





SOKOINE UNIVERSITY OF AGRICULTURE



JOB MARKET SURVEYS, TRAINING NEEDS ASSESSMENT AND TRACER STUDIES FOR SUA UNDERGRADUATE PROGRAMMES



SUMMARY OF FINAL REPORTS

PANTIL ITCB Series No. 1

JUNE 2008

PANTIL

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Programme for Agricultural and Natural Resources Transformation for Improved Livelihoods

SOKOINE UNIVERSITY OF AGRICULTURE



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EXECUTIVE SUMMARY

Sokoine University of Agriculture (SUA) through the FOCAL (Future Opportunities and Challenges in Agricultural Learning) Programme in 2005 commissioned studies to survey job markets, assess training needs and conduct tracer studies in relation to the current and future employment opportunities. The aim was to provide SUA with evidence of the required labour market demands hence training needs in terms of methods, contents and skills required. In order to facilitate the exercise, thirteen degree programmes were grouped into five agricultural and natural resources fields (clusters). Four firms were assigned consultancy works in the five clusters. These firms were: i) K-Rep Advisory Services (Cluster No. 1), ii) Agrisystems (EA) Ltd (Cluster No. 2), iii) Development Associates Ltd (Cluster No. 3 & 4) and iv) Afrozone Ltd (Clusters No 5).

In order to implement the assignments most effectively, the consulting firms were given Terms of Reference (ToR). Data were collected through survey of employers, graduates, assessment of teaching methods and learning environment at SUA and review of key publications, policies etc. Results of the analyses were presented in graphical, tabular and textual formats for easy reading and comprehension. The main crosscutting issues on training needs and current employment status of SUA graduates are summaries as follows;

Graduate employability

The surveys results show that about 55% graduates had secured jobs. Of these, nearly half were employed by the government and quasigovernment departments with few engaged by private sectors. Very small portion (2%) of graduates had employed themselves. The level of employment differed from one degree programme to another. A good example is drawn from graduates of BSc. Agronomy who got absorbed in the first four months after graduation while some BSc. Horticulture graduates remain unemployed for up to two years. There was no gender discrimination observed among employers on

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employment preferences. The study revealed further that most graduates work in areas related to their education background.

Training needs assessment

The studies noted that generally SUA programmes meet the basic skills and competencies required by the job market. However, the graduates lacked value-adding skills in such areas as, communication, problem solving skills, entrepreneurship and the use of ICT in their work. This means that such skills need to be included in the training programmes to make the acquired education more relevant to current jobs.

Training delivery

Training delivery at SUA can have more impact by continuous improvement of learning environment, particularly teaching facilities. Almost all studies noted overcrowding in classrooms, lecture halls and laboratories (some suggesting limiting class sizes to 40 students), poorly equipped lecture halls and laboratories, inadequate library facilities and services for use by lecturers and students. In addition, the need to improve on campus accommodation and discourage offcampus preference, the lack of recreational activities and facilities were also pointed out. Generally speaking, the studies noted that an increase in workload for both students and instructors does not match an increase of resources required to motivate the two groups to improve performance.

Graduates practical experience

It was noted that SUA graduates have very low level of practical experience which makes lengthy induction programmes necessary in employing organizations. This has been contributed by limited time allocated to practical work and attachments and lack of improved laboratories. Emphasis is recommended on field practicals and work attachments. There is also a negative notion among graduates who prefer "white collar jobs" to agricultural and natural resources jobs which are largely field oriented.

Employers and graduates job satisfaction

Employers had a consensus that SUA graduates were competent with wide range of knowledge in the subject matter despite some shortfalls with the performance rated average and above. The graduates on the other hand show higher level of dissatisfaction on their current job engagements. The major reason was low salaries and/or poor working environments. The majority of those interviewed would want to work with the government for security reasons while a few preferred private sector which offers relatively higher remunerations and a relatively better working environment but low job security.

Areas where SUA could provide services to employers

Employers identified a number of possible areas where SUA could provide services to them. These areas included technical and professional advice in new and existing technologies and provisional of short professional courses.

Publicity of SUA programmes

Many employers in the Local Government Authorities (LGAs) and the private sector organizations indicated that they were not familiar with the skills and capabilities of SUA programmes. This limits employment of such graduates, therefore recommended that SUA should publicize its programmes to all stakeholders at national, district and LGA levels to improve employability of graduates.

Financing

It was observed that lack of financial resources was the source of some of the problems mentioned above. In adequate financial resources make it very difficult for SUA to organize and manage field practicals and attachments for longer periods, refurbish laboratories, classrooms, libraries, and increase the number of lecturers, just to mention a few.

Suggestions for improving the University training system

Studies found out that the University training system needs to be improved. They suggested a number of interventions as a way to

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ensure this happens. This included regular curricular review, employ/hire more lecturers/technicians, initiate Tracer Programmes across Departments as well as ensuring that students are not ill funded, among others. The University should, therefore, generate enough funds from internal sources and solicit for donors (both local and external) financial and material support.

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LIST OF ABBREVIATIONS

AEE	Agricultural Extension and Education
BSc.	Bachelor of Science
CSRD	Centre for Sustainable Rural Development
DRPGS	Directorate of Research and Post-Graduate Studies
DSI	Development Studies Institute
FOCAL	Future Opportunities and Challenges in Agricultural Learning
HE & HN	Home Economics and Human Nutrition
ICE	Institute of Continuing Education
ICT	Information and Communications Technologies
LGAs	Local Government Authorities
Ltd	Limited
NGO	Non Governmental Organization
PO-RALG	President's Office Regional Administration and Local Government
SUA	Sokoine University of Agriculture
ToR	Terms of Reference

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1.0 INTRODUCTION AND BACKGROUND

1.1 The University

Sokoine University of Agriculture (SUA) was until 1984 known as Faculty of Agriculture, Forestry and Veterinary Medicine of the University of Dar es salaam. "In May 1984 it was promoted to a fullfledged University under Act No.6 of 1984. It started with three Faculties of Agriculture, Veterinary Medicine and Forestry. Currently there are four Faculties: Agriculture; Veterinary Medicine; Forestry and Nature Conservation; and Science. There are also a number of Institutes and Centres offering specialised courses and services, including: Development Studies Institute (DSI), Institute of Continuing Education (ICE), Directorate of Research and Post-Graduate Studies (DRPGS) and Centre for Sustainable Rural Development (CSRD). Currently the University runs 16 degree programmes as opposed to 13 degree programmes in 2004/2005 when this study was conducted.

The University also has one constituent College. The Moshi University College of Cooperatives & Business Studies (MUCCoBS) which was affiliated in 2004 by the government Declaration No. 22 of 2004.

1.2 Background information

In year 1997 SUA adopted the corporate strategic plan, which targeted the transformation of its programmes, corporate processes and culture. The purpose was to try and reverse some of the basic causes and signs of decline that had characterized the university over the years. The signs included declining financial resources, deteriorating laboratory and worker equipments poor academic staff morale resulting in "brain drain" and low productivity, and perhaps, poor national and international visibility and image. As a result SUA has been going through various structural adjustments to ensure that the mission and vision of the University were achieved.

Among the important milestones of SUA's achievements is an academic audit that SUA commissioned in the process of implementing the corporate strategic plan. In pursuance of the recommendation from the academic audit and in line with the objectives of SUA's corporate strategic plan, a wide range of recommendations, one of which was to initiate and uphold a habit of regular curricular reviews based on, among other things: tracer studies of SUA graduates and end-users of graduates' education and training employers. This was to provide vital input into the reviews, improvements innovations and renewal of curricula.

Such curricular reviews to be done at least once in every five years, were to be preceded by periodic tracer studies that are designed to evaluate the external relevance of the programmes by actually tracing and interacting with their alumni and employers in an effort to determine, among other things:

- (i) Where are the graduates? (Location);
- (ii) What are they doing? (Activity);
- (iii) Is their current involvement tally with what they were trained at SUA? (level of relevance and satisfaction); and
- (iv) Are the end-users (employers) satisfied with the graduates' performance?

In order to answer these and other related questions, SUA contracted four consultants to undertake a job market survey, training needs assessment and tracer studies for her graduates under five clusters as shown in Table 1. Table 1List of clusters, degree programmes, and consultants for
the Job market surveys, Training needs assessments and
Tracer studies for SUA graduates in 2004/05

CLUSTER	DEGREE PROGRAMME	CONSULTANT
CLUSTER 1	1. Bachelor of Science in	K-Rep Advisory
Crop	Agriculture General	Services Ltd
Production	2. Bachelor of Science in	
and and the second	Horticulture	
24 yr. (M2970-15-1-	3. Bachelor of Science in	
 states estatumente 	Agronomy	
CLUSTER 2	4. Bachelor of Veterinary	Agrisystems (East
Animal	Medicine	Africa) Ltd
Production	5. Bachelor of Science in	
	Animal Science	
CLUSTER 3	6. Bachelor of Science in	Development
Engineering	Food Science and	Associates (Ltd)
and Food	Technology	18, 20 M.
Technology	7. Bachelor of Science in	Set and a set of the s
	Home Economics and	01H ()
	Human Nutrition	
	8. Bachelor of Science in	
	Agricultural Engineering	
CLUSTER 4	9. Bachelor of Science in	Development
Agricultural	Agricultural Economics	Associates (Ltd)
Economics and	and Agribusiness	2
Extension	10. Bachelor of Science in	×
	Agricultural Education	
	and Extension	
CLUSTER 5	11. Bachelor of Science in	Afrozone Ltd
Natural	Forestry	
Resources	12. Bachelor of Science in	
Management	Wildlife Management	
	13. Bachelor of Science in	
	Environmental Science	
	and Management	

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2.0 METHODOLOGY

In order to implement the assignment most effectively, various methods and approaches were adopted by the consultants. The strategies included:

- (i) Review of SUA corporate publications (Corporate Strategic Plan, Prospectus)
- (ii) Review of Labour Markets and National Employment Policy
- (iii) Review and analysis of different degree based documents (eg. review of Agriculture and Natural Resources Sector Policies and Strategic plans)
- (iv) Situation analysis of teaching methods, materials and the learning environment at SUA.
- (v) Sectoral and institutional analysis to identify development trends, levels of technological changes, market needs, employability, employment opportunities, skills requirements, existing gaps and limitations.
- (vi) The use of specific field questionnaire surveys for employed graduates and employers. These provided information from employed graduates relating to salaries, employment conditions, and appropriateness of the training to the current responsibility, level of responsibility, career prospects, relevance of the education received and suggestions for improvement.

The employers were also approached to provide information on major occupational requirements, problems in recruitment, assessment of quality of training and skills level of SUA graduates, skills requirements due to technological changes, perceptions on improvements of the quality of SUA graduates and need for skills development for employees.

2.1 Data analyses and presentation

Results of the analyses were presented in graphical, tabular and textual formats for easy reading and comprehension. The draft reports submitted by consultants were reviewed and comments raised by review panels were discussed during stakeholders' workshops. The latter were held for each cluster and attended by Deans, Directors, and Heads of Departments, members of review team, students' representatives and consultants.

2.2 Study limitations

The research teams could not fix the sampling frame as there were no reliable database of SUA graduates and their respective employers. In this case "snow-ball" approach of sampling was adopted by most consultancy firms.

3.0 RESULTS AND DISCUSSION

The results for all clusters as presented by the consultants with respect to the Terms of Reference (ToRs) are summarized hereunder.

3.1 Graduate Employability

3.1.1 Current employment levels

Results from the studies showed that slightly over half of graduates (55%) had secured jobs while the rest had no gainful employments during this survey. For those who secured jobs 52% were employed by the government and quasigovernment departments (Figure 1). Recently, other non-traditional sources of employment have emerged like the Non-Governmental Organizations (NGOs) and the private sector especially for the Natural resources graduates. A very small portion of graduates (2%) had employed themselves, a fact which calls for re-orienting graduates into entrepreneurship so that they could be creative enough to generate ideas that are turned into business enterprises (jobs/self-employment). The emphasis should aim at creating job creators rather than job seekers.

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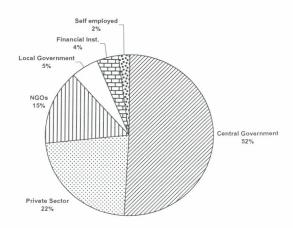


Figure 1: Major employers of SUA graduates by 2004/05 in terms of percentage response

The employment levels differed from one degree programmes to another. For example the level was higher for Veterinary graduates as opposed to Animal Scientists as most clients showed to be willing to 'treat' than to pay for management costs. Results from Cluster 1 (Crop production) showed that almost all (100%) BSc. Agronomy graduates got absorbed in the first four month after graduation while some BSc. Horticulture graduates remain unemployed for up two years. Assessment of the relationship between employment and gender showed that generally there is no discrimination among employers.

Studies revealed further that most graduates work in areas related to their educational background. However, slightly negative opinion was observed for graduates of cluster 5, 1 and 3 (Natural Resources, Crop Production and Home Economics & Human Nutrition) whom 13%, 32% and 37%, respectively indicated that they were employed in jobs not related to their educational background.

3.1.2 Reasons for declining Employment opportunities

Unemployment of University graduates seems to be a result of mismatching between the number of graduates and the job opportunities created annually in both private and public sectors. The slow absorption, especially in the public sector, was attributed to the slow pace of public employment after the long period of employment freeze. However, the government has been trying to create a conducive environment for nurturing and growth of the private sector in the hope that it will create more employment opportunities, and fill the gap hitherto left by the public sector. This may benefit SUA graduates in future.

Contrary, declining job opportunities was mostly reported to exist only in the cities and urban centre (essentially in the core competencies) where most graduates are employed. In such places only graduates with managerial skills and work experience were targeted hence were a priority. But in the districts, where the job market is fast growing there is more emphasis on core competence plus appreciable level of managerial skills. However, it was also found that most graduates preferred working in the cities and urban centres than in the districts and this factor could contribute to the frictional unemployment, which connotes a fast growing population of unemployed graduates. It is also evident that self-employment is yet to be realized by SUA graduates.

It was further observed that a combination of economic hardships and change of policy has seen a sharp decline of 'traditional' employment opportunities. The government policy that froze employment in the public sector in the 1990s did consequently reduce employment opportunities to levels much lower than the annual production of the graduates. For instance between 1994 and 1998 there was virtually no recruitment of Veterinarians and Animal Science graduates in the two agricultural sector ministries and President's office, Regional Administration & Local Government (PORALG), only to resume in 1999 by starting with 4 engagements, which was later raised to 12 and 14 in the consequent years.

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3.2 Training Delivery

3.2.1 Methods of Training Delivery

Training and delivery methods under this University were reported as the same as those used in any conventional higher learning institution. The surveys found out that these methods were good despite the need for improvements. These included:

- i) **Lecturing:** is used by all instructors to present material, knowledge of the course to enable students understand the theories
- ii) **Seminars**: Are organized to enable students discuss both theoretical and practical issues.
- iii) **Consultations and counseling:** have been used to offer tutorials to needy students.
- iv) **Involvement in Research Project:** As a teaching tool, students learn to identify researchable issues either by participating in an ongoing research or pick up a subject from any of the practical training issues observed and systematically collect data, analyze and write a "special project" report under supervision.
- v) **Supervisory**: e.g. practicals relate to laboratory work, which is done under the guidance of instructors.

3.2.3 Highly demanded training needs

Generally, graduates with more skills and competences to provide analytical and problem solving guidance, able to make informed decisions and judgements, clear perspectives and able to communicate effectively were needed. The impression gathered, even without statistics, indicated that the demand for such graduates is greater and growing more than the supply of graduates in most degree programmes. This requirement necessitates changes on knowledge delivery methods as well on material delivered at SUA.

On the other hand, there were a consensus that SUA programmes meet the basic skills and competencies required by the job market with her graduates performing at an average and above. However, the graduates lacked value-adding skills which would make the acquired education more relevant to current jobs. These preferred skills are summarized in Table 2.

The survey found out that employers were also impressed by the knowledge and ability of SUA graduates on non-professional attributes as identified in order of priority as follows: Willingness to learn, Sense of responsibility, loyalty to institution and its objectives, self-confidence, ability to cooperate and reliability.

3.2.3.1 Information and Communication Technology (ICT)

The job market is faced with challenges of ICT as Technological development and globalization have created unprecedented new opportunities, risks and uncertainties for young graduates. There are courses in the existing curriculum, which impart basic knowledge and literacy in the use of ICT (computers and internet accessibility). It appears, however, that the current curricula does not enable the graduates acquire adequate hands-on computer and communication skills. The recommendation is that the content and conduct of the current computer and communication skills courses should be critically reviewed and shortfalls corrected.

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Table 2. A matrix of cross-cutting and degree specific elements of training needs in 13 assessed SUA undergraduate degree programmes (Columns 1-13 represent degree courses as numbered in Table 1 above)

S/N	Elements of	Demand status by degree programme												% of all	
	training needs	1	2	3	4	5	6	7	8	9	10	11	12	13	programmes
1	Information & Communication Technology (ICT)	V	\checkmark	~	~	V	\checkmark	V	\checkmark	V	V	V	\checkmark	\checkmark	100
2	Entrepreneurship	\checkmark		\checkmark	100										
3	Networking & Communication Skills	V	\checkmark	V	V	V	1	V	V			V	V	\checkmark	85
4	Internship					\checkmark	\checkmark	\checkmark							23
5	Field practical/work attachments	\checkmark	\checkmark	V	V	V	V	V	\checkmark	V	V	V	V	\checkmark	100
6	Numeric skills (Statistics & Mathematics)	V	\checkmark	V								V	\checkmark	V	46
7	Research and Reporting Skills		\checkmark	V	\checkmark		\checkmark	\checkmark	V			\checkmark	\checkmark	\checkmark	69
8	Financial Management / Business Studies	V	\checkmark	\checkmark	V	V	\checkmark	V	V	V	V	V	V	V	100
9	Environmental Impact Assessment Techniques	V	V	V			V	V	V			V	V	\checkmark	69
10	Human Resource Management				\checkmark	\checkmark	\checkmark	\checkmark	V	\checkmark	V				54
11	Marketing Skills				\checkmark	\checkmark	\checkmark	\checkmark	\checkmark						38
12	Knowledge on Policies and Laws						\checkmark	V	V			V	V	V	46
13	Rural Sociology & Extension Skills				V	V	V	V	V						38
14	Need for publicity of the SUA programmes						V	V	V	V	V	V	V	V	62
15	Need for improving teaching & Learning Facilities	V	V	V	V	V	V	V	V	V	V	V	V	V	100

3.2.3.2 Entrepreneurship skills

Graduates are inadequately equipped with skills in entrepreneurship/business management which are important particularly in self employment. Specifically, suggested areas of skill improvement include:

- Concise theories on entrepreneurship and entrepreneurial skills, including analysis of the environment for business development in Tanzania
- Project formulation strategies
- Marketing skills for small businesses
- Consultation and consulting skill (e.g. Protocols, rapport and sociology)
- Accounting for small businesses
- Financial management for small businesses
- Design and development of entrepreneurship development
 programmes
- Project management, monitoring and evaluation; and
- Planning and resource mobilization

3.2.3.3 Networking and communication skills

There is a consensus that, however academically brilliant students/graduates are, if they are not able to communicate their ideas to others, few opportunities existed for them. Skills required by employers are good verbal communication and presentation, good written communication skills, analytical and problem solving skills, team working and dependability.

3.2.3.4 Hands on skills

Generally, graduates/students showed a need for reviewing the weights for Special Project and Field Practical Training in terms of extension of time, units assigned and proper planning as they are very important in imparting knowledge and hands on skills.

Field practical training and excursions had the highest rating preference in almost all degree programmes. However, it was noted

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that these aspects are currently undervalued in terms of resources and time allocation. This observation tallied well with views of the employers that SUA graduates had very low level of practical experience probably due to the limited time allocated to practical work and attachments and lack of improved laboratories. This makes induction training necessary in employing organizations.

However, some practical aspects seemed unpopular among students. For example, it was mentioned by lecturers for Cluster 2 (Animal production) that there is a negative attitude among students on certain duties such as cleaning livestock structures/dairy units, which they considered dirty and meant for labourers. "As a consequence they miss the opportunity to learn practical aspects of farm management, which is critical in real life as they stand on their own and are required to supervise others", said the instructors. This observation tallies well with the general comment of the consultants that our students like "white-colour" jobs.

3.2.4 Environment of training delivery

An environmental inertia or stress was noted that weighs down the spirit of both lecturers and students. The study showed overcrowding in classrooms, lecture halls and laboratories (some suggesting limiting class sizes to 40 students), poorly equipped lecture halls and laboratories, inadequate library facilities and services for use by lecturers and students. In addition, the need to improve on campus accommodation and discourage off-campus preference, the lack of recreational activities and facilities were also pointed out. The increase in workload for both students and instructors (particularly after the introduction of semester system) does not match with increases in resources required to motivate both groups to improve performance. This has, relatively affected the quality of teaching, learning and performance of nearly every member of staff and students.

3.3 Job satisfaction as expressed by graduates

Generally the surveys showed that SUA graduates were not satisfied by the current job engagements. The major reasons were low salaries and/or poor working environments. Salaries, as conventional indicator of job satisfaction shows that graduate salaries varies from below Tshs100,000 to over Tshs 1,850,000/= per month. Salary levels were found to be positively and significantly associated with age, experience, degree studied, and employment in managerial occupations, large establishments and the employing sector. Private sector for example found to attract more graduates due to their relatively higher salary schemes as compared to public sectors, although those in government were satisfied with security of employment.

It was noteworthy that there is a strong link between salary levels with degree studied. For example, about 65% of graduates from Cluster 5 (Natural Resources Management) showed to be job satisfied as opposed to Cluster 1 (Crop Production) who showed to be highly unsatisfied as evidenced by higher job turnover.

3.4 Institutional linkages as means to improve employability of SUA graduates

The surveys revealed that sometimes employers hesitate to employ SUA graduates because they are not conversant with what the graduates learned and what are they capable of doing because they are not aware of the course programmes at SUA. This problem was particularly observed with relatively new degree programmes.

It was the opinion of various stakeholders that strengthening of linkages with the sector and industries and field orientation of SUA students into various work places while studying may raise awareness of such programmes and create positive impacts upon employment. A number of employers expressed interest in providing internship and work placement or even research training based in their workplace in ensuring mutual benefits to all the stakeholders. Unfortunately there is no continuous communication between the University and employers.

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Therefore, it was advised that SUA should strive to publicize itself on what it offers to students and to the public. Of interest, one consultant noted that although SUA is the oldest University in Morogoro, the respondents mentioned Mzumbe University when asked University they know in Morogoro. Mzumbe University is relatively new and is on the peripherals of the Municipality. Other respondents thought that changing the name of the University by omitting the word 'Agriculture' could 'sell' her graduates.

3.5 Quality of training provided by Sokoine University of Agriculture

Studies showed that there existed some strengths and weaknesses regarding quality of training delivered by SUA to her graduates. The summary of the strength of these aspects is given under two major areas including: Curricula coverage, and staff competence and commitment. While the weaknesses are as similar as those identified in the previous captions under skill requirements, learning environments and existing skill gaps in SUA undergraduate programmes. Some notable strengths and specific weaknesses in these areas were;

3.5.1 Curricula and coverage

The survey found out that there was a general feeling that taught courses were comprehensive, relevant, demand driven and diversified. There was a concern from cluster 1 (Crop Production) graduates and students that the programmes were too tight with repetitive courses. BSc. Agricultural Economics and Agribusiness graduates did not prefer most of the basic courses including Micro and macro economics, Biology of farm animals, Introductory geology and soil formation, Mathematics, Botany, Principles and practices of horticulture, Principles of agronomy and Biochemistry.

However, Mathematics and Biochemistry were disliked by most degree programmes probably due to poor foundation of students on these courses or they thought the courses were irrelevant in their career. There was a general consensus from the graduates that the current curriculum covers many areas that prepare them well competitively for employment in relation to other graduates of similar qualifications. Graduates acknowledged as well that SUA undergraduate courses also prepare and give them a wide area for further studies in their professional career development.

3.5.2 Competency of academic staff

It was observed that the University has generally adequate, competent and experienced lecturers/staff. However, some academicians were said to be poor in presenting matters, overworked either by administrative matters, research and or consultancies. This situation was noted as a key factor that affects their general performance in knowledge delivery/teaching. Studies found as well that some staff are too harsh to students that dilute the general quality of teaching. The consultants further noted that the mission of the University in terms of staff development was not well articulated, probably due to inadequate financial resources.

3.6 Areas where SUA could provide services to employers

The surveyed SUA graduate employers identified a number possible areas where SUA could provide services to them. These included:

- i. Technical and professional advice in new and existing technologies for purpose of improving productivity.
- ii. Pilot projects through which employers could learn new skills and acquire knowledge of new technologies related to agricultural and natural resource management.
- iii. Provisional of short professional courses on areas related to;
 - Agricultural related entrepreneurship
 - Research and Development
 - Environmental related courses(courses in the management of the environment)
 - Livestock management/breeding
 - Animal biotechnology
 - Micro-economics

- Information technology
- Rural sociology
- Participatory methodologies
- iv. Provisional of research and consultancy services

3.7 Suggestions for improving the University training system

Studies found out that constraints related to improved training and lack of quality graduates are, mainly caused by inadequate practical and entrepreneurship skills. All these call for a shift in the way SUA imparts knowledge and practical skills to her students. In order to address these constraints the University should work closely with other stakeholders to:

- (a) Regularly review curriculum so that students are well oriented in both scientific understanding of the profession and application of that science/knowledge for research work, production and dissemination/sharing of the knowledge and skills in the changing world.
- (b) Improve learning environment by hiring more lecturers/technicians, improving the remuneration for lecturers. This should go in hand with periodic academic audits to assess the performance of academic staff.
- (c) Undertake a careful study on the required balance between core and elective courses in view of the recommendations to offer more of entrepreneurship and life skills, which will certainly require some sacrifice in the time allocated to some of the current core and/or elective courses offered.
- (d) Ensure that students are given adequate funds for reference books and field practicals as well as equipping the library and laboratories.
- (e) Consider the option of enhancing practical skill acquisition by students through internship programmes lasting for at least six

months to one year. Adequate funds for practicals is equally important.

- (f) Initiate a Tracer Programme where by each Department follows a cross-section of its graduates to learn on the experiences in the field.
- (g) Prepare students for self-employment through inculcating in them throughout their training on the inevitability of selfemployed and their role as creators of employment rather than job seekers. This will require:
 - Intensification of entrepreneurship skills training to produce business and corporate minded graduates.
 - Additional skills in areas such as research, participatory techniques, human resource management, project planning and management, information technology, computer skills as well as business communication and presentation.
- (h) Strengthening the social dimension of the curriculum by putting emphasis on social aspects, extension courses and the politics of natural resources and Agricultural administration and management.
- (i) Maintaining technical competencies and skills but also putting emphasis on other important competencies such as oral and written communication and other "people" skills.

However, to acquire these milestones, SUA should use all avenues to impress upon the government to increase funding and encourage funding from internal sources and other sources like donors (both local and external).

4.0 CONCLUSIONS AND RECOMMEMNDATIONS

In general, the findings of these surveys suggest that SUA graduates generally hold favourable views of the University and are satisfied with various aspects of their experiences at the University. It also appears to indicate that employers are, on the whole, satisfied, or at least not very dissatisfied, with the performance of recent graduates in their workplace, in terms of their transferable skills. Generally, the findings showed that there are prospects for more employment opportunities for qualified graduates in all sectors of economy. However, it is important to take a closer look at the results for specific issues in cluster/degree programmes before drawing any definitive conclusions.

The survey findings identified areas that can be pursued further in an attempt to improve the relationship between graduates and the University on one hand and employers on the other hand. This would mean conducting regular reviews of the curriculum; improve learning environment as well as marketing the University to the public, including the employers, among other strategies.