

Research Application Summary

**Contributing to rural transformation through skills development: the role of University-Community and TVET Linkages with experiences from Egerton University**

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**Abstract**

This paper provides highlights of Egerton University engagement with farming communities and TVETs and demonstrates the inherent potential that the University-Community and TVET partnership can achieve in rural transformation. Egerton University, is one of the best agricultural universities in Kenya running a unique model of agricultural training that is focused on practical skills development. Staying on its foundations as an agricultural college, the university has continued to train working in partnership with the Technical and Vocational Education and Training (TVET) institutions in Kenya. Running a practical competency based oriented curriculum with a strong focus on agricultural commodity value chains, industry, and communities; Egerton University has demonstrated that it is possible for a university to be a nucleus for rural transformation. For example, through the farm attachment programme, farmer's skills have been enhanced and the profitability of the commodity value chains especially the dairy value chain has been enhanced. Additionally, both rural and urban youth have been able to find employment opportunities in profitable commodity value chains as well as in value addition. Similarly, smallholder farmers engaged with the university are transitioning from subsistence focus towards being agripreneurs within Kenya.

Key words: Competency based training, innovation, Kenya, partnership

**Résumé**

Ce document présente quelques aperçus des travaux auprès des communautés agricoles et EFTP de l'Université d'Egerton, et démontre le potentiel inhérent que le partenariat université-communauté et EFTP peut réaliser dans la transformation rurale. L'Université d'Egerton est l'une des meilleures Universités d'agriculture du Kenya ayant adopté un modèle unique de formation agricole axé sur le développement de compétences pratiques. Se basant sur ses principes en tant que collège agricole, l'université a continué à former en travaillant en partenariat avec les institutions d'enseignement et de formation techniques et professionnels (EFTP). En coordonnant un programme d'études axé sur les compétences pratiques et les chaînes de valeur agricole, l'Université d'Egerton a démontré qu'il est possible à une université de devenir un noyau de transformation rurale. Par exemple, grâce au programme de stage agricole, les compétences des agriculteurs ont été améliorées ainsi

que la rentabilité des chaînes de valeur des produits de base, en particulier les produits laitiers. De plus, les jeunes en milieu rural et urbain ont pu trouver des opportunités d'emploi dans les chaînes de valeur des produits de base rentables ainsi que dans leur valeur ajoutée. De même, les petits exploitants agricoles engagés avec l'université transitent de l'objectif de subsistance vers agro-entrepreneurs au Kenya.

Mots clés: Formation axée sur les compétences, innovation, Kenya, partenariat

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## **Background**

Egerton University was founded in 1939 as a transformed from a Farm School founded in 1939 by Lord Maurice Egerton of Tatton, a British settler in Kenya in the 1920s. In 1950, the school was upgraded to an agricultural college; focused on skills development. 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. Egerton University became a full-fledged University through an Act of Parliament in 1987. The University was chartered in 2013 under the Universities Act of 2012. The University currently 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 (Mungai and Njuguna, 2017).

In keeping with the traditions of its founding as an Agricultural College, Egerton University has maintained a 'skills oriented' training university and maintains strong linkages with other actors including the Technical and Vocational Education and Training (TVET) institutions in Kenya. Egerton University's recognition of working with TVET is founded on the role that TVETs play in rural transformation (UNESCO, 2012) as well as being a critical catalyst in country's economic development. This primarily because TVET is considered a tool for productivity enhancement and poverty reduction (Povlova, 2014). Accordingly, the university has direct engagement with institutions such as; Dairy Training Institute (DTI), Animal Health and Industrial Training Institute (AHITI), Bukura College of Agriculture, Baraka Agricultural College, and Agricultural Development Corporation (ADC Molo). The partnership is focused on arrange of issues including technical backstopping, collaborative research and training, facilities sharing and provision of progression opportunities for TVET graduates (Hawkins et al., 2018). This communication shares experiences of Egerton University engagement with communities and TVETs and brings forward the potential of role of University-TVET partnership in rural transformation.

## **Egerton University training model and experiences**

Egerton University runs an adaptive training model that allows for the engagement of various stakeholders as well as flexibility to develop and modify curricula to suit the requisite context and industry needs. The Faculty of Agriculture is the parent academic unit that maintains closer ties with the TVET institutions especially the agricultural colleges in Kenya. The Faculty has 5,000 students undertaking training at different levels including certificate, diploma, bachelor's degree, master degree and PhD level. Egerton

University runs specialised academic programmes, for example; a specialised BSC in dairy technology and management, designed to produce a diploma graduate qualified to work in milk processing industries in production and managerial capacities; to venture into entrepreneurship in the food industry.

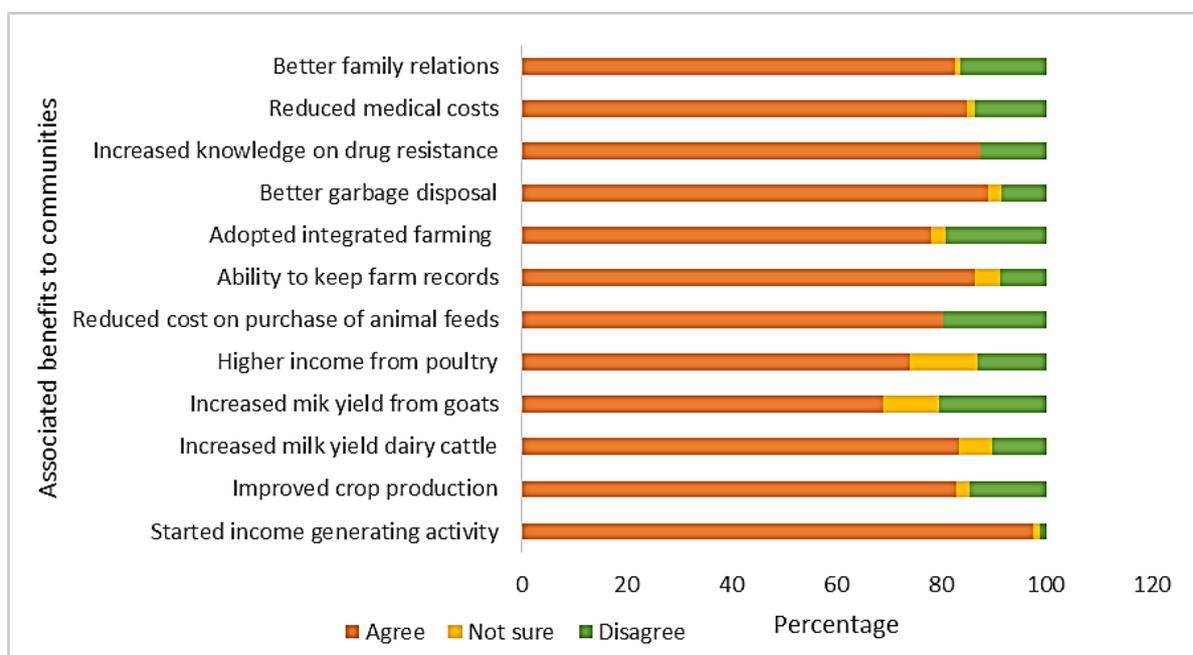
Egerton University adopted value chain and competency-based training approach with a greater linkage to farming communities. A tracer study among 341 alumni of Egerton University that had gone through the practical oriented training in entrepreneurship revealed that nineteen (19%) percent of those surveyed were self-employed with 40% being producers and 31% being traders in various agricultural value chains. Further, 38% of all the respondents were employed in the private sector with 33% of former students that trained in the Diploma in Farm Management and Bachelor of Agribusiness Management. Farm attachment is an integral part of the university's training programme, accordingly the university revised its community engagement strategy whose vision is "University-Community Engagement to Transform Lives" to facilitate deeper engagement with farming communities. This strategy provides for delivery of competence based training to students through practical field orientation. Through this learning process, students have the opportunity to identify a range of entrepreneurial opportunities at community level that can be transformed into enterprises. This approach focused on competency skills development, linkage with the farming communities and entrepreneurship has delivered tangible gains to the communities, students, and the university.

A tracer study on the impact of the community engagement approach undertaken by Egerton University in Kenya revealed that a cross-section of benefits to farming communities not only in their farming estate but a transition in their livelihood undertakings including improvement in gender relations as well as medical care costs reduction (Figure 1). Results also showed that 97.6% have been able to start income generating activities as a result of engagements with Egerton University. Another important aspect of the engagement has been the farmers to increase their records keeping and thereby being in position to determine the actual profitability of their farming enterprises (Figure 1).

### **Complementary linkage with Technical Vocational Education and Training Institutes**

Contrary to most Universities, Egerton has established formal partnerships with major TVET institutions including the Dairy Training Institute, Animal Health and Industrial Training Institute, and Baraka Agricultural College among others. The focus of this partnership is broad including technical backstopping in curriculum development, staff training, sharing facilities for students' training, collaborating on research, oversight and quality assurance. Egerton University also provides mechanisms for TVET graduates to be admitted to the University for further education. This type of progression is what is limited in most of the University-TVET (UniTVET) partnerships. Egerton University has had a partnership with Dairy Training Institute (DTI) focused on skills development in dairy sector especially products development and entrepreneurship through the 'dairytrain project'. This partnership was supported by the Netherlands Embassy and provided opportunity to staff of both institutions to obtain international best practices through training in curricular development, organizational management, finance and leadership;

and the provision of modern training infrastructure such as processing equipment, feed mill, internet connectivity facilities, computer labs, ICT training equipment among others.



**Figure 1. Impact of community engagement activities**

This interaction between TVETs and the university has led to successful training of graduates as well as engagement with the communities (Adipala and Egeru, 2018). In a scoping study to strengthen the Technical Vocational Education and Training in the Dairy Sector in East Africa it was revealed that industry players preferred certificate and diploma holders as they were considered more skilled oriented (Hawkins *et al.*, 2018). Further, Egerton University has strengthened the engagement with the TVET institutions in the delivery of agricultural technologies and best practices. In a partnership with Baraka Agricultural College and Agricultural Development Corporation (ADC Molo), through the seed potato supported community action research project, quality seed multiplication was undertaken on a three acre piece of land. This resulted into the production of 400 bags of certified Shangi potato variety; some of which was sold to farmers while other became foundation seed for a five acre piece of land (RUFORUM, 2018a). Four key benefits arose from this engagement: i) Baraka Agricultural College became an instant 'centre of excellence' in the provision of quality seed to farmers leading to the Government of Kenya recognising its efforts in this direction; ii) students both from Egerton University and Baraka Agricultural College had the opportunity to advance their skills in the production of certified seed; iii) the farmers field days conducted on farm at Baraka Agricultural College trained more than 400 farmers in seed and potato production; and iv) further partnerships have been brokered with the National Potato Council of Kenya and other players in the seed potato industry

(RUFORUM, 2018b).

### **Industry networks and strategic alliances for rural agricultural transformation**

Egerton University has established strong partnerships with private sector companies especially those in the Dairy Industry. These companies engage Egerton University to conduct research, provide training and technical support. Egerton University also benefits from the industry know-how, and opportunities for their students to be hired by the companies. The University-Industry to rural community linkages have in particular propelled the technical skills advancement in products development especially dairy products such as yoghurts and creameries; this has supported effective student's transitions to the world of work. Additionally, these linkages have facilitated direct placement of students to industry arising from the relevant technical skills obtained such as in the horticultural industry in Nakuru County.

Whilst the linkage with industry seems to be aligned to the direct benefit of the university, the university has also been catalyst for smallholder farmer's engagement with industry through increasing product quality and networking farmers with industry players. The community action research project on cassava value chain is focused transforming the cassava value chain in Kenya by increasing productivity as well as advancing the entrepreneurship and income generating enterprises associated with cassava production. Through this project, a network of stakeholders have been mobilised including the County Executive Committee (CEC), Members of Agriculture, Marketing, Trade and Industry players from the cassava growing Counties, Kenya Plant Health Inspectorate Services (KEPHIS), Kenya Agricultural and Livestock Research Organization (KALRO), Horticultural Development Authority (HDA), Kenya Bureau of Standard (KEBS) and East African Breweries and animal feeds millers.

The East African Breweries is particularly interested in the new dimensions of cassava for feed and brewery applications to open up new product demand pathways. The possibility of substituting barley with cassava in the brewing processes at the East Africa Breweries Limited (EABL) are strongly being explored. These efforts will increase sustained demand for cassava and the development of the cassava value chain in Kenya. The university has already trained the nucleus farmers (139 farmers); 49 in Lare and 90 in Solai and further progressive requirement and training of farmers into the production arrangements are being undertaken with the university undertaking both research and mobilisation.

**Potential of Egerton University-community and TVET linkage for agricultural transformation in Kenya.** University-community and TVET linkages in agricultural development as observed from Egerton University experience and its partnership with the TVETs provides opportunity for agricultural transformation especially for smallholder agriculture. This is because it provides opportunities for both vertical and horizontal transformation of the agricultural enterprise among smallholder farmers. It does this through:

- Skills transfer to farmers and farmers to students and the education system; thereby increasing the relevance of the education and supporting rural transitions. This is the

principle behind the adapted farm-attachment mechanism that is designed within the framework of competency based training model.

- Emphasis on agricultural value chains and value addition; provides opportunity for structured competences that lead to value chain opportunity expansion and job opportunities. For example; the Competence Based Curricular in Piggery Value Chain, Dairy Value Chain, and horticulture are critical in improving the performance of the respective commodity value chains.
- Agripreneurs development within a subsistence based agricultural system is being enhanced among farmers whose primary focus is tailored to meeting subsistence needs at household level. Well-coordinated and linked University-TVET training has great skills spill overs to farmers that will support their transitions to become agripreneurs. Better still, farmers have the opportunity to access training within the TVET institutions regardless of their qualifications such as has been the experience with Baraka agricultural college and Dairy Training Institute (DTI).
- Catalysing rural agro-based industries; University-TVET linkages offer opportunity for rural industrialisation and increasing value into agricultural produce. This offers the opportunity to the both the TVET and university to transform their education processes from Education 3.0 model (traditionally defined roles of the university) focused primarily on teaching, research and outreach to Education 5.0 model focusing on advancing; teaching, research, community engagement, innovation and industrialisation. One of the biggest beneficiaries of this is the dairy sector in Kenya; several yoghurt brands are produced in Kenya owing to a good linkage between Egerton University and DTI in training of technically competent youth in the dairy sector utilising an adaptive training programmes geared at value addition in the dairy sector.

While the working relationship between Egerton University, communities and the TVET institutions is flourishing, it is worth noting that recognition of mutual respect and leadership commitment to the partnership are critical factors for success of the partnerships. Further, value co-creation also provides incentives for the maintenance of the partnership. While Egerton University provides facilities and offer training to both staff and students of TVET institutions, the TVET institutions also provide opportunities for Egerton University to interact better with grass-root industry practitioners; having better understanding of their issues and incorporating them into their research activities and at the same time support the university with hosting experiments as has been the experience with Baraka Agricultural College and Bukura Agricultural College among others.

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