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Research Application Summary

The role of agribusiness incubators and start-up Hubs in the creation of innovative agri-entrepreneurial mindset among undergraduate students: Updates from the StartUP Villa UCC_AEE Case study

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Abstract

StartUP Villa UCC AEE is an innovation villa that seeks to connect agro-technology and agribusiness models that can serve as case studies and learning centers for research, learning and industry. As an agriculture-based innovation hub, this center seeks to identify, train and mentor talented undergraduates and graduate students who have entrepreneurial and innovative mindsets that can create scalable and sustainable business models. The unique component of this hub is the varied focus and combination involving farmer-based organizations, community groups and SMEs to provide business solutions to challenges faced by them from the onset. An action research and prototyping of agro-processing technologies by selected students is important component of this innovation. Whiles the StartUP villa is located on the campus of the University of Cape Coast, rural information centers were expected to be established within communities whereby business models and innovations emanate from students, and later on by selected youth, will be tested. The case studies are to serve as learning tools for the community of practice that will engage in these projects. Scalability of the tested business models is core to the vision and mission of the StartUP Villa UCC-A EE hub. Preliminary results of the original vision of the StartUP Villa is presented in this paper.

Keywords: Agribusiness, Agro-processing business incubation hub, Undergraduates, StartHub

Résumé

StartUP Villa UCC AEE est une villa d'innovation qui vise à connecter des modèles agro-technologiques et agro-industriels pouvant servir d'études de cas et de centres d'apprentissage pour la recherche, l'apprentissage et l'industrie. En tant que centre d'innovation basé sur l'agriculture, ce centre a pour but d' identifier, former et encadrer des étudiants talentueux de premier cycle et des cycles supérieurs qui ont un esprit d'entrepreneuriat et d'innovation pouvant créer des modèles commerciaux évolutifs et durables. La composante unique de ce hub est l'orientation variée et la combinaison impliquant des organisations d'agriculteurs, des groupes communautaires et des PME pour fournir des solutions commerciales aux défis auxquels ils sont confrontés dès le départ. Une recherche-action et un prototypage de technologies agro-industrielles par des étudiants sélectionnés constituent une composante importante de cette innovation. Alors que la villa StartUP est située sur le campus de l'Université de Cape Coast, des centres d'information ruraux devaient être créés au sein des communautés, où les modèles commerciaux et les innovations émanant des étudiants, puis de jeunes sélectionnés, seraient testés. Les études de cas doivent servir d'outils d'apprentissage pour la communauté de pratique qui s'engagera dans ces projets. L'évolutivité des modèles commerciaux

testés est au cœur de la vision et de la mission du hub StartUP Villa UCC-A EE. Les résultats préliminaires de la vision originale de la StartUP Villa sont présentés dans cet article

Mots clés : Agro-alimentaire, Pôle d'incubation d'entreprises agro-industrielles, Premier cycle, StartHub

Introduction

The Agribusiness incubation hub that the University of Cape Coast, Department of Agricultural Economics and Extension (UCC-DAEE) established involved farmers, value chain enablers and supporters right from the onset. Our business model seeks to establish a six-tier spectrum of agribusiness and technological innovation hub that has physical presence and structure located at the University of Cape Coast Campus, specifically, on a designated space owned by DAEE. The hub is expected to have physical presence in selected communities whereby undergraduate and graduate students will test, initiate their business idea/model, and or test their prototype solution. Farmer based organizations and community groups are to form integrated part of the testing/incubation period of the solution to be provided by the student entrepreneurs/innovators. Notable solution to be addressed include postharvest and processing of farm products, agri-marketing, development of Apps and related technological solutions, and agriculture financing, among others. The StartUP Villa has already made business, marketing and sales linkages with potential customers and clients across Cape Coast and its strategic institutions such as the Cape Coast Technical University, medical and various educational and hospitality industry.

Already, agribusiness undergraduate students have pitched their products and business ideas, and they have began to receive feedback which is helping them to transform their ideas into business plans for testing. The approach for selection of the business ideas is embedded into a compulsory final year student's project entitled 'Supervised Agribusiness Projects' SAPs. This approach deviates from initial proposed method whereby an open call and competition for business proposal and concepts was to be initiated at the last quarter of 2018. Submitted proposals were to be screened to 50 students who would emerge with innovative ideas/proposals, and that meet a set of criteria to be developed. Each student is expected to provide an agriculture technology and or agribusiness related solution to varied issues that affect farmers within nearby communities. Exceptions were to be given to students who are familiar with agriculture-based solution that cuts across agro-technology and business issues. Innovative business models that have potential to be scaled up, and as well be replicated, were core to the assessment and selection criteria.

The overall objective is to develop, initiate, establish, run and operate a start-up agribusiness incubator, as well as agribusiness hub that will serve as a linkage between practice and theory for undergraduate students, community youth and technology-based experts such as hackathons and agro-processors. Specifically, the hub will have the following outcome / deliverables:

- At least 30 students trained in agri-entrepreneurship skills and knowledge by the end of year two
- At least 10 agri-business enterprises set up as either partnership or sole proprietorship firms by the end of year two
- At least 50 participants not selected but have viable agribusiness/processing ideas linked to institutions/other impact hubs institution to improve on their business ideas and models
- At least 100 small holder farmers (10 FBOs) from selected communities organized/partnered to serve as source for testing business models/ processing technology innovations
- An ICT platform and rural information center established to link at least 100 SMEs and 50 Farmer

Groups/FBOs within communities and surrounding areas where the business model startups will be tested/scaled up

- At least 40% of project participants provides a conduit for the transfer of appropriate technology and new business models to farmers and SMEs

Figure 1 presents the design conceptual framework.

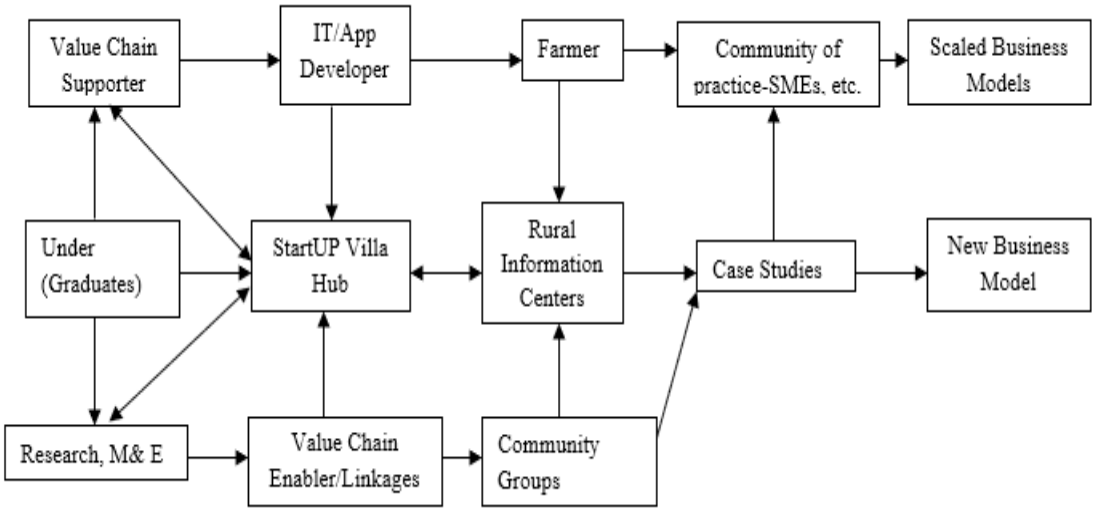

Fig 1. Conceptual Framework/Operational Model of StartUP Villa UCC AEE

The StartHub has two primary activities to be carried out by selected students/youth groups, i.e., action research and or development of prototypes for agro-processing and value-added products. This may include development of Apps/platforms and rural information centers that will link the selected students and FBOs/Farmer groups to share, learn and refine the business models/prototypes to be initiated. The success or otherwise of these products will serve as case studies for teaching, research and learning. Lessons learnt will further help develop and or upgrade new business models for scaleup/ commercialization.

The Business Model. The business model is based on a community of practice, as well as integrated with entrepreneurial and technological acumen. By community of practice, the hub will constitute a physical structure that comprise an incubation and innovation space, quasi-offices, experimental laboratories, greenhouse and open space experimental fields, conference rooms, shared spaces, minimarket, brainstorming and facilitation spaces. A flora and fauna sanctuary garden will be provided to serve as meditative space. The entrepreneurial and technological acumen will encompass the linkages with and to community based centres, related agri-hubs as well as innovation spaces such as the many technological and entrepreneurial hubs, i.e., Accra hub, iSpace, Meltwater, Kumasi hub, Ashesi Innovation Centre, FarmerLine Ghana, SMEs, Processing/Fabricators, NGOs, Government Ministries, local Government Authorities, etc.), within and across the Central region as a start. A scale up collaboration will be developed for other regions that the University of Cape Coast has its satellite Campuses and community development initiatives. Sister collaborations would be sourced from international and research institutions such as the Wageningen Startup Hub, University of Abomey Calavi Startup Village, Botswana Hub, The Philadelphia, Rutgers, Stanford, and MIT Innovation spaces, among others. These collaborations will serve as initiatives that will create joint ventures based on the competencies each of the partners/actors have. The Innovation and StartHub centre intends to create a community of practices whereby the new entrepreneurs and business models developed will be pitched and benched marked with similarly developed/created products and services from the

collaborative hubs within Africa, and with our international partners.

Interdisciplinary teams will be encouraged to create innovative businesses and ventures that will be taken through a robust and rigorous processes before being selected to enroll in the incubation processes. A window of opportunity would also be given to initiatives that show promise but might be disqualified due to unforeseen circumstances.

Methodology

The community based centres, farms, businesses, investors, etc. are to serve as farm fields, and practicum/action research arena. The business and marketing, as well as prototyping and scale of innovations will thus be initiated either at the agri-hub centre on the UCC campus, or at the various community spaces across the operational jurisdiction of the centre.

The assumptions. The siting of the incubator hub is to link theory, practice, create entrepreneurial acumen among young graduates, as well as raise a new level of Agripreneurship for the youth. Students will engage in a process and content research, and collaborations with internal and external agribusiness related stakeholders. Student participants are expected to discuss and test the efficacy and efficiency of their business models, and or innovations and technological ideas with a selected F BO or SME. The community where the agriculture value chain they intend to enhance, via their business model and or innovative prototypes will also be engaged by each student entrepreneur/ innovator or teams.

The Supervised Agribusiness Projects (SAPs) is compulsory for UCC final year undergraduate Agribusiness students. Thus these students serve as the primary recruitment point for the StartUP Hub. Furthermore, the graduates at UCC with viable business plans will continue to be mentored, coached and linked to various supporting organizations. These will continue to be tracked even after school.

On the part of coaches, the Department of Agricultural Economics and Extension and the Business School at UCC have seasoned experts who have been informed of the coming StartUP hub. Practitioners from industry in and around Cape Coast have also been scanned for their possible involvement in the coaching and mentoring session, even after graduation of the mentees. We presume some graduates may relocate with their businesses to other parts of the country after graduation. The external coaches and mentors thus will help in providing the needed support to them as well. We intend to create a network system that encourages graduates whose businesses succeed to share and provide the needed support to others that may need support to improve their businesses as a form of peer-to-peer mentorship.

Progress to date

Location of the Centre. The centre was to have been located between the Sasakawa centre, the main university library, the senior members' clubhouse and the 'Science' bound road within the university campus. The facility was to have state of the arts internet and telecommunication facility that will serve the off-campus field centres. A community information center was expected to serve as a link where information, knowledge and update/outcomes will be shared with all partners. The initial assumption has not been realized, due to the fact that management disapproval of the original location and this led to the relocation of the StartUP villa to the School 's technology village and teaching and research farm.

Students Training in Entrepreneurship and Agribusiness Setup. Seventy-seven students have so far

been trained, coached and mentored in agribusiness technical processes and entrepreneurial acumen. Forty students comprised the first batch, and these engaged in four primary agribusiness enterprises (Table l). All students graduated in September, 2019. Three out of the forty graduates expressed their interest to engage in the scale up of their tested SAPs. The remaining 37 students comprised the final year cohort of the RECAP initiative engaged in about eleven value added businesses (Table 2). Feedback and reviews from the first batch enabled the team to revise its strategy.

In the second year however, students have been working on value added processing as their innovative business models. Thus, businesses are located in and around the university campus. A vegetable team is implementing their business model at a village (Ampeyi), where Ko-Sa Beach Resort, a Dutch family business is hosting them to transfer their knowledge and experiences to interested youth in the predominantly fishing community.

Table 1. Phase One Enterprises and Updates

Enterprise Groups	Number of Students	Remarks
Mushroom	11	All enterprises, except the mushroom groups, produced and made profit during the first year. No student enterprise was scaled up About 20% of graduates expressed interest to scale up their tested business plans after the compulsory National Service
Meat Processing	4	
Poultry Production	22	
Vegetable Production	3	
Number of Enterprises:	40	

Table 2. Year One Group of pilot enterprises (2018-2019 Academic year)

Enterprise Group/ Name of Business	Type of product	Number of Males	Number of Females	Total
ZONAL Foods	Processing of ripped plantain powder	3	0	3
VALLETTA Food Enterprise	Fortification of cereal porridge with mushroom	2		3
QUAM Enterprise	Production and packaging of chili pepper powder	3		3
JEVA Juice	Production of fresh fruit juice		2	3
Panoma meat	Processing of meat into various products	2	2	4
PENBIL	Production and processing of mushrooms	3		4
RACO Veggies	Production and marketing of organic vegetables	2	1	3
NITLOTH Veggies	Production and marketing of organic vegetables	2	1	3
GASS Broilers	Production and marketing of broilers	4	0	4
BFJ Farms	Production and marketing of broilers	3	0	3
DASA Farms	Production and marketing of broilers	4		4
Total		29	8	37

Changes in the Business Model. Whilst two streams of implementation of the call for business ideas have been reached, it is noteworthy that the business model initially proposed by the team has gone through extensive modifications. These modifications include concentration of business ideas on final year agribusiness undergraduate students who have to compulsorily participate in the SAPS organized at DAEE. Students' entrepreneurs still get coaching, mentoring and technical guidance from experts within and outside the University of Cape Coast enclave. Successful entrepreneurs continue to visit, assess and backstop on their preferred students businesses either being prototyped or tested. The StartUP Villa is not permanently located at the DAEE unlike it was initially planned. Structures such

as organic vegetable farm, mushroom house, broiler houses established at the Technology Village or Teaching and Research farm of the School of Agriculture.

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