

Research Application Summary

Linking universities to communities: The case of Egerton University

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Abstract

Egerton University, as a leading institution of higher learning in agriculture and environment in Kenya, has developed innovative approaches to enhance effective dissemination of technologies and contribute to extension service delivery. This is in realization that agriculture sector could be declining under the Devolved Government system during the transition period (2013-2016) and non-funding of extension services. These innovative approaches include: a) Student Field Attachment and Placement to Farming communities; b) Agro-Science Park product development and dissemination initiatives; c). establishment of a Division of research and extension; and d). Entrepreneurship training. This paper provides a description of each of these approaches as applied at Egerton University.

Key words: Communities, Egerton University, entrepreneurial graduates, experiential learning

Résumé

Université d'Egerton, en tant que principale institution d'enseignement supérieur dans l'agriculture et l'environnement au Kenya, a mis au point des approches novatrices pour améliorer la diffusion efficace des technologies et contribuer à la prestation de services d'extension. Ceci est en prise de conscience que le secteur de l'agriculture pourrait être en déclin dans le cadre du système de gouvernement par délégation pendant la période de transition (2013-2016) et le non-financement des services de vulgarisation. Ces approches novatrices comprennent: a) les stages et placements d'étudiants aux communautés agricoles; b) les initiatives de création d'un Parc de développement de diffusion des produits Agro-Science; c). la création d'une division de la recherche et la vulgarisation; et d). la formation à l'entrepreneuriat. Ce document fournit une description de chacune de ces approches, appliquées à l'Université d'Egerton.

Mots clés: les communautés, Université d' Egerton, diplômés entreprenants, apprentissage par l'expérience

Introduction

The place of a university in a changing and globalizing world is paramount. We live in a time where knowledge is vital to our societies and economy. Knowledge is replacing other resources as the main driver of economic growth and education and has increasingly become the foundation for people's prosperity and social mobility. Agriculture being the dominant sector in the economy draws a lot of interest from different actors and stakeholders through the formulation of policies that affects its performance and development. Egerton University is taking up the challenge and paving the way for collaborative working relations among students, researchers, farmers and national agricultural research institutions with the aim of promoting sustainable development in the agricultural sector and improvement of the livelihood of farmers. This paper describes the experiences and the approaches taken by Egerton University in ensuring production of entrepreneurial graduates with leadership skills and potential to create impact in the rural communities.

Egerton model

Student Field Attachment and placement to Farming communities. Egerton University was formerly a Farm School founded in 1939 by Lord Maurice Egerton of Tatton, a British settler in Kenya in the 1920s. The School was later upgraded to an Agricultural College in 1950. The Government of Kenya and the United States Agency for International Development (USAID) funded major expansion of the institution from 1979. In 1986, Egerton Agricultural College was gazetted as a constituent college of the University of Nairobi and later became a full-fledged University through an Act of Parliament in 1987. The University was chartered in 2013 under the Universities Act of 2012. Currently, Egerton University has ten faculties offering a wide range of programmes at diploma, undergraduate, and postgraduate levels. The University has over 25,000 students comprising of both local and international students. Being founded as an agricultural college, the Agricultural programme at Egerton University trains high level manpower with practical and conceptual skills for deployment to increase crop and animal production through research, extension education, training, marketing and self employment. At the end of the programme, graduates are able to perceive the importance of agriculture for the nation's population; effect proper methods of raising crops and animals either directly on their farms or indirectly through extension; carry out basic and applied research geared towards enhancement of crop and animal production; integrate practices of crop and animal production with other farming enterprises; and pursue advanced training in their areas of specialization among others.

Egerton University offers a systemic approach to introducing innovations in teaching and learning. Students are provided with experiential learning through practicals and attachment programs, among other approaches. Attachment on farms provides students with an opportunity to learn and to utilize theoretical knowledge acquired in class, understand the opportunities and challenges that farmers deal with and propose mitigation approaches to some of the challenges. The farm attachment program provides linkages between Egerton University and farming community stakeholders so as to enhance agricultural productivity and competitiveness in Kenya. This is because the platform allows students to interact with

surrounding rural communities and businesses through students' farm attachments across the years in a continuous relationship that strengthens the scholars experience and the uptake of technologies by farmers. This is a way of embracing Egerton University's motto 'Transforming Lives through Quality Education'. Internship processes are documented in a manual that is given to eligible students annually. The programme impacts on increased productivity at the farm level, increased awareness and utilization of agricultural technologies by farmers and students, need for curriculum review, need for prompt, reliable and unbiased agricultural information, and ethnic integration (Mungai *et al.*, 2016). Integration of the farm attachment program into university approaches go a long way in instilling the core values of Egerton University.

For the Farm Attachment program, Students who participate are drawn from three faculties namely; Agriculture, Education and Community Studies and Veterinary Medicine and Surgery based on existing agricultural-related courses and willingness of students to participate in the program. The program is designed such that students are attached to the same farm (s), continuously for at least three consecutive years. Each cohort of students builds on and follows-up on recommendations of the previous group. The first cohort of students focusses on making a general appraisal of the farm, i.e., identifying the strengths and weaknesses of the farm and making proposals for improvement.

The students and farmers work with backstopping by the project coordinators, lecturers and existing extension officers in synthesizing situational analysis reports and proposing appropriate recommendations to farmers. At the same time the students are nurtured as analytical observers and to be part of the solution that provides coordinated knowledge. The second and third cohort of students are sent to the same farm (s) in the second and third and fourth cycle of Field Attachment respectively to oversee implementation of agreed on intervention measures. Preliminary evaluations of the program have been done to assess students, lecturers, and farmers' perceptions of the farm attachment model. Every eight weeks of learning cycle bring in new challenges and gather innovations that can be incorporated in future research and/or packaged in future dissemination messages.

The farm attachment program ensures the involvement of farmers as decision-makers in all stages in this rural innovation approach. Participatory research and learning approaches are strategies for investing in human and social capital for farming families to empower them to articulate their priorities and to participate as decision-makers in the research and development process. Attaching students to farms decentralizes control over the research and development (R&D) agenda and permits a broader set of stakeholders to become involved in the learning processes, thereby addressing the differential needs for research and development for technical innovation.

The Faculty of Agriculture has proposed the introduction of a practical based course running from year 1 to year 4 for all undergraduate programmes beginning with the 2016/2017 academic year. This idea is borrowed from EARTH University model. The details of how the course will be implemented is being worked on but will generally involve principles in farm enterprise practices where Students will be assigned, guided and supervised in good

agricultural practices (GAP) on land measuring a minimum of 10 x10 m (preferably 100 m² per student). Diverse choices of crops per group will be chosen to undertake crop production as follows; inputs acquisition and advice, seedbed preparation (conventional and conservation tillage), sowing/planting, fertilizer calculation and application, crop protection, harvesting and yield determination. There will also be exposure of students to dryland crops and related practices. In addition, three field trip practicals to expose students to off-campus agro-enterprises will be part of the training. The approach will also be piloted on other agricultural value chains.

Establishment of Agro-science Park. Egerton University has established an Agro-Science Park to link industry, farmers and communities to markets and commercialize products. The Park overall mandate is to provide infrastructure and incubation space for transforming innovative ideas into new agro products and services for commercialization in partnerships with the industry. This will create new business opportunities and add value to agro-products that will spur rapid national and regional development in line with Kenya's Vision 2030. The basis for this agro-business Park was because Egerton University has a long tradition of agricultural training and research in the region and has innovations that can be nurtured into products and services for commercialization. Some of the achievements of the Agro-park include the release and commercialization of high yielding crop varieties for farmers in Kenya through Kenya Plant Health Inspectorate Services (KEPHIS) and seed industry. The varieties include high yielding beans (*Tasha, Chelalang and Ciankui*), drought tolerant chickpea varieties (*Chania Desi 1, Chania Desi 2 and Chania Desi 3*), medium duration pigeon pea variety (*Egerton Mbaazi 1*), sorghum for brewing/malting and baking and short duration finger millet; plant based mosquito Larvicide with ability to kill and control mosquito larvae in stagnant water in homesteads using traditional plants from Baringo; commercialization of Egerton University Organic Honey; development of and commercialization of indigenous mushrooms spawn (seed) and setting up of a fish finger lings for farming communities in Kenya.

Division of research and extension. Egerton University vision is being a World Class University for the advancement of humanity and has a mission of generating and disseminating significant knowledge and offering exemplary education to contribute to and innovatively influence national and global development. To achieve the above vision, Egerton University has deliberately forged national, regional and international partnerships with over 100 institutions (Universities, NARS, CGIARS, RUFORUM, etc.) in Africa, Asia, Europe and the USA. As result of these partnerships Egerton University regularly hosts foreign students particularly from East, Central, Southern and West Africa.

Egerton University has a division of research and extension, which was established in 1987 and is headed by a Deputy Vice Chancellor (Research and Extension). It is mandated by the University to manage, coordinate, promote and facilitate research and extension. It is through this division that Egerton University conducts demand-driven research that generates new knowledge, technologies and innovations that benefits communities within and outside Kenya. The research projects in the division of research and extension seek to provide

practical/innovative solutions to societal and global problems based on Kenya's national policies and priorities as well as market demands.

The university researchers not only endeavor to address issues that affect the economy of Kenya but they also ensure that their research based information is well packaged and effectively disseminated to the end users, in simple easy-to-understand language. The staffs fully understand the importance of working together with all the stakeholders as a team and of information sharing. For this reason the research division has established a network of partners in the private and public sector within and outside Kenya. Some of the partners work closely with the scientists in joint research, extension outreach and information dissemination initiatives and activities.

Egerton University has a strategic objective of increasing utilization of research findings through extension and outreach activities. Outreach activities are where the University offers community services using knowledge, technology or product. The approaches adopted in undertaking extension and outreach activities include demonstrations, development of extension information materials, group discussions with the communities, ICT applications, agricultural knowledge centres, exhibitions, shows and field days. Thus, there is an interactive platform for sharing research based knowledge, information, technologies and innovations with individuals, groups and communities/organizations. This enhances improvement of work efficiency, productivity, incomes, environmental health and living standards. Guided by extension and outreach policy, the activities undertaken are those that respond to community-felt needs with special focus on marginalized groups including the youth, women and physically challenged, among others.

One of the main achievements of the University is the establishment of Tegemeo Institute of Agricultural Policy and Development whose mandate include evidence-based policy research, analysis and outreach. The institute is a center of excellence in agricultural policy based research addressing micro and macro-economic policy issues. This Institute is under the Division of Research and Extension.

Entrepreneurship training for students. Egerton University has employed two main approaches to ensure that it produces graduates who are entrepreneurial. The approaches include introduction of mandatory courses on entrepreneurship and agricultural value chains for all students undertaking agricultural degree programmes at undergraduate level, and introduction of a master's degree programme in Agri-enterprises development. In the master's programme, students are attached to agribusiness for a minimum period of two months, in which they develop a business idea to solve observed challenges.

Conclusion

Through experiential learning with farming communities, Egerton University makes an effective contribution to the agricultural development agenda. This creates and strengthens the linkages between Egerton University, farming communities and Service providers to improve service delivery to rural communities geared to encouraging the shift from

subsistence farming to commercial agriculture. Farm solutions that are empirical and socially acceptable to farmers are provided. In addition a communication network platform exists to enable farmers to access information from the University. The university also receives feed-back from farmers and other stakeholders leading to repackaging of University curricula, research and subsequent extension messages. Egerton thus becomes a University of choice particularly in issues related to agriculture and environment.

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Reference

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