering the farm business may well have serious implications for the farm sector'.

Besides, a number of global issues and concerns are also dominating farming sector and world over farmers need to understand these challenges and act wisely. Morgan et al. (2008, p. 78) observes 'Over the last two decades concerns about the negative consequences of recent developments in agriculture and in the agri-food sector in Europe and worldwide have grown further viz. the debate about genetically modified products; cases of food contaminations; animal health concerns such as bird flu and the foot and mouth disease; issues of over-fishing; clear-felling of forests; loss of biodiversity; chemical pollution; climate change with its attendant effects on water resources and on the development of bio-fuels; and other environmental and health-related risks'.

These challenges are to be met for success of farming sector in developing countries. Providing farming related skills and qualifications to existing and would be farmers through flexible learning can be helpful to meet these challenges. Latchem (2004) reminds us 'there is need for agricultural development ranging from the application of agro-biotechnologies through sustainable agriculture and natural resources management to making the most of local indigenous knowledge'.

PROMOTING LIFELONG LEARNING AMONG FARMERS OF DEVELOPING COUNTRIES: Need and Challenges

In times of liberalization, privatization and globalization (LPG), countries are looking to establish effective systems of lifelong learning to prepare farmers for changing agricultural sector. The troika of LPG has impacted the world market and economies of nations are primarily responsible to bring changes in the agriculture market and agricultural occupations. For successful competition in today's LPG driven agriculture market, it has become a prerequisite for farmers particularly in developing countries to have skilful performance in modern technologies and specialized agricultural trades at their command. They are further required to learn new skills and update them regularly throughout their life. The traditional learning systems are bound to change under these conditions because traditional learning prepares farmers for careers that are based on manual or practical activities, traditionally non-academic and totally related to a specific agriculture trade, occupation or vocation.

Gasson (1988) suggests that 'better-educated farmers are known to make greater use of information, advice and training, to participate more in government schemes and be more proactive in adjusting to change and planning for the future of the business'. Farmers particularly from developing countries need increase in production, poverty reduction, livelihood security and sustainable development and looking for ways to make it possible. Following this position, it is important to situate learning processes within an authentic social situation; the problems contained within these learning situations should motivate learners intrinsically and enable them to solve similar problems by themselves in future (Schnotz et al 2004, p.133).

Learning develops from action and action takes place in social situations. Following this principle, broader access to lifelong learning seems a viable option to uplift exiting farmers and attracting youths for agriculture related occupations. In this context, the guiding principle of lifelong learning that 'it is never too soon or too late for learning' has valuable importance for farmers of developing countries.

Lifelong learning can play key role in the lives of farmers by providing them equal and open access to high-quality learning opportunities, and a variety of learning experiences. In developing countries, it will offer an opportunity for farmers to understand the workings in market, the information and wisdom for occupational transformation, a motivation to produce, and the ability to survive and excel. Lifelong learning will be helpful for farmers at all stages of their lives to pursue stimulating learning opportunities. These learning opportunities are must for farmers because economic progress of any nation (particularly developing nations) depends on the lifelong development of the individuals (our human resources) to use national and capital resources wisely and to participate fully and efficiently as productive members of society through-out their life.

In this context, lifelong learning seems an appropriate approach for socio-economic development of farmers in developing countries. Its suitability lies in the fact that it includes natural learning, self-learning, non-formal learning and formal learning. But offering lifelong learning to farmers in developing countries) is a vital challenge and needs innovative strategies as majority of them are residing in remote and rural areas and have low educational qualification and lower socio-economic status.

WEB BASED LEARNING AND FARMERS: Key Issues

With increasing global competition in the agriculture sector, learning process has to be rapid, updated, highly dynamic and tailor-made to the global needs. As observed by Pocknee et al. (2002) 'In agriculture, like in most industries, new tools and information are growing at an ever-increasing rate. To remain competitive, farmers, consultants, and agribusiness must constantly re-train'. Web based Learning seems a potential tool to meet this future challenge. This concept, however, goes beyond technology, to the integration of knowledge and culture, aimed at improving communication and learning processes among relevant actors in agriculture at different levels i.e. locally, regionally and globally (Gakuru, 2010).

The Web, growing much faster than any other technology, has been seen as the most promising medium for deploying educational content (Ferdig et al. 2004). Web Based Learning (WBL) can support us in this cause because world over it is increasingly recognized as a viable and learner-friendly approach that can complement, or even replace, more traditional training and educational approaches. The process of Web based Learning provides the ease of learning by anyone, anytime and anywhere to a learner and provides a scope for the content developer to update the content on regular basis.

Provision of WBL supported lifelong learning can help a lot for capacity building and sustainable development of farmers particularly in developing countries. According to Kruse (2010) 'The general benefits of Web-based training when compared to traditional *instructor-led training* include all those shared by other types of technology-based training. These benefits are that the training is usually self-paced, highly interactive, results in increased retention rates, and has reduced costs associated with student travel to an instructor-led workshop'. He further writes 'When compared to *CD-ROM training,* the benefits of Web-based training stem from the fact that access to the content is easy and requires no distribution of physical materials.'

The use of WBL for lifelong learning of farmers demands strategic focus upon: agreeing and extending progression mechanisms, progressions accords and pathways, filling skills and progression gaps, and enabling skills(s) that facilitates the progression opportunities (Pocknee et al. 2002).

To fulfill these objectives, the priority is to research about key strategies to promote lifelong learning among farmers in changing global scenario dominated by liberalization, privatization and globalization. In this background, the following key strategies can be adopted for WBL supported lifelong learning among farmers in developing countries.

USING WEB BASED LEARNING TO PROMOTE LIFELONG LEARNING AMONG FARMERS: Key Strategies

Considering this positivism, the lifelong learning needs of farmers may certainly be met effectively and efficiently by establishing '*Web based Lifelong Learning Centers'* at different locations. The establishment of these centers will be helpful to meet out the lifelong learning needs of every willing and needy farmer. The modus operandi of proposed '*Web based Lifelong Learning Centers'* for farmers will be as follows:

- **The grant for establishment of these centers may be provided by**

respective governments. The governments may provide grant for buildings, equipments, maintenance and running costs.

- **The centers will be equipped with sufficient number of web based learning tools such as computers with High speed internet connections and telephones. The centers will also have the teleconferencing facilities for farmers.**
- **The services of multiple operators like NGOs, the private sector and government entities, social help groups, and voluntary organizations may be sought to run these centers.**
- **Every center will be required to contact farmers of the region and explain them about the objectives of centre, Afterwards; the centers will register all the willing farmers from catchment villages as member of centre. The registered farmers may be issued a member card to utilize the services of the centre.**
- **The governments may ask telephone operators to provide toll free telephone services to contact these centers. This facility will be helpful for farmers to contact these centers via telephones without paying any cost.**

These centers will mainly provide three types of WBL support to fulfill the lifelong learning needs of farmers. The nature and modalities for providing lifelong learning support to farmers via these centers will be as follows:

Web based Occupational Lifelong Learning

Occupational learning is the first and foremost lifelong learning need of farmers. The farmers are mainly dependent on agriculture for their livelihoods. They need to learn more about their primary occupation agriculture on regular basis. Unfortunately, most of them have no formal means to pursue their most sought occupational learning needs. The proposed '*Web based Lifelong Learning Centers*' will be helpful to fulfill these learning needs of farmers by following way:

- **The farmers will be able to learn about occupation related information like availability of good quality seeds, most suited crops to the region, latest farming techniques, etc. through these centers. These centers will use web to spread this information to farmers. Besides, farmers may also visit these centers to access internet for these information.**
- **The farmers will get agricultural guidance and counseling through these centers. These centers will provide teleconferencing services for farmers on various occupational aspects on regular basis by inviting agricultural experts. Besides, the list of agricultural and veterinary experts consisting their contact address and telephone numbers may also be uploaded through these centers. These facilities will help the farmers to put their problems, questions and queries before these experts and seek their advice.**
- **The farmers will use these centers as a learning sharing platform. These centers will provide an opportunity for farmers to share their best farming experiences, traditional occupational knowledge, tricks of trade among other farmers from different parts of the country by using web. The experts of these centers will mediate to disseminate the information provided by farmers by using websites, blogs, chat rooms, etc.**
- **The other important task of these centers will be to organize virtual occupational training Programmes/Workshops for framers.**

This measure will help the farmers to attend agricultural training on different aspects like cultivation techniques, animal husbandry, crop preservation, etc via distance mode. By this provision, farmers will be able to update their knowledge and skills without going to distant places or paying a hefty fee.

- **Weather related information in advance is one of the most important learning needs of farmers in developing countries as agriculture in rural sector is mainly dependent on it. Taking this need in view, these centers will provide different type of weather information for farmers. This information will help farmers to utilize weather forecast in effective manner by planning their farming activities accordingly.**

Web based Financial Lifelong Learning

The farmers from developing countries are not so viable on financial aspects. They are marred by high cost and low savings. The proposed '*Web based Lifelong Learning Centers*' will help to overcome this and many other financial problems marring farmers from developing countries.

- **The farmers from developing countries are mainly restricted to local environment. They are not aware about the existing possibilities and opportunities in globalize and open economy. This centre will act as a window of the outer world to the farmers. The farmers will be able to learn about the global agriculture trends and demand to learn financially viable lessons for them.**
- **The farmers will use these centers to know about the cost of their agricultural products at regional and national markets. This will help them to compare the rates of their products and sell them on higher rates. These centers may also offer on-line trading option for farmers.**
- **These centers will be helpful to organize different programmes related to financial planning, savings, agriculture and cattle loan for farmers on regular basis. Learning about these provisions will help the farmers to make them financially aware and informed.**

Web based Developmental Lifelong Learning

The urban migration is another major problem as numbers of rural youths (potential farmers) in developing countries are migrating to cities due to inadequate economical and developmental opportunities. The '*Web based Lifelong Learning Centers*' will help to check these and other social problems in following manner:

- **These centers will provide opportunities for farmers to put their social problems on a broader canvas by using web services. These centers will help the farmers to share and learn about best practices adopted by fellow farmers from other parts of the country to tackle existing social problems. Besides, they will also be able to get the advice of experts via web on different social issues.**
- **These centers will provide the list and contact of those voluntary, governmental and non-governmental organizations working for the welfare of rural sector. The farmers will be able to contact these organizations for organizing different developmental schemes in their respective village**

- **These centers will further act as a data bank of farmers. The details, problems and concerns of farmers will be put up in e-repository of these centers. This data bank will help the government to assess the needs of farmers to plan different developmental schemes accordingly.**
- **These centers will be helpful for farmers to learn about environmental challenges by showing them different progammes related to environmental protection and conservation. This Learning will help the farmers to initiate different environmental initiatives like tree plantation, conservation of natural resources, utilization of waste and barren lands in eco-friendly way, etc.**
- **Education and health are two main pillars for development of any society. Majority of farmers from developing countries lack on both these aspects and need to learn about these issues for their development. Taking this need in view, the proposed centers will offer web supported need based health education and adult education programmes in regional languages for farmers.**

CONCLUSION

Fulfilling lifelong learning needs of farmers residing mainly in rural sector is must to make developing countries into developed nation. The researcher has a belief that provision of Web supported lifelong learning to farmers from developing countries through proposed `*Web based Lifelong Learning Centers*´ will certainly be yield fruitful dividends if implemented in right spirit and faith.

Author's Note: **An earlier version of this paper in Indian context was presented at ICDE 23rd World Conference on Open and Distance Learning held at Maastricht by Open University Nederland during 7-10 June 2010.**

BIODATA and CONTACT ADDRESSES of AUTHOR

Dr. PRADEEP KUMAR MISRA is Reader (Educational Technology) in the Faculty of Education and Allied Sciences of M.J.P. Rohilkhand University of India. His qualifications include M.Sc., M.Ed. and Ph.D. He is engaged in teaching to the students of B.Ed. and M.Ed. and supervising Ph.D. research. His specialization areas are educational media, development of educational soft wares, and HIV/ADIS education. He has been awarded the prestigious Doctoral and Post Doctoral Research Scholarships of DAAD, Germany and European Commission's Erasmus Mundus Visiting Scholar Scholarship.

Dr. Pradeep Kumar Misra
Faculty of Education and Allied Sciences,
M. J. P. Rohilkhand University, Bareilly - 243006 (U. P.). INDIA
51, Shakti Nagar, Bareilly -243006 (U.P.) INDIA
E-mail: pradeepkmisra@yahoo.com

REFERENCES

Ferdig, R.E., Mishra, P. & Zhao, Y. (2004). Component Architectures and Web-Based Learning Environments*. Journal of Interactive Learning Research,* 15.

Gakuru, M., Winters, K. & Stepman, F. (2010). Inventory of Innovative farmer Advisory Services using ICTs. The Forum for Agricultural Research in Africa. Retrieved August 16, 2010 from http://www.fara-africa.org/media/uploads/File/NSF2/RAILS/Innovative_Farmer_Advisory_Systems.pdf

Gasson, R (1988). Educational qualifications of UK farmers: A review. *Journal of Rural Studies,* 14(4), 487-498.

Kruse, K. (2010) Using the Web for Learning: Advantages and Disadvantages. Retrieved July 05, 2010 from, http://www.e-learningguru.com/articles/art1_9.htm

Latchem, C., Maru, A. & Alluri, K. (2004). The L3Farmers Project- Report and recommendations to the Commonwealth of Learning on Open and Distance Lifelong Learning for Smallholder Farmers and Agricultural Communities. Retrieved July 10, 2010 from, http://www.col.org/SiteCollectionDocuments/0410_L3Farmers_Rpt.pdf

McElwee, G (2004). A segmentation framework for the farm sector. 3rd Rural Entrepreneurship Conference University of Paisley.

Morgan,S., Miele, M. & Marsden, T.(2008). The ESoF project within its policy context: CAP reform, global change and the response of farmers. In Rudmann, Christine (Ed.) Entrepreneurial Skills and their Role in Enhancing the Relative Independence of Farmers. Results and Recommendations from the Research Project Developing Entrepreneurial Skills of Farmers. Research Institute of Organic Agriculture, Frick, Switzerland. Retrieved July 10, 2010 from, http://www.esofarmers.org

Murrell, T. (2000). Precision Agriculture: What Have We Learned So Far and What Needs Exist? Retrieved July 08, 2010 from.
http://www.farmresearch.com/ifafs/needs/scott.htm

Pocknee, S., Kvien, C., Rains, G., Fiez, T., Durfey, J. & Mask, P. (2002). Web-Based Educational Programs in Precision Agriculture. *Precision Agriculture,* 3, 327–340.

Rudmann, C. (Ed.) (2008). Entrepreneurial Skills and their Role in Enhancing the Relative Independence of Farmers. Results and Recommendations from the Research Project Developing Entrepreneurial Skills of Farmers. Research Institute of Organic Agriculture, Frick, Switzerland. Retrieved July 10, 2010 from, http://www.esofarmers.org .

Schnotz, W., Molz, M. & Rinn, U. (2004). Didaktik, Instruktionsdesign und Konstruktivismus: Warum soviele Wege nicht nach Rom führen. In Rinn, Ulrike & Meister, Dorothee M. (Eds.): *Didaktik und neue Medien.Konzepte und Anwendungen in der Hochschule*. Berlin: Waxmann, pp.123-146.