

COMMENTARY

**PUBLIC-PRIVATE PARTNERSHIP
FOR RESPONSIVE EXTENSION EDUCATION:
THE CASE OF SAFE AND UCC IN GHANA**

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ABSTRACT

Developing nations in Africa are not shielded from the pressures of a globalized competitive agricultural marketplace. With an appreciable bulk of her people deriving livelihoods from diverse agricultural enterprises, these nations must respond to important contemporary issues shaping global agriculture. Farmers from such nations, including Ghana, will be able to improve their participation in the competitive local, regional and global agricultural marketplace if the appropriate agricultural technologies and extension information support are available. To achieve this, a new breed of agricultural extension graduates who can respond to current and emerging challenges in agriculture and interface effectively with farmers must be produced through responsive extension education and training. While extension education can produce effective extensionists to hasten agricultural development, budgetary constraints make it difficult for most African governments to successfully and sustainably implement such educational programs. However, public-private partnership (PPP) initiatives offer a way out of this financial dilemma. Beginning in 1993, the Sasakawa Africa Fund for Extension Education (SAFE) worked with the University of Cape Coast (UCC) in Ghana to develop an innovative extension education program through a public private partnership. The program, comprising a BSc. and Diploma components, was designed to respond to the myriad of challenges facing higher agricultural extension education in Ghana. A key practical feature of the curricula is the “Supervised Enterprise Projects” (SEPS), which enable students to work with relevant stakeholders to identify and tackle agricultural problems in farming communities through experiential extension approaches and action research. The SAFE-UCC initiative fulfils important education goals such as: expanding and improving access; ensuring quality and relevance; ensuring funding and mobilizing resources for sustainability; building partnerships and linkages; and promoting international co-operation. The paper discusses the underlying conditions for a successful public private partnership in agricultural and extension education and sheds light on the impacts, lessons learned and challenges.

Key Words: public private partnership; agricultural extension education; agricultural development; impacts; Ghana.

INTRODUCTION

Developing nations in Africa are not shielded from the existing competition in a globalized agricultural marketplace. To survive and thrive in this marketplace, these agricultural nations must respond to important contemporary issues that are shaping global agriculture by implementing good agricultural policies that include responsive agricultural and extension education. Despite years of post-independence agricultural development project interventions, the uncompetitive nature of much of Africa's agriculture, except in the case of a few cash tree crops, remains a worrying issue.

In the 1990s it became clear that extension education in many developing nations in Africa needed revamping. For example, of sub-Saharan Africa's estimated 150,000 extension officers in the early 1990s, only about one in six had completed a BSc. degree or higher. About 70% possessed a certificate issued by an agricultural college of the Ministry of Agriculture while another 15% tended to hold a higher diploma degree in agriculture usually issued by a university. Thus, about 85% of the extension workers of the era tended to begin their careers with a weak grasp of agricultural science and limited skills in extension communication.

While extension education can produce effective extensionists to hasten agricultural development, budgetary constraints make it difficult for most African governments to successfully and sustainably implement such educational programs. However, public-private partnership (PPP) initiatives offer a way out of this financial dilemma. The World Bank defines PPPs as typically medium to long term arrangements between the public and private sectors whereby some of the service obligations of the public sector are provided by the private sector, with clear agreement on shared objectives for delivery of public infrastructure and/ or public services [1].

SOME CHALLENGING ISSUES CONFRONTING sub-SAHARAN AFRICA'S AGRICULTURE

The following are some challenging issues confronting sub-Saharan Africa's agriculture:

1. **Global competitiveness and comparative advantages.**

Agriculture along the value chain must be viewed as a competitive business operating in local, national, regional and international markets. There are comparative advantages which can be exploited through well planned and implemented agricultural education and extension training (AEET) systems.

2. **Food safety, food standards and the need for compliance**

In a globalised competitive agricultural marketplace there are food standards that must be complied with. Food standards allow everyone involved in producing, distributing or selling food to be guided by a set of rules that ensure a consistent quality and build consumers' confidence in what they buy and use as food. Standards also allow businesses to know the set of quality and other requirements needed to be satisfied to enter markets. There are punitive measures associated

with non-compliance with standards, but a well planned and implemented AEET system will help keep all informed and compliant.

3. Value chain approach to agricultural education and training

Today, market-oriented agriculture teaches dictates that consumer demands must be foremost on our minds before we embark on agricultural production. Attention must be paid to all issues related to inputs, production, processing and marketing that take food from “farm to fork” or “from farm to table” in the form consumers want. Also of key concern is value addition along the value chain. A good AEET system addresses this.

4. Climate change and its implications for agricultural development

Climatic conditions affect both agriculture and fisheries. It is important to understand and plan appropriate responses to changes in climate if agriculture is not to be adversely affected. These responses may be in the application of new crop and animal varieties and breeds as well as other technologies or innovations. Again, a good AEET system of education will help us keep abreast on this challenge.

5. Environmental protection and sustainability

Agriculture must be sustainably practiced. This means the land, water and other natural resources used in agricultural production should be sustainably managed in such a way that the environment remains healthy to satisfy the food security needs of both present and future generations. A good AEET system will provide the knowledge and skills needed to manage this.

6. Venture capital, loans and credit challenges

Sourcing for venture capital, loans or credit for agricultural purposes become difficult because of risks and uncertainties posed by the agricultural sector. However, these risks are reduced when competent people are operating along the agricultural value chain and managing the system. A good AEET system not only produces competent people, but also provides information on appropriate sources of agricultural financing and how to successfully manage such financial resources.

7. Information communication technology and agriculture

The application of information communication technology is increasing in importance as agricultural industries battle to get competitive advantages. Information and Communications Technology (ICT) use in agriculture must therefore be addressed by agricultural education and training to enable actors in the system take full advantage of the available information and communication opportunities it offers for such important functions as marketing.

THE AGRICULTURAL EDUCATION AND EXTENSION RESPONSE

For sub-Saharan nations' economies, the challenge is to lift up the large populations involved in agriculture to make them competitive players in today's agricultural marketplace. Small and medium-scale farmers will be able to improve their participation in the sector if the appropriate agricultural technologies and extension information support are provided through responsive extension education and training. A new breed of agricultural extension graduates who can respond to the issues and challenges in agriculture outlined above must be available. These extension officers must be:

- Problem solvers and systems thinkers
- Highly motivated individuals who can take initiatives
- Innovative, market-oriented and entrepreneurial in their outlook and thinking
- Experientially trained—practical, hands-on people
- Good communicators with excellent people skills
- Lifelong learners
- Good leaders with positive values and influence
- Committed to environmental protection and sustainable production.

GHANA'S AGRICULTURAL EXTENSION EDUCATION CHALLENGE

The abysmal state of agricultural extension education and training observed in many countries did not occur by accident. In the case of Ghana it was the result of neglect, poor education policies and lack of understanding and priority setting in the agricultural development agenda.

The importance of agriculture as a subject for national development was underscored shortly after political independence by introducing agriculture as an academic subject into the curriculum at all stages of education over time. However, the 1990s and early 2000s saw the decline of formal agricultural education at the basic, secondary and tertiary levels. At the basic and secondary levels, agriculture was discontinued as a teaching subject and fused with science to create a new subject called integrated science. Kwarteng has noted that this significantly reduced the content and scope of agriculture in the syllabus to about 10% [2].

At the tertiary level, the teaching and learning of agriculture is beset with the lack of adequate facilities for the acquisition of practical skills. Thus the curriculum is very theoretical and tilted towards knowledge acquisition to satisfy the cognitive domain, but skill acquisition in the psychomotor domain is found greatly wanting. Negative attitudes towards the subject therefore tend to be built into students and the affective domain of learning is negatively impacted. Agricultural Technical and Vocational Education and Training (ATVET) is offered by some private institutions and also the Ministry of Food and Agriculture (MoFA) through the Ministry's five Agricultural Colleges and three Farm Institutes. However, there are challenges. A survey carried out in 2014 by Engineers Without Borders showed that the problems militating against the effective delivery of ATVET in these institutions include; inadequate and outdated infrastructural

facilities, poor equipment, inadequate numbers of well-trained trainers with the required pedagogical and skills, poorly motivated training staff, non-responsive curricula that are not demand-driven, poor vision of market orientation, gender insensitivity, and very poor funding support of programs [3]. The result is that graduates from ATVET institutions do not fully satisfy the knowledge, skills and competency requirements of industry.

THE SAFE-UCC PUBLIC PRIVATE PARTNERSHIP

The traditional role of the government as the primary infrastructure and public service provider is gradually being supplemented with private sector expertise and financing. The partnership between Sasakawa Africa Association (SAA) and the University of Cape Coast (UCC) is a good example. Sasakawa Africa Association is an International Non-Governmental Organization (NGO) founded in 1986 by the late Japanese philanthropist Ryoichi Sasakawa, the late Norman E. Borlaug, Nobel Peace Laureate and former USA President, Jimmy Carter. Sasakawa Africa Association was established to support the efforts by sub-Saharan African governments towards achieving food security and improving the livelihoods of smallholder farmers. Towards this end, SAA's efforts center around bringing science-based crop productivity enhancing technologies to smallholder farmers, increasing their incomes through value adding processes, and linking them to markets. Sasakawa Africa Association operates under the name Sasakawa Global 2000 (SG2000). The first Sasakawa Global 2000 agricultural project was launched in 1986 with the MoFA in Ghana.

From 1988, when it became apparent that programs to provide responsive extension training for mid-career agricultural extension staff were not immediately available, the SAA Board of Directors began looking for ways to revitalize extension education in Ghana. After considering and abandoning options which included an African Scholarship Program that sponsored students for degrees in already existing programs in other universities, SAA launched the Sasakawa Africa Fund for Extension Education (SAFE) initiative for the purpose of developing and implementing an innovative responsive extension education program in Africa.

The consensus after discussions was that there was a need for a special program that would balance theory and practice and improve the knowledge, skills, attitudes and overall professional competencies of mid-career extension staff upon graduation. The program was aimed primarily at developing the competencies of mid-career agricultural extension staff of the MoFA to make them responsive to the ever changing world of the farmers they work with.

Based on the above consensus, the MoFA, SAA and Winrock International (USA) approached two universities to jointly develop and implement a responsive program for mid-career extension staff of MoFA who possessed academic qualifications at the diploma or certificate levels. The two universities turned down the request with the explanation that they did not want to change their existing programs or develop new ones and wanted to maintain academic rigor by not being flexible enough to modify their

admissions criteria to take into account the substantial on-the-job experience of the prospective candidates in assessing their credentials for admission. Finally, SAA, MoFA and Winrock approached UCC with the same request. University of Cape Coast was flexible enough to consider and accept to develop and implement a responsive, innovative agricultural extension program.

With a PPP understanding in place, SAA began in 1993 to work with UCC in Ghana and extension specialists from Winrock International (USA) to develop an innovative extension education program for mid-career extension workers. Naibakelao and Zinnah have noted that the goals of the program were to:

- open doors to leadership positions for mid-career extension workers through advanced training,
- link extension curricula more closely to the real world of African farmers, and
- help university faculty to broaden their perspectives by frequent contact with the rapid changes taking place in rural areas [4] .

The effort subsequently yielded a two-year BSc. Agricultural Extension degree program at UCC for diploma holders and a two-year diploma program in agricultural extension in 1999 at the Kwadaso Agricultural College (KAC) for certificate holders. The KAC program was affiliated with UCC. The understanding was that graduates from the Diploma program at KAC would be admitted into the BSc. program at UCC after working for some years in the field to continue for their BSc. degrees and above.

The SAFE-UCC Curricula

The curricula of both UCC and KAC are demand-driven and based on identified needs. The SAFE-UCC curricula development process at both UCC and KAC was cyclical and consisted of six main steps:

- A decision was made by the main stakeholders that change was necessary for training mid-career extension staff in the country;
- Informal discussions were held among the stakeholders to comprehend the need and clarify the vision for a responsive extension training program;
- Formal extension training needs assessment was conducted;
- A stakeholders' workshop was held to discuss the needs assessment report and other related issues in order to reach consensus about the structure and content of the curriculum;
- The curriculum was developed and reviewed by stakeholders; and
- A strong network of institutions and agencies committed to the training of agricultural extension staff was established to implement the curriculum.

The pluralistic, joint decision-making approach, which involved the stakeholders, was intended to:

- Ensure that the curriculum was responsive and relevant
- Facilitate local resource mobilization and management of the training program by stakeholders
- Give stakeholders, especially MoFA, the sense of ownership of the program.

Kwarteng and Okorley described a key feature of the SAFE curricula to be the “Supervised Enterprise Projects” (SEPs) [5]. The SEPs are six- to nine-month practical experiential field projects which enable students, together with their employers, their lecturers and farmers to identify peculiar problems facing farming communities. Students then develop relevant proposals which they implement with farmers in the communities to address the identified problems under the direct supervision of their lecturers and employers. Supervised Enterprise Projects provide unique and rare opportunities for academic staff to assess the relevance and effectiveness of their teaching and to identify other opportunities for learning from real life situations. They also provide a forum for bringing together students, employers, farming communities and the education institutions.

MEETING EDUCATIONAL POLICY CHALLENGES

To gauge the appropriateness and relevance of the SAFE-UCC curriculum in terms of satisfying policy directions, we examine it against the under-listed desirable policy components:

Expanding and improving access: The program sought to expand and improve access by making it possible for a wider and more varied group of qualified staff to participate in the program. Greater and wider nationwide enrolment of both males and females was encouraged and a remedial program was made available to help more people qualify to enter the program.

Ensuring quality and relevance: As indicated above, the curriculum of the UCC-SAFE BSc. Agricultural Extension program was designed to be experiential, demand-driven and based on identified needs.

Incorporating ICT for development and global competitiveness: A well-stocked computer centre was established to provide ICT support for the program. Exposure to information support through the provision of ICT improved program quality and competitiveness. Internet connectivity allowed access to websites hosting relevant and important information and facilitated communication among stakeholders.

Ensuring effective and efficient management and co-ordination: With several stakeholders involved, the program set up an effective and efficient management and coordination system to ensure the smooth running of the program. A management Board,

Department Board and a SEPs Committee were established to oversee the implementation of the program.

Ensuring monitoring, evaluation and quality assurance: Monitoring is an important aspect of program assessment. It enables stakeholders to know the extent to which programs are on course in good time to take remedial action if necessary. Evaluation on the other hand is needed to be able to make informed judgements about program outcomes. The SAFE-UCC program established a systematic monitoring and evaluation system that enabled objective measures of the state, quality and performance of the program to be collected and used for decision making aimed at improving the program.

Providing funding and mobilizing resources for sustainability: With the low level of Governmental funding for Agricultural Education and Training programs it was necessary to take steps to ensure the financial sustainability of the program. Inadequate budgetary support will always impact negatively on program facilities and quality. To ensure that funding was available for SEPs supervision, a sustainable internally generated funds (IGF) program was put in place in the form of a guest house and conference rental facility and restaurant.

Building partnerships and linkages: Partnerships and linkages including networking among stakeholders are important to create synergies and develop an integrated approach to agricultural education and training (AET). Linkages ensure continuity of product development to an acceptable quality and encourage joint development, implementation, monitoring and evaluation of curricula. By linking with MoFA, NGOs, Winrock International and other educational institutions, a very firm foundation was laid for sustainable success.

Promoting International co-operation: The quality of agricultural education and training can be improved through international co-operation. Fresh injections of ideas and new strategies for moving approved programs forward are benefits that accrue from international co-operation. Educational visits are exchanged to cross-pollinate and enrich programs.

SATISFYING DRIVERS (INGREDIENTS) FOR PPP SUCCESS

The National Council for Public-Private Partnerships proposes 7 keys or “best practices” to guide the planning and implementation of P3s [6]. We examine the SAFE-UCC initiative within the context of these 7 keys or “best practices” to gauge the extent of conformity:

1) Public sector champion:

During the planning and implementation of P3 there is the need for recognized public figures to serve as the spokespersons and advocates for the project and the use of a P3. Well-informed champions can play a critical role in minimizing misperceptions about the value to the public of an effectively developed P3 and also to lend credence to the effort. In the case of the SAFE-UCC initiative public sector support and advocacy was

received from the Vice Chancellor of the University, the Dean of the School of Agriculture, the Minister of Food and Agriculture and the Director of Extension.

2) Statutory environment:

There should be a statutory foundation for the implementation of each partnership. For the SAFE-UCC initiative, the statutory environment provided by the education sector was fertile ground for an unsolicited proposal from SAFE and MoFA. This was a positive catalyst for initiating an innovative educational program designed to respond to the abysmal state of extension education in Ghana at the time.

3) Public sector's organized structure:

An important requirement for P3s to succeed is the availability of a dedicated team for P3 projects or programs. This unit should be involved from conceptualization to negotiation, through final monitoring of the execution of the partnership. In the case of the SAFE-UCC initiative, the personnel and structure of the University and the School of Agriculture provided the necessary flexibility in terms of structure to enable the program to be implemented.

4) Detailed contract:

A P3 is a contractual relationship between the public and private sectors for the execution of a project or service. This contract should include a detailed description of the responsibilities, risks and benefits of both the public and private partners. Such an agreement will increase the probability of success of the partnership. Right at the outset, the SAFE-UCC initiative spelt out the roles of stakeholders. Under the arrangement, the University was to institute and implement a responsive curriculum with the help of experts, the MoFA was to release mid-career professionals to participate in the program and SAFE was to facilitate with funding and other required technical support.

5) Clearly defined revenue stream:

While the private partner may provide a portion or all of the funding for capital improvements, there must be an identifiable revenue stream sufficient to retire this investment and provide an acceptable rate of return over the term of the partnership. In the case of the SAFE-UCC initiative, all partners provided funding, some in kind and some in direct cash infusions. To ensure sustainability of funding, income generation from internally generated sources were put in place.

6) Stakeholder support:

A very important aspect of P3 is stakeholder support. This is necessary for long-term support for the project. This also has implications for program sustainability. To ensure total stakeholder support in the SAFE-UCC P3, all major stakeholders were involved in the curriculum development and implementation process. There was open, clear and candid communication with stakeholders to minimize potential misunderstanding. The students in the program have always been really enthusiastic, keen to learn and hard working in their studies. The lecturers in the program have shown the commitment to facilitation needed for the successful implementation of the program.

7) Partnership selection:

Partners for P3 must be carefully selected because of the required support and commitment required for success. The strong commitment of the leadership at UCC greatly contributed to the success of the program.

IMPACTS

The following have been some of the main impacts of the SAFE program:

- The SAFE program, began as a modest pilot program in Ghana in 1993, has expanded to 23 institutions in 9 countries by 2015. As at May 2015, 1,135 mid-career extension staff had benefited from the SAFE initiative in Ghana, including 1,066 graduates. It is worthy of note that 18% of the beneficiaries are females. Graduates of the programs now occupy higher positions of responsibility in the agricultural systems of their respective countries. They constitute a pool of true agents of change and are providing the needed leadership to move agriculture forward. A summary of statistics for both the University of Cape Coast and the Kwadaso Agricultural College are presented in Tables 1, 2 and 3.
- Lecturers associated with the SAFE programs now have greater exposure to the farming communities. The supervision of the students' field projects have provided them with the opportunity to interact with farmers and field extension workers.
- The practical component of the program has enriched curricula and provided invaluable opportunities for faculty and students to learn from real life situations and bring new benefits to farmers.
- The practical field orientation and demand-driven nature of the program have made teaching and learning more interactive.
- Female students have made visible impact with income generating projects in SEPs that have improved the women's welfare.
- There is a closer and better working relation between MoFA and UCC than before the establishment of the SAFE program.

CHALLENGES

The challenges encountered include:

- Limited accessibility of the current full-time residential programs, especially for women professionals who have many competing demands on their time.
- Low levels of female intake in the programs.
- Reorienting faculty members to embrace the program's philosophy and also low numbers of female faculty members.

- Funding for sustaining the students' off-campus Supervised Enterprise Projects (SEPs).

Lessons learned

The following are some of the lessons learned from the UCC-SAFE partnership:

- Employers of mid-career students, development organizations and resource persons from outside universities and colleges can influence the design of the curricula.
- Universities can actually respond to well-articulated demands – contrary to the “ivory tower” stigma that characterizes institutions of higher learning.
- Mid-career extension professionals represent under-utilized sources of information and catalysts for rural development.
- Field experience can enrich curricula and teaching at universities and colleges, by providing unique opportunities for university staff to learn from real life situations.

CONCLUSION

The UCC-SAFE public private partnership has propelled the development of agricultural and extension education in Ghana forward. The evidence is visible, tangible and measurable. Important ingredients for success have included a viable partnership between two organizations that are concerned about the same problems and committed to a shared vision and mission as well as a strong and committed leadership with a desire to attain the vision. An important factor is the flexibility shown by UCC in the design of the curriculum and the establishment of admission criteria into the program. There's the need to continue to ensure that the curriculum remains responsive and that it is backed by a staff capacity development program. Continuous funding is necessary to sustain program quality and this has been ingeniously achieved by UCC through efforts to generate funds internally. The experience of the UCC-SAFE partnership has clearly indicated that PPP works and that the interest, enthusiasm, and commitment of stakeholders can be assured and sustained if they are part of the decision-making process.

TABLE 1. Statistics at University of Cape Coast, Ghana

<i>Intake</i>	<i>Year</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Remarks</i>
1	1994/95	19	5	24	graduated in 1997
2	1995/96	23	4	27	graduated in 1998
3	1996/97	17	8	25	graduated in 1999
4	1997/98	20	5	25	graduated in 2000
5	1998/99	41	11	52	graduated in 2001
6	2000/01	22	3	25	graduated in 2002
7	2001/02	26	1	27	graduated in 2003
8	2002/03	24	7	31	graduated in 2004
9	2003/04	25	6	31	graduated in 2005
10	2004/05	18	7	25	graduated in 2006
11	2005/06	19	5	24	graduated in 2007
12	2006/07	19	10	29	graduated in 2008
13	2007/08	19	7	26	graduated in 2009
14	2008/09	20	6	26	graduated in 2010
15	2009/10	18	8	26	graduated in 2011
16	2010/11	20	5	25	graduated in 2012
17	2011/12	25	3	28	graduated in 2013
18	2012/13	23	6	29	graduated in 2014
19	2013/14	21	3	24	will graduate in 2015
20	2014/15	19	2	21	will graduate in 2016
TOTAL		438	112	550	

TABLE 2. Student Statistics at Kwadaso Agricultural College, Ghana

<i>Intake</i>	<i>Year</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Remarks</i>
1	1999/00	21	10	31	
2	2000/01	28	7	35	graduated 2002
3	2001/02	29	3	32	graduated 2003
4	2002/03	33	7	40	graduated 2004
5	2003/04	35	3	38	graduated 2005
6	2004/05	39	11	50	graduated 2006
7	2005/06	33	10	43	graduated 2007
8	2006/07	36	8	44	graduated 2008
9	2007/08	31	4	35	graduated 2009
10	2008/09	50	10	60	graduated 2010
11	2009/10	50	4	54	graduated 2011
12	2010/11	45	6	51	graduated 2012
13	2011/12	22	2	24	graduated 2013
14	2012/13	21	3	24	graduated 2014
15	2013/14	10	4	14	will graduate in 2015
16	2014/15	8	2	10	will graduate in 2016
TOTAL		491	94	585	

TABLE 3. Statistics of Students in Ghana from 1993 to 2015 (as of May 2015)

SAFE Program Universities/Colleges	Graduated			Current			Total
	Male	Female	Total	Male	Female	Total	
University of Cape Coast, (B.Sc.)	398	107	505	40	5	45	550
Kwadaso Agricultural College, (Diploma)	473	88	561	18	6	24	585
SUB-TOTAL	871	195	1,066	58	11	69	1,135

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