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Research Application Summary

**TAGDev Model positions agricultural graduate students at Gulu university to respond to international development challenges –the case of refugee situation in Northern Uganda**

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### **Abstract**

Globally, universities are meant to contribute to development and positive transformation of societies through three cardinal functions of teaching, research and outreach. However, the relevance of African universities in responding to community needs has been variously questioned. The “ivory tower” orientation (which detaches universities from the community of end-users) is one of the factors believed to negatively affect the contribution of African universities to community development. Agriculture is still the main livelihood base of the vast majority of the African population and as such, agricultural universities are expected to play meaning roles in generating actionable innovations for community development. This calls for re-modelling the manner in which agricultural universities “conduct business” in order to respond effectively to community development needs. As part of a wider effort to re-position agricultural universities in Africa, the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is championing an eight-year (2016-2025) initiative “Transforming African Agricultural Universities to Meaningfully Contribute to Africa’s Growth and Development (TAGDev)”. One of the critical elements envisioned under TAGDev is practical orientation of students to enable them become champions of development in Africa. At the core of the TAGDev initiative are two models, i.e., the Student-Centred Outreach model and the Agribusiness Innovation model, that constitute what is referred to as a “new (TAGDev)” model of agricultural education, and is being piloted by two early adapter universities, Gulu University in Uganda and Egerton University in Kenya. Violent conflict has resulted to a huge refugee population in Africa. At the same time humanitarian assistance from various agencies has reduced over the years to a bare minimum and has become unsustainable. Therefore, using the refugee situation in northern Uganda as a case, this paper provides insights into how Gulu University is applying the TAGDev model to position agricultural graduates to respond to community development challenges at both local and international levels.

Key words: Agribusiness innovation, Gulu University, refugees, student-centred outreach

## Résumé

Globalement, les universités sont censées contribuer au développement et à la transformation positive des sociétés grâce à trois fonctions cardinales d'enseignement, de recherche et de sensibilisation. Cependant, la pertinence des universités africaines pour répondre aux besoins des communautés a été diversement remise en question. L'orientation «tour d'ivoire» (qui détache les universités de la communauté des utilisateurs finaux) est l'un des facteurs présumés d'affecter négativement la contribution des universités africaines au développement communautaire. L'agriculture est toujours la principale base de subsistance de la grande majorité de la population Africaine et en tant que telle, les universités agricoles sont supposées jouer un rôle significatif dans la génération d'innovations réalisables pour le développement communautaire. Ceci nécessite la re-modélisation de la manière dont les universités agricoles «mènent leurs affaires» afin de répondre efficacement aux besoins de développement communautaire. Dans le cadre d'un effort plus large de repositionnement des universités agricoles en Afrique, le Forum Régional des Universités pour le Renforcement des Capacités en Agriculture (RUFORUM) se fait le champion d'une initiative de huit ans (2016-2025) «Transformer les universités agricoles Africaines pour contribuer de manière significative à la croissance et au développement de l'Afrique (TAGDev)». L'un des éléments critiques envisagés dans le cadre de TAGDev est l'orientation pratique des étudiants pour leur permettre de devenir des champions du développement en Afrique. Au cœur de l'initiative TAGDev se trouvent deux modèles, à savoir le modèle de sensibilisation centré sur l'étudiant et le modèle d'innovation agroalimentaire, qui constituent ce que l'on appelle un «nouveau modèle (TAGDev)» d'enseignement agricole, et qui est piloté par deux premières universités adaptatrices, l'Université de Gulu en Ouganda et l'Université d'Egerton au Kenya. Un conflit violent a entraîné une énorme population de réfugiés en Afrique. En même temps, l'aide humanitaire fournie par diverses agences s'est réduite au fil des années au strict minimum et est devenue intenable. Par conséquent, en utilisant la situation des réfugiés dans le Nord de l'Ouganda comme un cas, cet article donne un aperçu de la façon dont l'Université de Gulu est en train d'appliquer le modèle TAGDev pour positionner les diplômés agricoles pour répondre aux défis du développement communautaire aux niveaux local et international.

Mots clés: Innovation agroalimentaire, Université de Gulu, réfugiés, sensibilisation centré sur l'étudiant

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## Background

Many developing regions of the world are perennially plagued with poverty, food insecurity and lack of employment for the youth. These problems are increasingly being compounded and made worse by two important scenarios, (i) occurrence and persistence of armed conflict; and (ii) lack of innovations to enable people work and live in decent dwelling conditions. In situations of conflict, depending on the nature of conflict, the affected communities are either placed in Internally Displaced Peoples Camps (e.g. Northern Uganda during the 20 year old LRA armed conflict, from mid-80s to mid-2000) within the country or in Refugee Camps as is the case with South Sudanese refugees and others from the Democratic Republic of Congo and Burundi currently hosted in various locations in Uganda.

Displaced people living in camps are typically confronted with two phases of practical adjustment in terms of livelihood issues. First, being immobilized in camps, credible survival mechanisms need to be adapted. For a number of years, refugees or internally displaced people relied solely on assistance from humanitarian development agencies for provision of food, medical care, education, water and other necessities (Ahimbisibwe, 2014). Dependence on humanitarian assistance has increasingly become unsustainable for two main reasons: (i) global economic down-turn has increasingly made it difficult to raise resources sufficient to cater for the needs of displaced persons/refugees; and (ii) over the years, it has been realized that reliance on humanitarian assistance creates dependency syndrome, and as such people fail to cope upon returning to original homes when external support ceases. Secondly, arising from closure of camps, refugees/displaced persons need to re-build their lives upon returning to their original homes. This can only be possible if they are equipped with innovative, practical, relevant and adaptable livelihood strategies. Experience from Northern Uganda has demonstrated that lack of such “sustainable what to do” creates favourable situations for returnees to resort to anti-social behaviour for survival rather than engaging in productive economic ventures (McDonald, 2017).

Relatedly, human population in developing countries and more especially in Africa is dominated by the youth. It is projected that global youth population will reach 1.3 billion by 2013. In the case of developing countries, theoretically, such a huge youth population under normal circumstances is expected to drive economic development and create decent living conditions in those countries. However, inappropriately developed human capital, and lack of practical, adaptable sustainable innovations has in part made it difficult for many developing countries to unlock and effectively make use of the huge youth population for economic development and prosperity. As a consequence, the youth in these countries is largely economically unemployed and redundant, and thus creating a potential “recipe” for anti-social behaviour spiralling to conflict creation and resurgence.

Gulu University, right from the time of its establishment in Northern Uganda in 2003 strategically positioned itself to champion community development. Therefore, rather than following the “ivory tower” orientation model that a number of other universities have adopted, Gulu university “chose the path” of a community-oriented higher education institution. The community orientation nature of the university is well reflected in its motto “for community transformation”. This orientation is not only meant to make the university relevant to the community, but most importantly to enable the community participate effectively in delivering the core mandates of the university (i.e., teaching, research and outreach or community engagement).

In the context of rural development and in the context of the African continent in particular, it is important to appreciate that the community orientation of Gulu University is not just a deviation from the operational strategies of the ivory tower-oriented universities, but rather a strategy to bridge the gap between the “ivory tower” universities and the wider community of end-users of the expected products and services developed by universities. In championing its community transformation agenda, Gulu University under the auspices of the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM),

in partnership with Egerton University, Kenya, is implementing an eight-year initiative (2016-2025) “Transforming African Agricultural Universities to Meaningfully Contribute to Africa’s Growth and Development (TAGDev)”. From a wider development context, the TAGDev initiative aims at strengthening the capacity of African agricultural universities and their graduates to transform agriculture and accelerate growth and development of sustainable livelihoods. One of the critical elements envisioned for achieving the TAGDev development outlook is practical orientation of students under real conditions of challenges typically experienced in Africa. At the centre of students’ practical orientation are two models: (i) the Student-Centred Outreach model (Kalule *et al.*, 2016) and the Agribusiness Innovation model (Kalule *et al.*, 2017). These models combined, constitute what is referred to as “a new model of agricultural education that connects tertiary agricultural education to rural communities”. Gulu University and Egerton University are two early adapter institutions that have been selected to pilot the “new model”. Therefore, using the refugee situation in Northern Uganda as a case, this paper provides insights into how the “new” model is being applied to achieve the development outcome of the TAGDev programme.

**The operational dimensions of the TAGDev model.** The operationalization of the “new” model takes due consideration of community development challenges and the need for universities to position themselves to generate sustainable solutions to the challenges. The TAGDev model combines the agribusiness innovation model, which is implemented through student enterprise projects (also commonly referred to as the Student Enterprise Scheme, SES) (Kalule *et al.*, 2016) and Student-Centred-Outreach (S-C-O) model (Kalule *et al.*, 2017). The two models work in tandem. The S-C-O model enables students to understand and appreciate community agricultural development challenges, identify through value chain analysis, business opportunities which are fed into the SES. At the heart of the SES, students develop, defend and evaluate their own ideas and they are supported to actualize such ideas into businesses. The results and lessons learnt from the SES are taken to the community through the S-C-O model. The intention is that, business models that are found to be successful are refined and promoted in the community for up-take, and then, through the S-C-O framework, training services surrounding proven business models are provided to the community. It is important to appreciate that at community level in developing countries, capacity to develop, test and refine agribusiness plans is largely lacking. In principle, the S-C-O and SES approaches of student training is expected to act as a continuous means of providing to the community robust and up-to-date agribusiness innovations.

**Application of the TAGDev model to refugee situation in Northern Uganda.** Gulu University (GU) in collaboration with the Food and Agriculture Organization (FAO) entered into a framework to pilot the TAGDev model to address undernutrition and livelihood challenges of South Sudan refugees settled in Northern Uganda. Graduate students of the MSc. Food Security and Community Nutrition and MSc. Agri-Enterprises Development programmes were selected to play a centre role on the basis of the S-C-O model (Kalule *et al.*, 2017). The selection of the two MSc. programmes is justified on the account of their relevance to food security and agricultural livelihood challenges experienced by the refugee communities. South Sudan refugees are settled in various locations in Northern Uganda. However, the GU-FAO framework being a pilot, it was envisaged that TAGDev be tested in a

few settlement locations, and lessons learned would then be extended to other locations. Therefore, settlements camps located in Adjumani and Arua districts were selected. The piloting exercise went through three stages. First, using community-based community action research approach (Kelly, 2005), the students, and refugee community members, facilitate by academic staff, within the framework of the S-C-O model (Kalule *et al.*, 2017) identified challenges that could be tackled through agricultural-based interventions. Two key challenges were identified: (i) lack of cost-effective solution to undernutrition in children; (ii) lack of appropriate livelihood strategies to enable them live economically and amicably with the host communities. Secondly, on the basis of those challenges, the students carried out value chain mapping and analysis, identified opportunities and translated them into business plans. Business plans were developed in the following areas: (i) Nutritious food composites based on locally available food resources; (ii) mushroom production; and (iii) vegetable production. Thirdly, on the basis of the developed business plans, refugees were provided practical training on the technical aspects required to ensure success of various businesses.

Because of the huge refugee population (> one million), it is practically impossible to provide capacity building to all of them. Therefore, a two-stage approach was adopted. The first stage involves training of a few selected champion agents. In the second stage, the champion agents are expected to train the remaining members of the refugee community. However, the content of this paper is only limited to the first stage. Table 1 provides information on the location, type of enterprise and the number of groups of champion agents that were engaged.

### Scenario analysis and discussion

Whereas, the GU-FAO cooperation is largely focused on the refugees, as an entry point, and on the basis of the S-C-O component of the TAGDev model, initial consultation and engagement had to be made with local leadership of the refugee host areas. This was necessary to enable buy-in, an essential precondition for success of a development initiative of this nature. In deed involving local leadership provided important insights on

**Table 1. Location, enterprise type and number of champion groups engaged**

District	Settlement	Enterprise	Champion groups**
Adjumani	Agoju	Mushroom, nutritious food composites	03
	Maji I	Vegetable (cabbage, onion)	03
	Maji II	Vegetable (okra, tomatoes)	03
Arua	Imvepi	Vegetable (onions, cabbage) and mushroom	03
	Ofua III	Vegetable (okra, Onions, cabbage, tomatoes), nutritious food composites	04
	Omugo	Vegetable (okra, tomatoes, cabbage, onions)	04

\*\*Each champion group had between 20-30 members.

the relevance of the TAGDev model. Local leadership was very appreciative of the model and had a strong belief that the model, if correctly applied had the potential of providing solutions to agricultural livelihood challenges among both the refugee and the host communities. On closer scrutiny of the operational framework of the TAGDev model, local leaders expressed strongly, the need for its application to re-tool agricultural extension workers to enable them adopt and apply enterprise-based approach in community agricultural development. In a broader sense, this observation illustrates the true relevance and the potential of the model to transform agricultural extension service provision for better impact, thus providing justification from the view point of policy makers, the transformative potential of the TAGDev model. The favourable opinion of the local leaders on the TAGDev model with respect to extension service provision is consistent with the fact that agricultural extension in Africa has largely been ineffective and several reasons have been advanced for the shortcomings (Msuya *et al.*, 2017). Nonetheless, we believe that lack of entrepreneurial orientation of extension service provision is a critical factor that requires due attention.

From a socio-economic point of view, the local leaders believed that the huge refugee population would strongly contribute to the volume of food produced and hence improving food security in the two districts and the surrounding. This is because food consumed in the two districts is largely imported from the Lango sub-region and eastern part of Uganda. On the basis of this observation, local leaders were of the view that the GU-FAO initiative on the application of TAGDev model should target production of staple foods such as sorghum, cassava, beans, etc. In addition, local leaders were also of the view that capacity of refugees could be built in poultry production because poultry products such as poultry meat and eggs are lacking in those areas. On interacting with the refugee communities, several scenarios that contrast with the aspirations of the local leaders emerged. First, refugees preferred high value horticultural crops, due to small plot sizes allocated to them. Secondly, the refugees expressed strong interest in processing to add value to the low volume of primary produce from the small plot sizes. Thirdly, refugees were not in favour of engaging in poultry production because of lack of suitable feed sources in the area.

From the foregone observations, it is clearly apparent that the aspirations of local leaders did not reflect real circumstances encountered by the refugees. This scenario illustrates clearly the functional importance of the S-C-O component of the TAGDev model in orienting students to understand and appreciate community situational circumstances. Classically, agricultural universities in Africa are largely designed on the basis of the university farm model. Despite its usefulness in practical skills development, university farm model approach, when used exclusively limits students from experiencing community scenarios and developing capacity for community immersion after graduation. Following interactions with local leaders and refugee communities, students appreciated the value of community engagement, particularly in exposing them to international development challenges such as the refugee situation. Interestingly, on the basis of the disparity between aspirations of local leaders and needs expressed by the refugee communities, students expressed gratitude on how community engagement can be used to tailor implementation of development initiatives. One of the key inputs that the students gained from interacting with the refugee community is how refugees thought rationally on the choice of high value horticultural crops and value addition as a strategy

to maximize income from small size plots allocated to them. This is one classical example of how community engagement provides opportunity for students to blend knowledge acquired from the classroom with what is resident in the community.

In many developing countries and in Africa in particular, industrial growth is limitedly vivid, and if it is to take place, will largely be agro-based, for the foreseeable future. This is well evidenced in a number of policy documents such as the African Union Agenda 2063, East African Community (EAC) Vision 2050 and Uganda's vision 2040, among others. On the other hand, it is apparently clear that for agriculture to transform lives among rural communities, it should be undertaken as a business, and as such extension service provision should address constraints in an agri-business enterprise. Unfortunately, the vast majority of extension service provision is largely based on technical aspects (seed type selection, when and how to harvest, etc) but not on enterprise development and provision of training services around the enterprise. This situation could be a consequence of inadequate entrepreneurial orientation of extension service provision strategy. This probably justifies the interest expressed by local leaders that the TAGDev model be extended to retool extension services providers. Central to the agribusiness innovation component of the TAGDev model is the recognition that agribusiness is knowledge-based. This justifies the rationale for capacity building of refugee communities in technical aspects of the enterprises presented in Table 1. The rationale is that when students develop business model for each enterprise, then through the S-C-O component of the TAGDev model, the business models will be made available for uptake and implementation by the refugees.

## Conclusions

Piloting the TAGDev model with refugee situation in Northern Uganda provided opportunity for (graduate) students to experience and appreciate refugee challenges that can be addressed through agricultural innovations. Students, working together with the community screened identified potential business opportunities suitable for the refugee situation. This paper demonstrates that TAGDev model has a great potential to position agricultural (graduate) students to respond to international development challenges.

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