

Harnessing student-oriented extension schemes for University driven agricultural transformation in Africa

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Abstract

The role of student-oriented extension services in socio-economic transformation is increasingly being acknowledged but less developed in African universities. A few agricultural-leaning universities are growingly integrating students in community engagement activities with the view of improving impacts at community-level learning and innovation. Analysis of the student-oriented extension schemes on the basis of Gulu University Model shows that host communities hold positive perceptions about these approaches. However, these extension schemes are seemingly more cost-effective in rural based universities which tend to have many farming households in the neighbourhood or near distance farmsteads from the university campuses. Notably, the performance of student extension service at community level is influenced by nearness of farmstead distance to the university, social support and faculty supervision support to students. In view of the exceedingly high extension worker to farmer ratio typical of many African countries, we recommend policy prioritization of student-oriented agricultural extension services for public funding in universities so as these intervention approaches can be exploited to complement existing public and non-public extension systems in facilitating community-based learning and innovation.

Key words: Agricultural transformation, Gulu University, Northern Uganda, students extension services

Resume

Le rôle des services de vulgarisation orientés vers les étudiants dans la transformation socio-économique est de plus en plus reconnu mais moins développé dans les universités africaines. Quelques universités à vocation agricole intègrent de plus en plus les étudiants dans les activités d'engagement communautaire afin d'améliorer l'impact sur l'apprentissage et l'innovation au niveau communautaire. L'analyse des programmes de vulgarisation orientés vers les étudiants sur la base du modèle de l'université de Gulu montre que les communautés d'accueil ont une perception positive de ces approches. Cependant, ces programmes de vulgarisation sont apparemment plus rentables dans les universités rurales qui ont tendance à avoir de nombreux ménages agricoles dans le voisinage ou à proximité des fermes des campus universitaires. En particulier, la performance du service de vulgarisation des étudiants au niveau communautaire est influencée par la proximité des fermes par rapport à l'université, le soutien social et le soutien des professeurs aux étudiants. Compte tenu du ratio vulgarisateur/agriculteur extrêmement élevé qui caractérise de nombreux pays africains, nous recommandons de donner la priorité aux services de vulgarisation agricole orientés vers les étudiants dans le cadre du financement public des universités, afin que ces approches d'intervention puissent être exploitées pour compléter les systèmes de vulgarisation publics et non publics existants en facilitant l'apprentissage et l'innovation au niveau communautaire.

Mots clés: Transformation agricole, Université de Gulu, Nord de l'Ouganda, services de vulgarisation pour les étudiants.

Introduction

Universities are considered essential in pursuing knowledge-oriented development and facilitating an inclusive innovation system that focuses on the poor and marginalized communities (Cloete and Maassen, 2015; Kruss and Gastrow, 2017). This position of thinking, anchored on the knowledge economy paradigm, is reinforced by accumulated lessons and experiences gained from the land-grant institutions model of the United States [US]. The knowledge economy paradigm emerges from the need to bridge linkages in development processes between industries and socio-economic settings of local communities on one part, and the knowledge institutions such as universities and research on the other, for purposes of harnessing researched technologies and innovation (Cozza and Blessingger, 2015). In the land-grant institutions model (LGM), universities supply knowledge to rural communities within the region of their location targeting enhanced productivity, competitiveness of production firms and thus, accelerating economic growth (Mack and Stolarick, 2014). At the center of such university activities are students working under supervision from faculty staff. Given the big population of students in universities, it suggests a possible large number of personnel in place that can provide agricultural extension services to the farming communities. It gives an impression that a big learning impact can easily be realized especially in communities that experience under-service from other traditional extension systems. Examples of impact of student-oriented service are disseminated studies on LGMs that focus on agriculture and engineering (Liu, 2014). It has been reported that student extension services are associated with improved farm practices and overall production (Liu, 2014).

In the African context, the student-oriented extension approach is not well developed despite the existence of marginalized communities in their localities. A number of reasons have been suggested as responsible for this kind of scenario. First, African universities are not well funded and based on this, it is the outreach functions that suffer most. Yet again, community engagement is the least prioritized function of universities (Kraemer-Mbula, 2014). Second, many faculty staff, especially the aged and those who were trained long time ago, have competence limitations in facilitating community engagement (Blackie, 2016). For instance, many faculty are yet to come to terms with managing the student-led extensions services from the universities. Third, existing incentive structures do not adequately motivate faculty staff to supervise students on community placement and extension.

In recent times, African universities are growingly integrating students in community engagement activities. Majority of these universities embracing student-oriented community engagement are in South Africa (Preece, 2013). Elsewhere, in East Africa, universities known for community connectedness are mainly the agricultural training leaning types. Examples include Gulu and Makerere Universities in Uganda and Egerton University in Kenya (Kalule *et al.*, 2016; Mungai and Njuguna, 2016; Opolot *et al.*, 2018). Gulu University runs the Student Centered Outreach Model in which: 1) undergraduate students are attached on farmsteads in neighbourhood of the university for period of not less than a year; and 2) graduate students placed at farmer organization for a period of 2-3 months (Kalule and Ongeng, 2016). Makerere University uses the internship program for attaching students to farming household so as to offer advice to their hosts. For Egerton University, a farm attachment is used as the vehicle

for students to provide extension services to the farming community. These approaches of student community engagement depict three main features: 1) practical training to students while still under university studies; 2) facilitating community-based learning and innovation; and 3) stronger university visibility in the communities. A quick review of enrolment statistics in African universities reveals that institutions hold sizable number of agricultural students. However, student-oriented extension services remain under exploited and therefore the need to examine options for better use of students in community engagement to facilitate farmer learning.

Study description

The preparation of this reflection paper is based on experience gained from implementation of the Student Centered Outreach model (SCO) at Gulu University. In the SCO, undergraduate students are attached at the farmsteads which they regularly visit during the course of their study at Gulu University for a time period of not less than one year. The students undertake farm visit by riding bicycles or walking. This means that short distance operation (at least less than 10 km) is critical for the SCO. In addition, graduate students participate in the SCO through attachment to farmer organizations including farmer associations, producer cooperatives and organizations that serve the farming community in Northern Uganda. For these graduate students, community attachment lasts for a short time of about 2-3 months, during which they serve individual farmers who have membership with such organization. The SCO model has also been piloted in the refugee settlements and host communities in West Nile sub-region of Uganda (Aura and Adjumani districts). Accordingly, in the year 2018, graduate students were oriented on the refugee situation and subsequently deployed to facilitate in the project on promoting farm based micro enterprises for increased participation of refugees in the money market (Gulu University agri-entrepreneurship symposium, 2019). In order to enhance the validity of findings disseminated in this paper, experiences have been triangulated with document and article review as well as opinions of beneficiaries communicated in various meetings including stakeholder symposium of May 2020.

Analysis and discussion

Research on student-oriented extension service, also commonly referred to as the student community engagement, in African Universities is growing (Sherrard and Alvaro, 2018). A key observation in existing studies based on the SCO model of Gulu University shows that host-communities perceive that student-oriented extension is useful and effective (Kalule *et al.*, 2019a). This in part is attributable to the fact that host-communities consider the students, as facilitators of learning, to possess state-of-the-art knowledge which if tapped into can bring farm-level improvement in productivity and incomes. That aside, host-communities tend to experience more frequent contacts with students on farm placement than many of other agents of agricultural extension service. Notably, the scenario of being under assessment for academic grade from the university supervisor and the community-placement host, motivates the student to perform tasks diligently including regular visits to the places of community attachment. Thus, if the student-oriented extension can be harnessed, it can potentially free the thinly spread national and non-public extension staff to be deployed in distant areas that cannot be served by the student system.

Managing the student-oriented extension scheme in universities is not free of challenges. These challenges can be grouped as either student-centered, university centered or community centered. For the student-challenges, there are mainly two issues. First, language and communication barriers, especially if, the concerned student comes from a region where the local language of the host communities is not the main medium of communication (Roberts and Edwards, 2017). However, experience of deployment of students to refugee communities in Northern Uganda has shown that with good planning and working in teams, students easily cope up to facilitate interactive learning in refugee communities coming from diverse cultural and tribal backgrounds. Indeed, a highly engaged process between the refugee leaders and the university staff resulted into students of Gulu University implementing an effective and harmonized approach of facilitating the development of farm based micro-enterprises in refugee and host communities of Arua and Adjumani districts. Secondly, the knowledge that the students transfer to host-communities tends to be in technical and intricate language which is not easily accessible to the target communities (Mirembe *et al.*, 2016). This likely creates information flow challenges and may limit learning at community level. Nonetheless, extension faculty should be able to deal with this type of communication challenge through adequate preparation and orientation of students in the use of decoded terms meant for non-specialists. At university level, key challenges for successful supervision of student extension schemes include: 1) inadequate logistical support for field based work; 2) absence of motivating mechanisms for rewarding faculty staff excelling in community based work (Larsen, 2016); and 3) sacrificing of community engagement in preference to research and training, a common practice, when budget constraints are experienced (Muriisa, 2015). A dedicated policy shift and national and university level is required to deal with these challenges. For community, common challenges include: misalignment of expectations between the university and or students with the host communities. For instance, host-farmers of community engagement tend to look at students as a source of free farm labour rather than opportunity of learning improved farming techniques that includes farm work for purposes of practicing. Further, communities tend to expect hand-outs such as allowances, farm inputs and others from the university. Though, with explanation that the university is only knowledge institution, many community members accept to collaborate with the university.

Even with existing multitude of challenges, student-oriented extension is widely viewed as a cost-effective approach of engaging local communities in learning. Students only need little resources in form of facilitation to reach host communities which may include upkeep, transport and food costs. Yet these students have fresh knowledge on a range of disciplines commonly taught in Agricultural degree programs and courses. Much as student-oriented extension schemes cannot replace mainstream public and non-public extension systems, if well exploited can complement other forms of extension services. This is particularly important considering the fact that extension agent to farmer ratio in most of the African countries is disappointingly too high to provide meaningful coverage of farmers and their needs. The student-oriented extension scheme are more likely to be impactful in areas that are underserved by public extension systems.

Given the value of the student-oriented extension, it is important to analyze factors that contribute to their successful rolling out. Basing on the experiences gained while implementing the Student-Centered Outreach (SCO) at Gulu University, it is evident that a key factor for

implementing the student-oriented extension schemes is the rural location of the university. This rural nature situation of universities creates an advantage of having many farming households in the vicinity of the university campus which students easily serve through commuting to and from the farmstead on a regular basis. Relatedly, nearness of the farmstead distance to the university is also a critical factor for student extension. For instance, research has shown that host communities in close proximity to the university campus exhibit better learning behavior towards students facilitating community learning compared to their counterparts coming from far distance to the university (Kalule *et al.*, 2019a). This is attributable to ease of reach of students to host farmsteads which in turn facilitates more frequent visits to farmers. Indeed, Kalule *et al.* (2019a) study showed that farmers in close proximity to university perceived the SCO to be superior compared to public extension and non-governmental extension because of more frequent contact between the students and the farmers. Further, sound preparation of students prior to farm placements is essential for students to be acquainted with the social learning environment of the host farmers and gaining techniques of securing community buy-in to prospective services (Kalule *et al.*, 2019b). For example, joint meetings between community members, students and faculty staff to explain the objectives of student extension and align expectations is thought to generate social support for student community engagement. Lastly, faculty supervision support to students while on farm placement improves farmer learning behavior towards student facilitators (Kalule *et al.*, 2019c). It can thus be argued that university student extension services offer gap-filling opportunity in service provision in areas that have remained underserved by existing public and non-public agricultural extension systems. However, student-based extension services is seemingly more cost-effective in rural universities that tend to have numerous farming households in the vicinity of their campuses. Currently, the S-C-O is largely implemented at primary production level. However, to have a greater impact on agricultural livelihoods, its implementation framework should be broadened to deal with issues of value addition and nutrition at the community level.

Conclusion and recommendations

This reflection paper is based on the growing recognition that student-oriented extension can provide complementing services to public and other forms of agricultural extension systems in facilitating community-based learning and innovation. It has been shown that student extension services are perceived as useful at community level for bringing most up-to-date farming knowledge to poor farmers. These student-oriented extension services are seemingly more cost-effective in rural based universities that tend to have numerous farming households in close proximity to the university campus. Further, the performance of these forms of extension services are strongly influenced by nearness of farmstead distance to the university, social support at community level and faculty supervision support to students. Therefore, we call for policy support and prioritization of student-oriented services for public funding in universities so as these intervention approaches can be exploited to complement existing public and non-public extension systems in facilitating community learning and innovation.

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