

Research Application Summary

Preparing students for agricultural employment in sub-Saharan Africa

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Abstract

There is an increasing need for universities to produce graduates with strong technical skills, practical experience in their areas of specialization, ability to work with rural smallholder farmers and yet with broad development perspectives. One of the ways in which the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is filling this gap is through the Field Attachment Program (FAPA). The FAPA grants are awarded to students who have completed or just about to complete their theses study. The FAPA provides funding to enable students go for 3-6 months attachment to the communities where they conducted their research, so that they give feedback and design follow-up activities. It is also used to support attachment to industry, farmer organisations, research institutions, etc. This paper shares experiences from the last five years of the program. The information shared is drawn from data and analysis from review of individual progress implementation reports submitted by the awardees. From 2010 – 2015, RUFORUM under its Competitive Grants Scheme (CGS) awarded 148 FAPA grants to its funded graduate students. A synthesis of the data reveals that the RUFORUM FAPA has enhanced student skills and capacity to engage with communities. Students indicated that they acquired field-based experience of working at community level as well as opportunity to transfer knowledge to farmers, and other stakeholders. In addition, students reported that farmers were very impressed that the field attachment enabled students to go back to the communities where they had conducted their research and shared and disseminated their research findings. Based on this feedback, the FAPA has achieved its set objectives. The Award offers an effective mechanism to skilling graduates and preparing them for the labor market while at the same time linking farmers to research outputs for which they engaged as part of participatory action research. The FAPA process therefore provides a mechanism of how university-based research teams can effectively engage and prepare graduates for future work. Interest in FAPA has increased over the years as demonstrated by the increased number of applications. It is recommended that the FAPA be institutionalized by universities as a mechanism of facilitating both graduate and undergraduate students to participate in community activities while enhancing their practical skills.

Key words: Community engagement, field attachment, practical skills, RUFORUM, rural development, Universities

Résumé

Il existe un besoin croissant pour les universités de produire des diplômés possédant de solides compétences techniques, une expérience pratique dans leur domaine de spécialisation, une capacité de travailler avec les petits exploitants ruraux et en même temps ayant de larges perspectives de développement. L'une des façons dont le Forum régional des universités pour le renforcement des capacités en agriculture (RUFORUM) comble cette lacune est à travers le Programme de placement en stages des diplômés dans des milieux où ils ont fait leurs recherches (FAPA). Les subventions pour FAPA sont accordées aux étudiants qui ont terminé ou sont sur le point de terminer leurs thèses de fin d'études. Le FAPA fournit des fonds pour permettre aux étudiants de retourner vivre pendant 3-6 mois avec communautés où ils ont fait leurs recherches, de sorte qu'ils partagent des résultats de leurs recherches et conçoivent des activités suivantes. La subvention est également utilisée pour soutenir le stage dans l'industrie, les organisations paysannes, institutions de recherche, etc. Cet article partage des expériences des cinq dernières années du programme. L'information partagée est tirée de données et de l'analyse des revues des rapports de progrès individuels présentés par les lauréats. De 2010 - 2015, RUFORUM, sous son régime de subventions concurrentielles (CGS), a accordé 148 subventions FAPA aux étudiants des cycles supérieurs qu'il finance. Une synthèse des données révèle que le RUFORUM FAPA a amélioré les compétences et les capacités des étudiants à collaborer avec les communautés. Les étudiants ont indiqué qu'ils ont acquis une expérience sur le terrain de travailler au niveau de la communauté, ainsi que la possibilité de partage et de transfert des connaissances aux agriculteurs, et d'autres parties prenantes, et apprennent aussi des agriculteurs. En outre, les étudiants ont déclaré que les agriculteurs ont été très impressionnés que le FAPA a permis aux étudiants de revenir aux communautés où ils avaient mené leurs recherches pour partager et diffuser leurs résultats de recherche. Sur la base de ces commentaires, le FAPA a atteint ses objectifs fixés. Le Programme offre un mécanisme efficace pour rendre les diplômés compétents et les préparer pour le marché du travail tout en reliant les agriculteurs aux produits de la recherche dont ils ont fait partie dans le cadre de la recherche participative appliquée. Le processus FAPA fournit donc un mécanisme de la façon dont les équipes de recherche universitaires peuvent s'engager efficacement et préparer les diplômés pour les travaux futurs. L'intérêt pour FAPA a augmenté au fil des ans, comme le démontre le nombre croissant d'applications. Il est recommandé que le FAPA soit institutionnalisé par les universités comme un mécanisme pour faciliter à la fois les diplômés et les étudiants de premier cycle à participer dans des activités communautaires, tout en améliorant leurs compétences pratiques.

Mots clés: engagement communautaire, stage en milieu réel de recherche, les compétences pratiques, RUFORUM, le développement rural, les universités

Introduction

The need to produce graduates with practical experience in their areas of specialization and yet with broad development perspectives is an increasing expectation of universities in Africa and in particular Colleges of Agriculture and related sciences. Universities need to design

innovative approaches to provide students with experiential learning through internship programmes, especially those linking them to communities to catalyze their meaningful participation and contribution to agricultural transformation projects and programs (Hawkins, 2010). Graduates have previously been criticised for lack of 'transferable' skills and inadequate knowledge and experience in working with rural smallholder farmers in Africa.

The development trajectories today require that universities pass out graduates who are skilled with appreciation of working with and engaging at community level as a foundation. However, several universities in sub-Saharan Africa have not fared well in these aspects both at undergraduate and graduate level training. Further, graduates from universities outside Africa often struggle with resource constraints facing both farmers and agricultural institutions in Africa, particularly when compared to northern contexts. The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), a network of 60 Universities in 25 countries in Africa has been implementing the Field Attachment Programme Award (FAPA) with a view to pilot-test approaches of dealing with this challenge. This article provides information on the design and implementation of the RUFORUM Field Attachment Program and highlights how the FAPA has readied students for the job market. Specifically, the article highlights the role of FAPA in producing practical oriented graduates with ability to serve communities.

The FAPA is a component of RUFORUM's Competitive Grants system. FAPA was designed as a graduate student internship programme to link thesis research findings and recommendations to application and use at community level. A key objective of the programme is to provide students with opportunities for sharing their research findings and knowledge with stakeholders, particularly farmers, and to obtain opportunity to engage with potential employers (RUFORUM, 2014). The broader Competitive Grants Scheme is designed to help to build understanding of, and commitment to, solving the problems of rural communities (RUFORUM, 2015). The FAPA grant mechanism came out of a desire to address the challenges graduates face in transition between education and employment. The FAPA grants are also intended to provide opportunity for dissemination of research outputs with a view to inform policy development and sharpen students' skills in working with communities to use the research outputs that have been generated (Ntwali *et al.*, 2012).

Approach

A purposive systematic review was undertaken to gather relevant information. The approach was both a qualitative review of FAPA proposals and project reports and quantitative analysis of selected information available on FAPA. We obtained data through review of documents and from individual's testimonies. Data were obtained from on-line information in the RUFORUM Information Management System (RIMS). The tool is an online platform used for submitting research proposals online, scholarship applications, and progress reports. Data were also obtained from reports submitted by awardees to the Secretariat mainly through email. In total, 71 student reports and stories were reviewed. Data were also collected from individual testimonies of FAPA awardees. Quantitative data were summarized in MS Excel while qualitative data were grouped into emerging themes using computer-assisted qualitative analysis applications.

Field Attachment Programme Award granting process

The management of FAPAs at the Secretariat is guided by the Competitive Grants System Programme Manual (RUFORUM, 2015). The schematic in Figure 1 presents steps in processing a FAPA. A call is prepared and circulated widely usually using virtual platforms. The FAPA calls are normally open throughout the year and this is intended to enable potential applicants to prepare and submit at any point whenever they feel that they fulfil the conditions and requirements. Circulation of calls is done through the RUFORUM website, RUFORUM weekly and blog to ensure that the information reaches as many member university faculty members and students as possible. RUFORUM Secretariat also uses its scheduled meetings with respective organs including Deans and Principals Committee, and the Annual General Meeting (AGM) held twice and once a year, respectively, to share information about FAPA. Submission of applications to the FAPA call is done through the RIMS. When applications are received at the Secretariat they are automatically acknowledged and subsequently the Secretariat carries out compliance and administrative reviews based on established criteria. Each proposal is provided with a unique identifying number to provide anonymity on the files sent to reviewers. Each compliant proposal is sent to two reviewers. The reviewer responses are compiled and analyzed and the best proposals are awarded by the RUFORUM Technical Committee. Where necessary the Secretariat works with the applicant to improve their write up and focus of the FAPA work. Ideally each FAPA awardee continues to work with the university supervisor/mentee and a designated contact person at the hosting institution. During/after the implementation of the FAPA the student is expected to submit reports to the Secretariat through RIMS or emails. The students are also expected to write a 1-2 page article on their personal experiences for sharing with the network through the RUFORUM website, social media and repository.

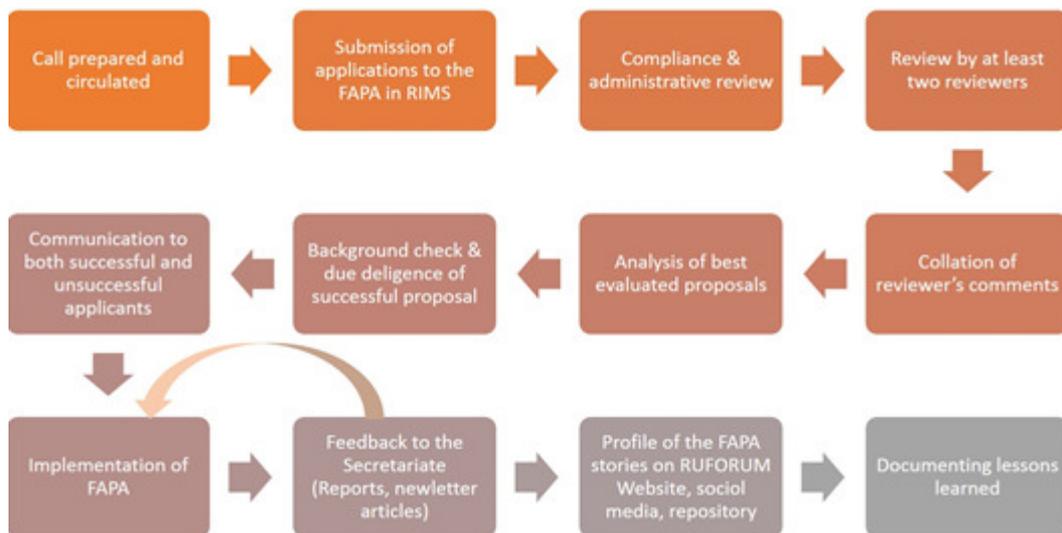


Figure 1. Schematic presentation of FAPA application, review, implementation and reporting process

FAPA over the past years

For the period 2010 - 2015, RUFORUM under the CGS has awarded 148 FAPAs to its graduate students (Fig. 1). There was a steep increase in awards from 2014 – 2015 due to participation of students funded under the Intra-ACP Mobility Projects being implemented at various universities in Africa (Table 1).

Lessons from completed FAPAs based on graduate students and on the community feedback

The analysis of reports and other information sources revealed that the RUFORUM FAPA has enhanced student skills and capacity to engage with communities and particularly opportunity to share findings. The students reported that they acquired experience in working with communities. Our analysis reveals that there are a number of skills and experiences that have been gained by the grantees. These are summarized in Figure 2 and are grouped into skills and mind sets. The skills acquired address three important aspects that are increasingly becoming very critical in the labor market; the psychomotor domain, the affective domain, and the cognitive domain. Students reported that farmers were very impressed that the RUFORUM field attachment enabled students to go back to the communities where their research was undertaken to share and disseminate their research findings. We believe this to be so because often researchers collect data from communities/respondents, but rarely report back on the findings and follow-ups. In terms of mindset components, also referred to as psychological factors, or motivational or non-cognitive factors, the findings indicate that students gained courage, vision, integrity, resilience and inclusiveness (Fig. 3) from implementing the FAPA.

Table 1. Students awarded grants under the Field Attachment Program Award (FAPA) 2015

	Students		
	Male	Female	Total
Graduate Research Grant Students	9	8	17
Intra-ACP Program			
Mobility to Enhance Training of Engineering Graduates in Africa (METEGA)	22	7	29
Sharing Capacity to Build Capacity for Quality Graduate Training in Agriculture in African Universities (SHARE)	17	7	24
Inter-University Cooperation to Train Crop Scientists for African Agriculture (CSAA)	23	3	26
Total	71	25	96

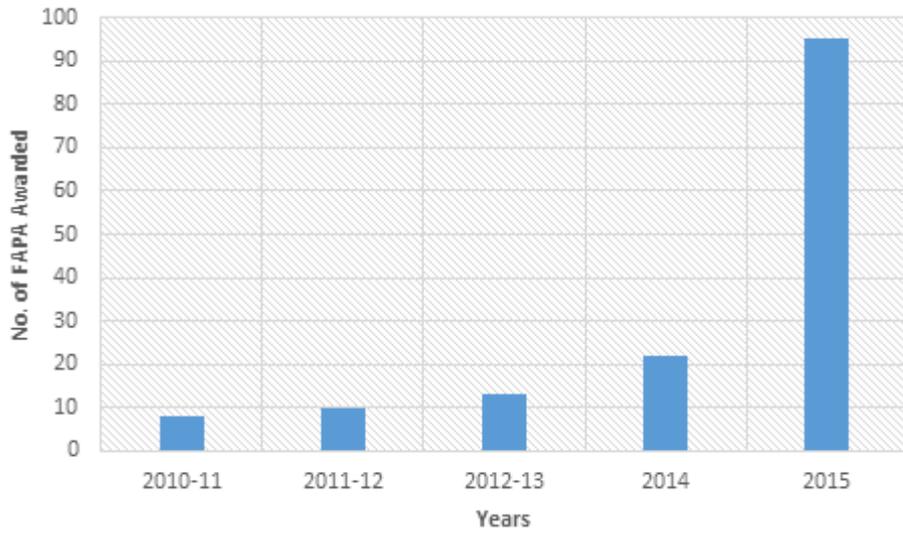


Figure 2. Number of FAPA grantees by year from 2010-2015

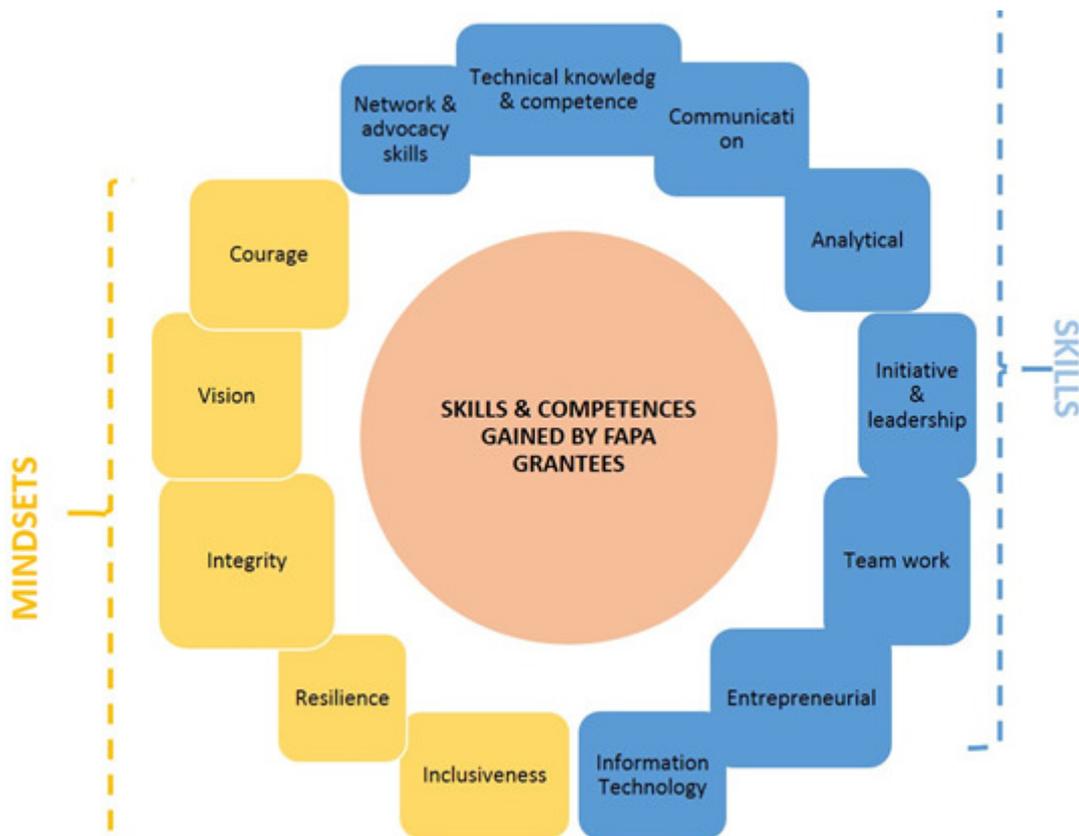


Figure 3. Skills and competences gained by FAPA grantees with direct benefit to the community

The importance of the attachments was expressed by both students and farmers, with students indicating that they got a chance to not only learn from farmers but to understand what farmers take into consideration when it comes to adoption of new knowledge and technologies. In one case in Uganda, the FAPA innovation led to a start of an organization that is still benefiting the community. Below is an account of a successful enterprise established by one of the awardees.

“I graduated with a Master’s degree in Agricultural Extension Education (MSc. AEE) from Makerere University. I set up and registered an agro based company as a result of the need for innovative ways to solving the multifaceted challenges of farming communities that often limit the viability and commercialization of small-scale agriculture. The FAPA award helped me to operationalize the services my organization offers to the community after realizing that entrepreneurial extension services have become important due to low funding for extension, high unemployment of graduates and the inherent challenges of public service delivery related to poor accountability and slow response. This I did by establishing an agriculture development center at the sub-county. The organisation strikes a balance between profit maximization and social impact so as to stay relevant to the needs of majority of smallholder farmers. To date through the seed support of the FAPA, the organization still offers a wide range of services including strategic business planning and management/ leadership; farm start-up/turn-key projects; facilitation of linkages to input/produce markets and agricultural finance; facilitation of farmer organization and institutional development; agricultural land brokerage; and extension, training, research & consultancy.”

Discussions

Field attachment programmes are not new in the training process of graduates especially at undergraduate level (Milton *et al.*, 2012). The FAPA is an extrapolation of the internships and field attachments to ground practical skills at the postgraduate level. Previously, the assumption has been that research gives practical exposure to graduate students but the reality has been that the labor market has tended to demand greater practical skills from graduate scholars. The FAPAs have provided students and their supervisors an opportunity to apply theoretical and research knowledge gained at the university to real-life situations, and to learn practical approaches already in the market place relevant to their areas of specialization. Further the FAPAs have enhanced direct interaction of students with farmers and organizations, thus strengthening university- community engagement. It should be noted that most employers require that potential employees have some form of experience before hiring employees; students with internship experience are more likely to be hired after university than those lacking internship experience. Indeed Adomâent *et al.* (2014) found that with the increasingly changing and multicultural working environment, graduate field attachments enable students acquire interdisciplinary and trans-disciplinary competencies. Additionally, such students are more likely to engage in profitable enterprises and to effectively participate in rural development. This is in line with Moock (2011) who reported that sustained

capacity building in Africa today requires flexible, low cost approaches that stimulate not only conventional skills but also improvisational, experimental, management, and leadership talent. According to the student reports and testimonies the FAPA provides this kind of opportunity. Indeed the RUFORUM CGS (RUFORUM, 2015) acknowledges that the field attachment programme award is an innovative strategy aimed at encouraging graduate students at Master's level to follow through with the dissemination of their research and to enable them link more closely with the agencies working in the area where their research was undertaken. In order to positively influence real development processes, students have been found to gain cognitive experience by reflecting on field activities and processes during field attachment (Salvaratnam, 2013; Dweck *et al.*, 2014).

Conclusion and recommendations

The FAPA implementation has evolved over years and is now adapted to enhance the capacity of graduates and facilitate transition to the work place. The FAPA process provides a mechanism of how universities can better prepare graduates for employment. Interest in FAPA has increased over the years as demonstrated in the increased numbers of applications. FAPA has benefited students, faculty and the communities they work in. In light of this, it is recommended that universities in Africa institutionalize the FAPA within contexts of priority research and geographical areas of operation in order to concentrate anticipated and increasingly needed impact of universities service to communities. It is desirable that the FAPA be designed and incorporated into training curriculum particularly at the postgraduate level.

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