

Research Application Summary

Refocusing student–farmer attachment of Gulu University for improving marketing efficiency of smallholder farmers in Uganda

Kalule, S.W.,^{1*} Okello, D.M.¹ & Ongeng, D.²

¹Department of Rural Development and Agribusiness, Faculty of Agriculture and Environment, Gulu University, P. O. Box 166, Gulu, Uganda

²Department of Food Science and Post-harvest Technology, Faculty of Agriculture and Environment, Gulu University, P. O. Box 166, Gulu, Uganda

***Corresponding Author:** wamalakalule@gmail.com or s.w.kalule@gu.ac.ug

Abstract

Many curricula of university academic programs in sub-Saharan African do not provide for adequate field-based practical training. In part this is blamed on the limited public funding of programs and activities in Higher Education Institutions. As such, there have been attempts to initiate innovative practical methods while striving to strike a balance between what the universities can offer in terms of training and the competence needs of the labor market. In order to enhance field-based training at Gulu University, a student–farmer attachment was introduced in which students are either individually or in groups attached to farmsteads. In this approach, which also has community transformation goals, students spend a minimum of one year on farmsteads, commuting to and from the University by riding bicycles for purposes of interactive learning. However, a knowledge void exists on how farmers perceive the knowledge quality and attitudes of the students and how the overall scheme should be improved. Therefore, a baseline was conducted in the areas where the scheme has been operating and where it intends to spread. Results from the sub-sample of previous host farmers of student attachment indicated that 93.6% and 90% of farmers rated the knowledge quality and attitudes of students respectively as good and very good. Furthermore, product processing (63.6%) and provision of product buyer information (60.9%) emerged as the most highly ranked marketing advisory services that students could engage in and yield most improvement in the marketing efficiency of farmers. The study recommended that future interventions of the student-farmer attachment should strengthen efforts in advising on product processing and buyer information so as to enhance marketing efficiency.

Key words: Dissemination, innovation, rural development, student-farmer attachment, technologies, Uganda

Résumé

Beaucoup de programmes d'études universitaires en Afrique subsaharienne ne prévoient pas de formation pratique adéquate prenant en compte les réalités du terrain. Cela s'explique en partie par le faible financement par les entités publiques des programmes et des activités dans les établissements d'enseignement supérieur. Ainsi, des tentatives ont été menées afin d'initier des méthodes pratiques novatrices, tout en cherchant à trouver l'équilibre entre le

potentiel d'offre des universités en termes de formation, et les besoins en compétences sur le marché du travail. Afin d'améliorer le programme de formation pratique à l'Université de Gulu, un paquet étudiant-agriculteur a été introduit, et consiste à affecter des étudiants, soit individuellement ou en groupes, à des fermes. Dans cette approche, qui présente également des objectifs de transformation au niveau communautaire, les étudiants sont destinés à passer au minimum un an à la ferme, tout en allant et revenant de l'Université, à bicyclette, à des fins d'apprentissage interactif. Cependant, il existe un manque de connaissances sur la perception de la qualité des connaissances et des attitudes des élèves par les agriculteurs, et aussi sur la manière dont le programme global devrait être amélioré. Par conséquent, une étude de base a été effectuée dans les zones où le système est opérationnel et où il prévoit de se propager. Des résultats du sous-échantillon des précédents agriculteurs hôtes, montrent que 93,6% et 90% des agriculteurs estiment que la qualité des connaissances et les attitudes des élèves sont respectivement bonnes et très bonnes. De plus, le traitement des produits (63,6%) et la fourniture de renseignements sur les acheteurs de produits (60,9%) sont apparus comme les services de conseil marketing les plus estimés que les étudiants pouvaient entreprendre, et qui amélioreraient plus l'efficacité commerciale des agriculteurs. L'étude a recommandé que de futures interventions sur le paquet étudiant-agriculteur devraient aider à renforcer les efforts de conseil sur le traitement des produits et sur les renseignements des acheteurs afin d'améliorer l'efficacité commerciale.

Mots clés: Diffusion, innovation, développement rural, paquet étudiant-agriculteur, technologies, Ouganda

Background

Higher Education Institutions (HEIs) worldwide strive to achieve the triple roles of teaching, research and outreach (Nhamo, 2012; Kraemer-Mbula, 2014). The interplay between the three mandates of HEIs is essential for producing graduates whose knowledge, skills and attitudes match the working environment upon graduation. However, in Sub-Saharan Africa (SSA), universities are faced with two major challenges: i) inadequate public funding of higher education institutions; and ii) exponential student enrolment that does not match practical training facilities available (Tefera, 2013). These in addition to other constraints further stretch instructional capacity at universities. For instance, British Council (2014) reported that the ratio of lecturer to students in HEIs of SSA was averaging 1:50 and above, and even the necessary facilities for practical training were hardly available. Owing to this funding limitation, many training curricula in African universities do not provide for adequate field-based practical training. While enhancing practical orientation in these curricula and linking theory to practice in production sectors (Mwamila and Diyamett, 2009; Fergie, 2014; Kraemer-Mbula, 2014), HEI are increasingly devising innovative approaches for engaging students in community attachment. One such approach is the student-farmer attachment practiced at Gulu University in Uganda.

The student-farmer attachment (SFA) is a relatively economical approach, incorporating the teaching, research and outreach roles of HEIs. It has emerged as an alternative practical

training to the university-farm training model, a widely practiced approach in agricultural leaning universities. A key departure of the “university-farm training model” from the SFA is that the former approach does not mirror the working conditions (at least in SSA) students are expected to serve in following graduation. On the contrary, the suitability of SFA for practical training in Sub Saharan African universities is premised on the fact that this approach ensures that students are attached to smallholder farmers when they are still on university academic programs and get used to working conditions that they are most likely to serve in upon graduation. Indeed the approach can enhance employability of university graduates. For instance, evidence from South Africa has shown that field-based experiential learning including engagement in extra-mural activities, service learning, volunteering and other extra-curricular activities is influential in securing successful employment outcomes (Cape Higher Education Consortium, 2013).

The SFA approach was designed in such a way that students, either individually or in teams, are attached to farmsteads to which they spend a minimum of one year commuting to and from the University by riding bicycles for purposes of interactive learning. In effect, the approach achieves three interlinked and complimentary goals: 1) student experiential learning; 2) faculty linkage to the community; and 3) transformative learning to farming households. However, a knowledge void exists on how farmers perceive the knowledge quality and attitudes of the students and how the overall scheme should be improved. Such knowledge is crucial in improving the design of SFA for benefiting all actors namely, students, faculty and the farming households.

Study description

The SFA was started at the time of launching the Bachelor of Agriculture degree programme at Gulu University in 2005. At its inception, the SFA scheme targeted to cover farming households within the radius of 5km from the university campus. However, over time, this radius has been extending up to approximately 10km due to increasing interest and demand from both students and the farmers. Recently, it was decided that the geographical coverage of the scheme be extended to the whole of Gulu and Amuru Districts of Northern Uganda. Therefore, it became necessary to conduct a baseline in the proposed new areas for bench-marking the SFA but also utilizing the same opportunity of examining how this scheme was performing in areas where it was already taking place.

Baseline data were collected using a pre-tested questionnaire from a sample of 342 farmers in the districts of Gulu and Amuru. The sample comprised of farmers who had hosted students for farm attachment (110) and those who had never received and hosted students for attachment (232). However, in this study only farmers who had hosted students for attachment were included in the sample for analysis for the reason that they were more conversant with the operations of SFA of Gulu University. This meant that they would provide informed perceptions on the status of the SFA but also share their opinions on the future of the same scheme.

Research Application

Farmers' perception of competences of students. Findings on the perceptions of farmers towards the knowledge and attitude competences of students are presented in Table 1. Results show that 93.6% of previous host farmers for student attachment perceived and rated the knowledge quality of the students to be good and very good.

Table 1: Farmers' rating of knowledge quality and attitudes of students (n=110)

Rating	Knowledge Quality of Students	Attitudes of Students
	Percentage	Percentage
Very Poor	0.0	0.9
Poor	0.0	0.9
Fair	6.4	8.2
Good	70.9	73.6
Very Good	22.7	16.4

Relatedly, these previous host farmers rated highly the attitude competence of students towards farm work. Findings show that 90% of farmers rated the attitudes of students as good and very good. Such positive findings depict the continued willingness of farmers to receive students from Gulu University for farm attachments and that farmers could be learning from students.

Learnt farming practices from students. Findings on the crop farming and livestock management practices that host farmers learn from students are presented in Table 2 and Table 3. These findings show that host farmers learn from students more of crop farming practices than livestock management practices.

Table 2: Learnt crop farming practices from attached students (n = 110)

Learnt cropping practice	Percentage of "Yes" responses (%)
Planting Techniques	79.1
Harvesting Techniques	60.0
Crop Variety Selection	46.4
Weed Control	42.7
Post-harvest Handling	41.8
Cropping Site Selection	24.5
Soil and Water Conservation	21.8
Nursery Bed Management	3.6

Planting techniques (79.1%) and harvesting techniques (60.0%) were most common practices learnt by farmers. Some farmers were also trained in nursery bed management

(3.6%) and soil and water conservation techniques (21.8%). In the category of livestock management, few farmers reported to have learnt from students in the selected livestock farming practices, with highest learnt practice receiving 16.9% responses (poultry housing) in agreement.

Table 3: Learnt livestock management practices from attached students (n = 110)

Learnt Livestock Practice	Percentage of “Yes” Responses (%)
Poultry housing	16.4
Livestock housing Practices	10.9
Livestock breed selection	9.1

Advisory services for improving marketing efficiency. Findings on opinions of farmers on advisory services for improving marketing efficiency are presented in Table 4. It is evident that from the farmers’ perspective, the most relevant advisory services from SFA for improving the marketing efficiency is product processing (63.6%). This is followed by advice provision on product buyer information (60.9%), and product quality management and group-based marketing (both 51.8%).

Table 4: Farmer choice of advisory services for improving marketing efficiency

Preferred advisory Services (n= 110)	Percentage
Product Processing	63.6
Product Buyer Information	60.9
Product Quality Management	51.8
Group-based Marketing	51.8
Product Price Information	35.5
Market Actor Relations	31.8
Product Packaging	22.7
Product Transportation	19.1

The least preferred advisory services for targeting marketing efficiency are product transportation (19.1%), product packaging (22.7%) and market actor relations (31.8%). This means that while moving forward with SFA, aspects of marketing efficiency where students could be deployed for advising and yield more positive impacts are: product processing, provision of buyer information and product quality management.

Discussion

The study examined three key issues namely: 1) farmers’ perception of competences of students for facilitating learning; 2) farming practices learnt from students; and 3) farmers’ opinions on activities where SFA would be most helpful for improving marketing efficiency.

Farmers' general perception of competences of students as good implied that farmers found it useful working with intern students from Gulu University. It further conformed to anecdotes collected during previous interactive engagements with the farming community, in which farmers expressed interest to host students for attachment. For the learnt farming practices, it was interesting to observe that planting and harvesting techniques were ranked highly in the interactive learning process with the students. Since the two practices are important precursors to improving farm productivity and reduction in postharvest loss, it meant that the SFA offers a good opportunity of achieving increased farm output. Asfaw *et al.* (2012) explains that it is widely argued that improved dissemination of knowledge and technologies is important for improving productivity. This makes the student-farmer approach a useful vehicle for engaging farmers in their effort to move from subsistence production to commercial agriculture. However, what emerged surprising was the low attention devoted to nursery bed management and soil and water conservation, yet the two activities feature prominently in the training curricula of undergraduate agricultural students. This could be explained by the fact that vegetable and horticultural crops production is still low in Northern Uganda because the region is predominantly a cereal and root crops growing area. This means that the demand for advisory services in nursery bed management and soil and water conservation is low amongst the farming households.

Results of farmers' opinions on preferred advisory services in the marketing of farm products demonstrated that important services to farmers relate to value chain product and process upgrading. What is more interesting is the fact that farmers recognize that students can be useful in the provision of these services. It is believed that farmers can upgrade value chains when they acquire new capabilities or improve existing ones (Ponte, 2011). It can be assumed that farmers realize that product upgrading through processing and quality management adds value to farm output and brings them additional returns. On the other hand, the focus on functional and process upgrading namely, provision of buyer information and group-based marketing serves to reduce the costs of doing business and enhances competitiveness.

Conclusion

The Student-Farmer attachment approach has emerged as an alternative and popular practical training in agricultural leaning universities. Particularly, it allows students an opportunity for experiential learning in a smallholder agriculture context, which in the case of SSA mirrors the work environment the students are expected to serve in upon graduation. Evaluation of this approach in Gulu University at farmer level as illustrated in this paper has shown that host farmers perceived the knowledge, skills and attitude competences of students as useful for their (farmer) learning. It has also been established that the SFA has previously biased its focus on providing technical knowledge and skills and giving little attention to agribusiness development and soft skills. Overall, the SFA is demonstrating to be a good approach for facilitating farmers' commercialization and ultimately contributing to community transformation. In moving forward, the SFA should

refocus to engage students in provision of buyer information and advisory services for group-based marketing. This will contribute to better competitiveness of smallholder agri-enterprises by targeting to reduce transaction costs and improving profitability.

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