

Farmer education and training (FARM-ED): enhancing access to agricultural education in Africa

T.C.B. Chancellor, Natural Resources Institute: t.chancellor@gre.ac.uk

R.E. Hanlin, Open University: r.e.hanlin@open.ac.uk

L-A. Long, Open University: l.a.long@open.ac.uk

N. Dhlamini, Regional Universities Forum for Capacity Building in Agriculture: n.dhlamini@ruforum.org

A. Yaye, African Network for Agriculture, Agroforestry and Natural Resources Education: a.yaye@cgiar.org

ABSTRACT

The vast majority of farmers in sub-Saharan Africa (SSA) are smallholders, many of whom are women, who have limited access to inputs and markets and face a growing number of production challenges. Few young people are being attracted into agriculture because they see better opportunities elsewhere. New knowledge can help farmers to significantly enhance their productivity and income and stimulate the creation of rural businesses, but such knowledge is not available in many rural communities. An innovative Pan-African initiative on farmer education and training in SSA (FARM-ED) aims to address these issues by exploiting the use of Open Educational Resources (OER) and emerging information and communication technologies.

FARM-ED draws on the lessons from successful large-scale OER programmes in the education and health sectors, run by the UK Open University (OU) in collaboration with local partners in Africa and South Asia. These programmes have demonstrated how high quality learning materials can reach substantial numbers of people within a short period of time. A key feature of the approach is to establish partnerships which bring in relevant expertise and facilitate local ownership. FARM-ED is led by a consortium of knowledge institutions including the OU, the Natural Resources Institute of the University of Greenwich and the regional university networks in Africa, RUFORUM and ANAFE. But the partnership extends much more widely and includes civil society organizations, the private sector and government agencies. The emphasis is on strengthening the capacity of intermediaries to respond more effectively to the demand from farmers for knowledge on how to improve their farming systems.

An initial scoping study carried out in East Africa in 2012 revealed that there is considerable interest among different types of organization to participate in the development of OERs and to receive training in their effective use. Another clear message was the importance of addressing the needs of women and young people, and to help them overcome barriers to success. A particular challenge for FARM-ED is to reflect the wide diversity of agricultural systems and socio-cultural practices within and between countries in SSA. Generic learning materials are being developed for use with different media (including print and mobile) and will be freely available online. Although generic, there will be a strong emphasis on adaptation of the learning materials for the local context and, through working with communities of practice, improving them in line with feedback from users.

FARM-ED also aims to help to create a more favourable enabling environment for the implementation of best practice in priority areas such as adaptation to climate change, nutrition and rural entrepreneurship. It will do this through the development of special courses for policy makers and by engagement with national policy processes.

INTRODUCTION

Addressing food insecurity and rural poverty remains a huge global challenge, especially in Africa (IFPRI, 2012). The vast majority of farmers in Africa are smallholders who face a large number of constraints. These include limited access to inputs such as seed and fertiliser, declining soil fertility, new pests and diseases, and a highly variable and changing climate. Almost half of Africa's smallholder farmers are women. Women make a crucial contribution to small-scale agriculture but are seriously disadvantaged by lack of access to resources, finance, education and advisory services.

This makes it extremely difficult for them to remove themselves and their households from poverty (FAO, 2011). Young people living in rural areas see little prospect of advancement through farming and are moving to the cities in large numbers to seek employment. There is considerable potential in many areas to establish viable farming businesses, particularly by adding value to local produce through improved post-harvest practices. Unfortunately, deficiencies in the provision of vocational training mean that few young people have the skills needed to develop and manage a business.

There is a wealth of information on sound farming practices, much of which has been generated by farmers themselves. There is also a growing amount of information on value chains and business development. However, much of this is not in formats which are easily usable by farmers and other end users of such information. Neither is it readily accessible to them. This is largely due to the fact that in most countries in Africa, public agricultural extension and advisory services are massively under-funded and reach only a small proportion of smallholders. Moreover, linkages between these services and agricultural research and education organizations are weak so that promising new technologies and methodologies are often not tested and adapted for the benefit of smallholders.

The rapidly expanding coverage of the internet and mobile phone services in Africa is creating new opportunities for disseminating agricultural information and supporting knowledge exchange (Deloitte, 2012). Mobile technology, in particular, has tremendous potential for enhancing the access of agricultural information to large numbers of people. One example of this is the Esoko platform (<http://www.esoko.com/>) which offers a subscription service that provides content on market prices, weather and agricultural 'tips'.

In addition to improved access to information, farmers and other actors in the agriculture sector in Africa need better support for high quality learning. They need to be able to upgrade their skills and continue their education in ways that do not take them out of their communities for extended periods. Open educational resources (OERs) have the potential to significantly increase the range of quality educational material and support learning by those who are largely excluded from the educational process. However, there are still difficulties in ensuring access for learners in rural areas of sub-Saharan Africa. There is often a lack of communications infrastructure and limited power supplies. This may be compounded by the lack of skills required for learners to successfully engage with OER-related technologies and to fully benefit from interactive, collaborative learning.

In spite of these constraints there is considerable cause for optimism. The Open University in the UK is coordinating teacher education and health education initiatives which demonstrate that OERs can make a major contribution to supporting effective learning for people across sub-Saharan Africa and Asia. The Teacher Education in Sub-Saharan Africa (TESSA) programme is reaching over 500,000 primary school teachers in 10 countries in Africa. The Health Education and Training (HEAT) programme is helping the Government of Ethiopia to upgrade the skills of its 33,000 community health workers. In Bangladesh, the English in Action programme is on track to assist 15 million children to improve their English speaking skills. We believe there is good potential to replicate these successes in the agriculture sector and to contribute to poverty reduction and improved livelihoods for rural households.

FARM EDUCATION AND TRAINING

Against this background, the Farm Education and Training (FARM-ED) initiative was launched in March 2013 by a consortium of UK and African stakeholders. The initiative seeks to help to transform the lives of rural households in Africa by providing free access to up-to-date learning materials on agricultural practice and policy, and to support learning through engagement with communities of practice. FARM-ED was developed through a series of consultations in three countries in East Africa (Ethiopia, Kenya and Uganda) and in the UK. The initiative is Pan-African in scope but has an initial focus on East Africa where the approach is being piloted in an initial two-year phase.

The stakeholder consultations revealed that there was strong interest among a range of different actors including farmer organizations, private sector, non-government organizations, universities, research institutes, extension and advisory services and policy makers to share information and resources and to partner in a new initiative. One of the main lessons from the TESSA, HEAT and English in Action initiatives is that broad partnerships need to be established at the programme

planning stage in order to address issues of scale and sustainability. It was particularly important to actively engage local experts who understand the context in which teachers and health workers live and work and to assist them to develop high quality learning materials relevant to their needs. Thus, FARM-ED is led by education and research organizations but involves a wide range of other stakeholders.

The FARM-ED partnership draws on a large pool of agricultural educators in sub-Saharan Africa in the networks of the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) and ANAFE (African Network of Agriculture, Agroforestry and Natural Resources). It also builds on the educational experiences of the Sasakawa Africa Fund for Extension Education (SAFE) and the African Centre for Technology Studies. FARM-ED brings in specialist knowledge of agricultural extension and advisory services from the African Forum for Agricultural Advisory Services (AFAAS), together with its country networks throughout Africa, together with the Agricultural expertise and partnerships of the Natural Resources Institute of the University of Greenwich. It involves farmers' advocacy groups and farmers' unions with experience of working to promote young farmers and women farmers. FARM-ED is engaging with networks and services of global and national mobile phone operators. In addition, FARM-ED expects to work closely with national governments and relevant ministries of agriculture and education as well as regional institutions and initiatives such as the New Partnership for Africa's Development (NEPAD) and the Comprehensive Africa Agriculture Development Programme (CAADP) to ensure activities work towards national and regional targets. As the initiative develops further it is expected that there will be increased engagement with private sector organizations. Finally, FARM-ED utilises the capacity of The Open University to deliver high quality educational programmes at a large scale.

The experiences gained from the earlier Open University initiatives are also guiding the approach to the design of materials in FARM-ED. Materials are developed to be as generic as possible and structured in a way that makes it easy to adapt them for other contexts and other countries. This allows the initial investment in the development of learning resources to bring economies of scale. The materials are designed to be flexible so that they can be easily adapted for use online, or offline as printed study sessions and modules. They can be used as part of accredited training programmes or they can be used for workshops and continuing professional development. Because they are open educational resources they can be downloaded and adapted by anyone with access to the internet – and then freely shared on pen-drives, or as printed materials and increasingly, on mobile phones and tablets.

The consultations for FARM-ED showed that persons who provide advice and other services to farmers, both in the public and private sectors, generally lack skills in participatory approaches and so have limited capacity to engage effectively with rural communities. Therefore, FARM-ED will place considerable emphasis on familiarising service providers with more interactive, experiential teaching and learning approaches both in face-to-face and distance learning modes. The consultations also revealed that advisors and service providers have little expertise in how to run a business and are therefore limited in their ability to guide their clients in key areas such as business planning and financial management.

As a result three priority subject areas have been identified for the first two year start-up phase of FARM-ED. First, business development and value chain material that takes into account the challenges of a changing climate through sustainable approaches to the management of agricultural system. A sub-focus of this will also be the provision of materials to support the production of nutritious and safe food to improve health. We expect that these latter materials will also be developed in conjunction with other OER providers in the health field as a result of burgeoning recognition of the overlaps between agriculture and health.

Second, material providing support to those working to encourage women and young people into agriculture and make farming a viable career choice. And linked to these, a third set of learning materials on how to disseminate and engage farmers – or would-be farmers – with the materials. These essentially will therefore be a set of training materials around innovative methods for planning and implementing agricultural knowledge development that includes the use of mobile phones and the internet. An innovative element of this will be around the use of videos and film screenings – potentially in association with on-going and well known East African radio and TV shows – to garner and maintain the interest, particularly of young people, to agriculture and farming.

CONCLUSIONS

There is a need for high quality, learning materials that address key challenges faced by farmers and would-be farmers in East Africa in order to support ongoing efforts to improve food security and secure livelihoods in the region. This needs to incorporate a variety of multi-media platforms in order to have greatest reach and to ensure that it both provides opportunities for knowledge transfer but also acts as inspiration to those who have not been able to be involved in farming but would like to become involved.

Therefore at the core of FARM-ED is to a two pronged approach. First, to provide up-to-date relevant materials on key subject areas where there is a current lack of knowledge and/or relevant accessible materials. Second, and most innovatively, to link this to new ways of promoting farming and the business opportunities that it can create, through the use of innovative knowledge distribution mechanisms.

REFERENCES

Deloitte (2012) eTransform Africa: Agriculture Sector Study; Sector Assessment and Opportunities for ICT. Accessed on 26 July 2013 at http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/282822-1346223280837/Agriculture_FullReport.pdf

FAO (2011) The State of Food and Agriculture: Women in Agriculture. Closing the gender gap for development. Rome: Food and Agriculture Organization of the United Nations.

IFPRI (2013) 2012 Global Food Policy Report. Washington DC: International Food Policy Research Institute (IFPRI).