

The Role of Technology in Enhancing Livelihood Support Options

Kennedy Onyango
Director - Community Initiatives and Social Support Organization (CISSO)
cisso@africamail.com

BACKGROUND OF THE PAPER:

Achieving sustainable livelihoods through basic education, knowledge transfer and skills development in agriculture, agro-forestry and natural resource management remains a challenge. Knowledge is power-but who controls, owns, and has access to knowledge? It is not enough to develop technologies: they need to reach those who can benefit from them. Small holder farmers in sub-Saharan Africa require information about - and access to - technologies that will allow them not only to feed their families but also to earn an income from processing and selling their farm produce.

The challenge is not only to develop technologies that are appropriate and that respond to local needs, but also to ensure that the uptake pathways for these technologies are created and function effectively.

Drawing on work technically and financially supported by the Commonwealth Of Learning (COL) supported GRASSUP NOW; a technology-mediated Open and Distance Learning (ODL) initiative; that uses radio, print-media and computers in improving learning, knowledge/skills transfer and sharing among the rural small-holder farmers in the Lake-Victoria basin, Kenya. The project aim to create sustainable livelihood support options through learning by doing approach, it has been promoting the use of ICTs in support agricultural livelihoods for the last 4 years in the lake-Victoria basin, Kenya. Agriculture is an important economic sector, since it provides income and food for a large segment of the population in developing countries. Intensification of production and increased market orientation are the main processes that can contribute to the future viability of the sector and create income for the people that depend on it.

Structure of the paper:

The paper is built on the foundation of lessons learnt and expounds on the conceptual basis of the whole approach, while defining the rural poor and discussing the rationale for a rural focus, and then defining economic participation processes and the enabling environment.

The productive options are then identified which offer most potential for the rural poor, specifically, for: small producers for domestic, regional and global markets. We then consider two meta themes, namely access to factors of production, and environmental and natural resource management, and two cross-cutting issues, gender and ethnicity, before drawing conclusions.

Context:

Depletion of sustainable livelihood support options has led to the increased deaths related to HIV/AIDS. The pandemic can no longer be considered solely as a health issue, as the pandemic has wide ranging socio-economic impacts on all sectors, in particular on agriculture that supports livelihood.

Over-dependence on small-scale agriculture for food and livelihoods affect rural communities which are already faced with HIV/AIDS. Agricultural productivity is affected through the loss of skilled and unskilled labour; reduction in smallholder agricultural production; a decline in marketing surplus production; the loss of indigenous farming methods; decreased inter-generational transfer of knowledge; skills & practices. Income and food reserves are severely reduced and savings & assets depleted to meet health care, living and funeral costs.

The high number of people needing care and the high death rate is stretching traditional systems of mutual assistance to their limits. Formal and informal rural institutions are affected by the loss of human capital resulting from the rising scale of staff morbidity and mortality. All dimensions of food security – availability, stability, access and utilization of food are affected.

HIV/AIDS increases the depth and extent of rural poverty. The current food crisis in rural areas that used to be the food basket of Africa highlights the dynamic interplay between Livelihood and HIV/AIDS. People tend to rely on risky livelihood strategies that expose them to HIV infection.

Conceptual issues:

The paper intends to demonstrate a clear cut approach in using technology to improve alternative and sustainable livelihood support options in the developing world. Expectations of the potential of ICT to reduce global poverty and contribute to realizing the Millennium Development Goals (MDG's) are high, but the evidence base needs strengthening. This paper hopes to contribute to a joint understanding of the use of ICT in support of agricultural development and rural poverty reduction.

The desire to help peripherally-located poor people engage in achievement of the universally agreed MDGs on beneficial terms is the preoccupation of many development practitioners and policy makers in different places and economic contexts.

The aim of this paper is to describe how this task was approached and what priorities were identified, that could be used as learning points in the fight against poverty, illiteracy and HIV/AIDS through creation of multiple livelihood support options.

Challenges:

Of all the regions of the developing world, sub-Saharan Africa poses the greatest challenge for sustained improvement of rural livelihoods and agricultural productivity. A combination of uncertain and variable rainfall, poor soils, insect pests, outbreaks of the parasitic weeds, poor access to markets and rural infrastructure has stalled efforts to improve the productivity and sustainability of diverse agro-ecosystems while subjecting rural small-holder farmers into abject poverty. Inter-households/tribes conflicts, poor agricultural policies and high incidences of HIV/AIDS have exacerbated these problems. Malnutrition is common among children and women. Meanwhile, production of maize, the dietary mainstay for much of the continent, has failed to keep up with Africa's rapidly growing population.

Positive Outcomes:

The most effective approach to rural poverty reduction could be to enhance the skills of the rural poor to facilitate their move out of farming and even out of rural areas.

- Use of ICTs for livelihood is a matter of behavioral change and a matter of technology diffusion which takes over time, irrespective of age, sex and educational level.
- Designing of services related to livelihood pattern of the community is important.

The questions requiring more thought include:

- What is the impact of agricultural transformation on the livelihoods of the poor in the rural labour market?
- Can usage of ICT reduce poverty through generating increasing numbers of pro-poor jobs for the landless and the land-stressed in rural areas?
- Can ICT impact on the livelihoods of the rural poor at scale?
- What are the environmental impacts of ICT-enhanced activities?
- Do non-timber forest products only provide a likely route out of poverty when harvested as a 'specialist' strategy – rather than collected as a 'coping' strategy?

Our hands on approach proved the importance of using low-end ICTs such as radio, cell phones and print media (newsletters) as a strategy for linking rural people to global opportunities is contextually relevant in the face of knowledge-based economy (dot.com age) and can successfully integrate the rural poor in economic forefront. It also makes clear that rural issues cannot be discussed without considering the linkages between rural and urban areas, so ICT and media holds the key to addressing livelihood of the rural poor.

- Low and high-end technologies such as cell-phones, radio, TV, print-media and computers have a key role to play in order to reach the underserved rural populations that are mostly affected.
- We have learnt that appropriate application of ICT tools could empower the rural poor and address problems such as: food insecurity, malnutrition, HIV/AIDS, illiteracy and low incomes.
- ICT therefore provide an array of hope in supporting temporary and permanent migration from urban to rural areas. As a prior condition for the design and implementation of such policies, political mindsets need to be changed to give fuller recognition to the value of such labor in supporting economic participation of the rural poor.
- Agricultural innovation systems should include both users and producers of information, and must link them in a dynamic process that needs to be supported by appropriate framework conditions – not just policies but also financial, business and educational systems. As research plays a key role in the innovation system, helping research to become more demand-led is a key task that requires change in organizational culture, structure and systems.

Lessons Learnt on ICT Applications:

Analysis of the COL-supported ICT-based projects indicates that ICT's can contribute to achieving the first Millennium Development Goal to eradicate extreme hunger and poverty by raising the income of small scale farmers and strengthening the agriculture

sector that forms the mainstay of the rural poor economy. Overall ICTs contribute to better access to prices, markets and production information.

The projects reach predominantly lower-income users in rural areas and enhance their capacity to take informed decisions and strengthen their negotiations position. Monitoring and evaluation data indicates that 30% of the users are female while 70% are male. Extra efforts are required to achieve gender balance.

The majority of users are highly satisfied with projects, which have raised their awareness on the use of ICT. Some 50% persons involved in the project indicates that they are more empowered, and 35% experienced direct positive effects on their income.

Projects go through various phases. It takes time before the human capacity, tools and content are developed to yield economic benefits for end-users. An analysis of GRASSUP NOW Initiative indicates that after two years the levels of empowerment and economic impact have increased by some 10% in the sites the project components were implemented.

Clear direct impact is registered by ICT-enabled projects focusing on price information and market access. Direct, but less strong, impact on poverty is found with projects supporting efficiency and sustainability of agricultural products and with projects focusing on political empowerment. Develop national policies that includes the use of ICTs and streamlining agriculture information system can be contributed to among conducive environment for agriculture development and a potentially high, but indirect, impact on poverty reduction.

Recommendations:

For attainment of MDGS, the paper recommends the following processes in ICT-enabled project design and implementation. These are:

1. Use a participatory and integrated project design:

The participatory and systematic approach of COL-supported GRASSUP NOW Initiative was positively evaluated by project users. The approach covers awareness raising, capacity development and participatory monitoring system linked with knowledge sharing mechanisms. Specific recommendations are:

Identify clearly the information needs, facilitate active participation of users in the formulation phase, monitor the profile of the target group and if necessary redirect project activities, monitor the gender balance and ensure participation of women during the formulation and implementation, build a budget for maintenance of ICT infrastructure and ensure project support for at least 2-3 years.

2. Foster Ownership:

Ownership is crucial to the sustainability of development. Recommendations are the following:

Take time to build relationship and develop a conducive working environment and negotiate conditions of the partnership including roles, tasks and outputs.

3. Ensure availability of relevant content:

Content should address key needs of end-users. Price information is generally highly valued. Recommendations are the following:

Provide information that addresses local needs. It should be context-specific, delivered timely, accurately and presented in appropriate language and format, develop and disseminate local content complemented with information from government sources, civil society, research institutions and networks, carry out research of local socio-cultural attitudes towards ICT before implementation, track information use by simple monitoring methods and foster two-way information flows to validate content.

4. Include continued capacity development:

As new technologies or rather recent form of ICT adequate human capacity needs to be developed. Introducing ICT in organizations goes together with institutional changes. It is recommended to:

Focus training on practical project-related tasks and the local situation and develop mechanisms for training and support to provide partners with access to knowledge and skills when external support ends.

5. Use various ICT options:

Combining various ICT can overcome problems of rural access. Options include internet access through V-Sat systems or dial-up lines, local radio, two-way radio, mobile phones, use of multimedia and drama.

6. Include learning and knowledge sharing mechanisms:

ICT for Development is a new and dynamic field and continued learning and sharing of experiences with peers and others is necessary. Much can be gained by documenting and sharing experiences among partner organizations.

7. Integration of ICT at organization level:

Projects requires a certain time before they are well established. It is essential that successful projects are sustained by integrating them at institutional and sector level.

8. Mainstreaming ICT in the agriculture sector:

A conducive policy environment is necessary to foster the use of ICT to enhance rural livelihoods.