



## **ICTS SUPPORTED LIFELONG LEARNING FOR INDIAN FARMERS: NEED, CHALLENGES AND STRATEGIES**

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### **Summary**

*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. Agriculture is the mainstay of the Indian economy, as about 65-70 per cent of the population is dependent on agriculture for their livelihood. Majority of this population is rural population and accounts for around 12.2% of the world's population. Development of the agriculture sector and Indian farmers is essential in the transformation of 'developing India into developed India'. Indian farmers need increase in production, poverty reduction, livelihood security and sustainable development. Lifelong learning can play a vital role in this regard as it implies continual learning through out life. But offering lifelong learning to approximately 700,000,000 people in 634,321 villages is a vital challenge and needs innovative strategies. Provision of ICTs supported lifelong learning can help a lot for capacity building and sustainable development of Indian farmers. Considering this approach, present paper discusses about need and challenges to provide lifelong learning and presents an innovative strategy to establish 'e-Lifelong Learning Centers for Farmers' at every block headquarter to fulfill the varied lifelong learning needs of Indian framers.*

### **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 is also true for 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 population is rural population and accounts for around 12.2% of the world's population. Development of the agriculture sector and Indian farmers is essential in the transformation of 'developing India into developed India'.

### **Lifelong Learning for Indian Farmers: Need and Challenges**

Indian farmers need increase in production, poverty reduction, livelihood security and sustainable development and looking for ways to make it possible. The challenges before Indian farmers can be grouped into three broad categories, namely social, occupational and financial challenges. At social front majority of Indian farmers are affected by cast barriers, high population growth and low social status. While at occupational and financial front, they are plagued by poor farming techniques, unstructured marketing systems, less awareness of occupational opportunities, low income and low savings. Illiteracy among Indian farmers is another major challenge that needs to be addressed. According to Indian Census of 2001 only 59.21% rural folk in India were literate, while urban areas displayed a literacy rate of 80.06%.

Lifelong learning can play a vital role to empower Indian farmers to face developmental challenges as it implies continual learning through out life. Jacques Delors (1996) viewed “learning throughout life” as the “heart beat of society [.....] one of the keys to meeting the challenges of the 21st Century”. Lifelong learning includes natural learning, self-learning, non-formal learning and formal learning and seems an appropriate approach for socio-economic development of Indian farmers. But offering lifelong learning to approximately 700,000,000 people in 634,321 villages (among whom 207,000,000 are adult illiterates) is not an easy task. In this background, information and communications technologies (ICTs) supported lifelong learning for Indian farmers can be termed as an appropriate approach because ICTs supported learning is now globally recognized as a viable and learner-friendly approach that can complement, or even replace, more traditional training and education approaches.

### **ICTs supported Lifelong Learning to Indian farmers: Possibilities**

India, over the past decade, has become a test bed for innovations in information and communication technologies (ICTs) serving the rural user. Various reasons explain this emergence. The most obvious may be that rural India has remained poor while the rest of the country has moved ahead. Undoubtedly, its caste, religious, and other divisions present special challenges, as do its vast geography, many languages, and cultures. (Jhaveri, Dossani & Misra, 2005). The importance of ICTs for rural development of India is clearly expressed in the brochure of eAgriculture India (2008) conference ‘Since the Green Revolution, India has been growing steadily in terms of agricultural productivity and growth. Modern farming practices and inclusive technologies have been implemented in many parts of rural India to foster rural growth. Wireless communication networks and GIS-based agro-software technology are reaching rural India giving them access to vital and updated information on weather, farming technologies, fertilizers, livestock, commodity prices and stock markets’.

Number of initiatives has been taken by Government, NGOs and private agencies to use ICTs for rural development in India. In the Indian state of Madhya Pradesh, 32 villages have been wired to the central database for access to both government and agricultural information under *Gyandoot scheme*. At social front, the *Ujjas (light) programme* allows the women to voice their concerns, learn from each other and interact with the rest of the world). The *eChoupals* set up by ITC (a large private buyer of agricultural commodities) to facilitate their supply chain by buying directly from farmers is another successful initiatives. In addition to selling their own produce, users can buy goods and services, email, and manage online banking and insurance. In other side, Info *Village Knowledge Centers* established by M.S. Swaminathan Research Foundation derive useful information from the Internet and broadcast it in innovative ways to rural people. The Centers uses public address system at fishing villages or the siren that awakes fishermen when it is time for them to begin the fishing day and also provides Local language newspapers and signboards outside the centers to spread knowledge.

The impact of these efforts for rural development of India is a testimony to the fundamental belief that the innovative use of ICTs can be a powerful tool to meet the lifelong learning needs of Indian farmers. Jhaveri, Dossani & Misra( 2005) observes ‘Despite large-scale political and bureaucratic attention and the more focused, small-scale efforts of thousands of nongovernmental organizations (NGOs) and other civil society entities, a replicable, catalytic approach to rural development remains to be found. The hope that ICT can surmount at least some of these social, political, and administrative challenges and become a viable technology for the provision of health, education, and other social services is thus ICT’s strongest calling card’. In this context, it seems vital to devise a ICTs supported holistic strategy to fulfill the unmet lifelong learning needs of Indian farmers.

### **‘e-Lifelong Learning Centers for Indian Farmers’: Need based Strategy**

Provision of technology supported lifelong learning using Radio, Television, Computer facilities and the Internet can help a lot for capacity building and sustainable development of Indian farmers. The Conference brochure of eAgriculture India (2008) states ‘despite the usage of advanced ICT tools in many parts of rural India, there are several villages where advanced farming technologies, and interactive communications networks haven’t reached yet. Access to these technologies will help secure livelihood of many farmers and consequently build a stronger nation and economy’.

Considering this positivism, the lifelong learning needs of Indian farmers may certainly be met effectively and efficiently by establishing ‘*e-Lifelong Learning Centers for Indian Farmers*’ at every block headquarter. In India, the cluster of villages is called block, the cluster of blocks is called district, cluster of several districts is called as state and cluster of states is referred as Country. The states are ruled by respective state governments and the whole country is governed by central government. In this background, the establishment of these centers in every block headquarter will be helpful to meet out the lifelong learning needs of every willing and needy farmer. The modus operandi of proposed ‘*e-Lifelong Learning Centers for Indian Farmers*’ will be as follows:

- (i) The grant for establishment of these centers may be provided by central and state governments on cost sharing basis. The Central government may provide grant for buildings and equipments and state government may take care for maintenance and running costs.
- (ii) The centers will be equipped with sufficient number of different ICTs namely computers with High speed internet connections, telephones, Radio, and Television. The centers will also have the teleconferencing facilities for farmers.
- (iii) The services of multiple operators – NGOs, the private sector and government entities (such as the panchayat and postal system), social help groups, and voluntary organizations may be sought to run these centers.
- (iv) 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.
- (v) The government 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 e- support to fulfill the lifelong learning needs of Indian farmers. The nature and modalities for providing lifelong learning support to farmers via these centers will be as follows:

### ***(A) e-support for Occupational Lifelong Learning***

Occupational learning is the first and foremost lifelong learning need of Indian 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 'e-lifelong learning centers for farmers' will be helpful to fulfill these learning needs by following way:

- (i) 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 available ICTs like Community Radio and Television to spread this information to farmers. Besides, farmers may also visit these centers to access internet for these information.
- (ii) 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 displayed through these centers. These facilities will help the farmers to put their problems, questions and queries before these experts and seek their advice.
- (iii) 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 ICTs. The ICT experts of these centers will mediate to disseminate the information provided by farmers by using www, blogs, chat rooms, etc.
- (iv) 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.
- (v) Weather related information in advance is one of the most important learning needs of Indian farmers 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.

### ***(B) e-support for Financial Lifelong Learning***

The Indian farmers are not so viable on financial aspects. They are marred by high cost and low savings and worse of all, majority of them are in the grip of private money lenders. These money lenders lend money to needy farmers, charge very hefty rate of interest and exploit them in various ways. The ignorance of farmers about existing government backed financial support schemes compels farmers to come in the grip of these money lenders. The proposed 'e-lifelong learning centers for farmers' will help to overcome this and many other financial problems marring Indian farmers from decades.

- (i) The nationalized bank may open an extension counter exclusively for farmers in these centers. This extension counter will provide financial advice and guidance about loan schemes to farmers in their regional languages. These centers will further provide e-banking guidance along with cash transaction and deposition services to farmers. This provision will help the framers to meet-out their financial needs in a better and secure way.
- (ii) The Indian framers 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.
- (iii) 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.
- (iv) The available ICT facilities of these centers will help the farmers' to know about various governmental financial schemes targeted to framers like Farmer Credit Cards, Crop Insurance Scheme, Debt Waving Schemes etc.
- (v) 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 framers to make them financially aware and informed.

### ***(C) e-support for Developmental Lifelong Learning***

The Indian farmers are facing different social problems like dowry, female infanticide, drunkenness amongst the men folk, etc. The urban migration is another major problem as numbers of rural youths (potential farmers) are migrating to cities due to inadequate economical and developmental opportunities. This centre will help to check these and other social problems in following manner:

- (i) These centers will provide opportunities for farmers to put their social problems on a broader canvas by using ICTs. 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 ICTs on different social issues.
- (ii) 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 villages.
- (iii) 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.
- (iv) These centers will be helpful for farmers to learn about environmental challenges by showing them different proganmmes 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.

- (v) Education and health are two main pillars for development of any society. Majority of Indian farmers 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 ICTs supported need based health education and adult education programmes in regional languages for farmers.

## **Conclusion**

Fulfilling lifelong learning needs of Indian farmers residing mainly in rural sector is must to make India a developed nation. As observed by Singh (2006) 'In the long run, bringing rich information to the population of rural India, whether in the form of education, market prices, market opportunities, or knowledge that improves productivity, health and well-being, can only have positive impacts on the material well being of the rural masses'. The researcher has a belief that provision of ICTs supported lifelong learning to Indian farmers through proposed 'e-Lifelong Learning Centers for Farmers' will certainly be yield fruitful dividends if implemented in right spirit and faith.

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