Tracer Study of Bachelor of Science in Agricultural Education and Extension Graduates - Class of 2008 - Egerton University

Immaculate Kiliswa¹, Maurice O. Udoto², Jacob J.J. O. Konyango³,
¹,²Department of Agricultural Education & Extension, Egerton University, Nakuru, Kenya
³Department of Agricultural Education & Extension, Machakos University, College, Machakos, Kenya

Abstract: The introduction of agricultural and other vocational subjects in the education system was meant to address employment needs of students. In this respect, Kenya introduced vocational agriculture in the secondary school curriculum, at post-secondary, and at university. Egerton University is among the universities in the country that provide training in agriculture. Among the disciplines offered is Agricultural Education and Extension at degree level. Many Students have graduated from the programme since 1990 and joined the work force. However, there is no documentation about career placement and the appropriateness of the curriculum they were exposed to in relation to their careers. The purpose of this study was to generate information on career placement of the 2008 class of the Bachelor of Science in Agricultural Education and Extension (B.Sc. AGED & EXTN) graduates of Egerton University and determine the appropriateness of the curriculum the graduates undertook. Results show that most respondents are in agricultural education, a few in agricultural extension related careers and non-agricultural education and extension careers. In addition, most courses offered in the programme were considered relevant to the careers of respondents, whereas a small percentage were considered not relevant. This suggests that there is need for review of the curriculum to further align courses with career requirements.

Key Words: Graduates, Knowledge, Curriculum, Career.

1. Introduction

In Kenya, subsequent to the Weir Report of 1966 (Weir, 1967), professional agricultural training was rapidly expanded to address the perceived shortage of professional workforce in both public and private sectors. Certificate, diploma and degree training programmes in agriculture were therefore expanded. New diploma-awarding institutions were established, including Jomo Kenyatta College of Agriculture and Technology (1984) and Bukura Agricultural College. These colleges upgraded their certificate programmes to diploma programmes in 1990. In addition, the Animal Health and Industrial Training Institute (AHITI) added two new centres, at Ndomba (1982) and Nyahururu (1979). In 1987, the Kilifi Institute of Agriculture was opened as a certificate-awarding institution. The number of universities offering programmes in agriculture in Kenya rose rapidly. For example, University of Nairobi started teaching agriculture at degree level in 1970/71, Egerton College was promoted from a diploma to a degree-awarding institution in 1986, Moi University, founded in 1984, offered agriculture only at postgraduate level, Jomo Kenyatta College of Agriculture and Technology, a diploma-awarding institute since 1981, was elevated to university status in 1994. Maseno University College introduced a bachelors programme in horticulture (Ngugi, Isinika, Temu, & Kitaliy, 2002)

The Bachelor of Science in Agricultural Education and Extension programme at Egerton University borrows its origin from the 1959 Chavakali Vocational Agricultural Programme which saw the introduction of agriculture in the secondary school curriculum (Amatsimbi, 2009). The initiative saw the need for trained agriculture teachers for the secondary schools and extension officers at diploma level in 1967 at the then Egerton College (Egerton University, 2012). According to Konyango (2010) these initiatives seems to have been as response to the drive from the Food and Agriculture Organization (FAO) sessions of 1951, 1953, 1955 and 1959 which emphasized the need for agriculture in the curriculum and the improved methods of teachings, scope and content of vocational agriculture as a solution for school leaver unemployment (Chakeredza, et al., 2008). Following the elevation
of Egerton College to a university status in 1986, the Bachelor of Science in Agricultural Education and Extension programme was introduced to provide high level manpower in different fields in agricultural based courses. The curriculum is designed to meet the manpower needs in areas of Agricultural Education and Extension.

2.0 Appropriateness of Curriculum

The department of Agricultural Education and Extension at Egerton University has been training and producing graduates since 1987, who join the job market. The demand for these graduates appears to be rising. The career placement of these graduates and the duration they take before being fully employed is not clear. In 2008, the department in response to the demands from some stakeholders, specifically the TSC and the Ministry of Agriculture and Livestock reviewed its curriculum to meet their demand. However, there are many other employers besides these two. The department admitted 149 students to the Bachelor of Science in Agricultural Education and Extension degree programme in the 2008. Whereas the numbers of students admitted to the programme has been increasing slightly, the demand has been rapidly increasing in successive years. It is therefore important to establish the destinations, job placement and the types of occupations, the graduates joined with reference to relevance of job placement and the types of occupations, the therefore important to establish the destinations, job placement and the types of occupations, the graduates joined with reference to relevance of courses offered by the Department. This information would be useful as a way of feeding back to the department in designing courses and programmes to meet the needs of a wide category of stakeholders (Egerton University, 2012).

The training in Bachelor of Science in Agricultural Education and Extension has the following specific objectives which are to enable graduates to; plan and teach agriculture and biology in secondary schools, teacher training colleges, and agricultural institutions; develop, implement and evaluate agricultural education programmes; plan, implement and evaluate agricultural extension and rural development programmes; manage educational and agricultural organizations; design and conduct research in agricultural education and agricultural extension; develop and conduct training in agricultural extension and pursue further education in agriculture, agricultural education or extension( Egerton University, 2013). The training further enables Bachelor of Science in Agricultural Education and Extension graduates to initiate effective professional and technical innovations and leadership in agricultural development in secondary schools, agricultural institutions, colleges of technology and in agricultural extension establishments. (Steward, Barlow, Meiser, Tucker, Eisenbruch, & Kirk, 2010).

The main stakeholders for Bachelor of Science in Agricultural Education and Extension graduates include; the Ministry of Education through Teachers Service Commission (TSC), which is the major stakeholder in employing agriculture teachers, curriculum developers and educational managers, the ministries of agriculture, water, environment and other related ministries, the private sector which includes the banking sector, the insurance industry and the NGO sectors for various agriculture-related roles. Every stakeholder has set up specific requirements that graduates must meet in order to be employed. The Teachers Service Commission for instance employs agriculture and biology teachers (Avalos, 2011).

The ILO (2010) defines a tracer study as an impact assessment tool where the “Impact on target groups is traced back to specific elements of a project or programme so that effective and ineffective project components may be identified.” In educational research the tracer study is sometimes referred to as a graduate or alumni survey since its target group is former students. Tracer Studies provide quantitative-structural data on employment and career, the character of work and related competencies and information on the professional orientation and experiences of their graduates (Millington, 2008). Baldauf and Lwambuka, (1993) advocated for the use of a graduate tracer study as an appropriate tool in determining institutional capability in preparing graduates to meet the demands of the work place. The graduate tracer studies involves the determination of graduates in the job search mode, lead time and employment condition, where the knowledge acquired in schools is used at work, in promotions, and job satisfaction (Guzman & Costa, 2008).

University of Minnesota (1981) notes that graduate surveys are popular for “analysis of the relationship between higher education and work.” Although the usual end of the course evaluation can ask for the student to assess whether they have gained the knowledge and skills necessary for fulfilling their personal objectives, there is really little proof of this until the student has completed the entire course of study and has entered the workforce (Guzman & Costa, 2008).

Surveying a cohort of graduates from a specific institution, profession, discipline, graduation date, level of education, or a combination of these for comparative analysis, Schomburg (2008), presents examples of issues
which can be addressed in tracer studies. Biographical data on where graduates are may provide information on income, job title, nature of employment, and years of employment. Surveys should also include information “about the kind of work task, the relationship between study and work, and professional values and job satisfaction.” The Bachelor of Science in Agricultural Education and Extension curriculum strives to meet the needs of the society by providing graduates with skills and techniques for increased and sustained food production. In the year 2012 a total of 126 men and women graduated from Egerton University with a Bachelor of Science degree in Agricultural Education and Extension (Egerton University, 2012). Of these graduates it is not yet established the whereabouts of their employment or job placement status. Similarly it is not yet established how they fit in their occupational roles with reference to their course of study.

3. Methodology

Descriptive survey design was used to collect data. This design enabled the researcher to describe the nature of a situation as it exists at the time of study (Creswell, 2008; Gay, 1992 and Kothari & Garg, 2014). According to Best and Khan (1993), this design seeks to tell what exists or what is about a certain phenomenon without any form of manipulation. A total of 98 Bachelor of Science in Agricultural Education and Extension graduates of Egerton University, who graduated on 21st December 2012 (Egerton University, 2012) were conducted, 78 were men and 20 were women. This was a census study hence no sampling was done. Both qualitative and quantitative data were collected using semi-structured questionnaires. These were then analysed accordingly using SPSS. Simple descriptive statistics mainly; means, frequencies, percentages, standard deviations and bar charts were used to present data on career placement, appropriateness of the curriculum to the career placement and transition period to employment.

4. Results and Discussions

4.1 General Characteristics of the Respondents

The numbers of BSC AGED & ETXN students who graduated on 21st December 2012 and participated in the study were 98. Their distribution per County is shown in Table 1.

Table 1
Distribution of B.Sc. AGED & ETXN Graduates by County

<table>
<thead>
<tr>
<th>Country</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kakamega</td>
<td>5</td>
<td>5.1</td>
</tr>
<tr>
<td>Baringo</td>
<td>6</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Characteristics that were investigated included: gender, age, career placement of the 2008 class of the Bachelor of Science in Agricultural Education and Extension and appropriateness of the curriculum the graduates undertook.

4.2 Distribution of Graduates by Gender

Past study by Eze, Ezenwaform and Obi, (2015), indicated male dominance in the uptake of the Agricultural courses in higher institutions of learning the scenario is not yet to change. The low enrolment of female students in the subject could be attributed to traditional and sociological patterns
where the subject is viewed as meant for males, lack of proper guidance and counseling and parental influence on course selection (Akyina, Oduro & Ansah-Hughes 2015).

Figure 1 Proportional distribution of graduates by gender

4.3 Distribution of Graduates Age

The respondents’ age ranged between 28-40 years, with the mean age being 30 years. They were at an average age of 20 years on admission apart from the 1 in-service. The majority were pre-service who were nationally selected from secondary schools by the Joint Admission Board (JAB) on admission after completion and passing of their Kenya Certificate of Secondary Examination (K.C.S.E). 30 years of age on permanent employment is the expected age bracket for employment after going through four years in the University. A study done by Abdullah, Mlozi & Nzalayaimisi, (2015a) found out that at the appropriate age, learners are able to make informed decisions on their career choice after graduation.

Figure 2 Age distribution in percentage

4.4 Career Placement

Universities are expected to produce a competent workforce for industries but it can be argued that a university’s purpose must not be defined solely by the expectations of employers, but also by the aspirations of the nation. As is increasingly argued, the quality of higher education should not only be measured in terms of the employment rate of graduates but should also be measured by the extent to which higher education has addressed all of its purposes. Universities have the aim of producing fully functional individuals who not only serve in the workforce but must also be actively functioning members in their respective role of universities in nurturing the characteristics that help graduates to function across all aspects of life after they graduate. In other words, individuals must not only be geared towards serving the work sector, but must also develop the skills that allow them to benefit their family, community and the nation (Dan, 1999). Higher education must prepare graduates for all aspects of the outside world: employment, local issues and global problems.

The main stakeholders for AGED & EXTN graduates include; the Ministry of Education through Teachers Service Commission (TSC), which is the major stakeholder in employing agriculture teachers, curriculum developers and educational managers, the ministries of agriculture, water, environment and other related ministries, the private sector which includes the banking sector, the insurance industry and the NGO sectors for various agriculture-related roles. Every stakeholder has set up specific requirements that graduates must meet in order to be employed. The Teachers Service Commission
for instance employs agriculture and biology teachers (Avalos, 2011). In this study, the highest percentage of the respondents that is 61.2% were employed by TSC as teachers of Agriculture and Biology in different Counties, followed by the private sector 14% then Ministry of Agriculture 10%. Bachelor of Science in Agricultural Education and Extension being a diverse Course, it exposes its graduates to diverse career opportunities. Ministry of Home Affairs, Defense and Self-Employment are some of the additional stakeholders that absorbed the Bachelor of Science in Agricultural Education and Extension Bsc AGED & EXT graduates of Egerton University, who graduated on 21st December 2012 (Egerton, University 2012) as shown in Table 2.

Table 2: Distribution of Graduates by Current Employment

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSC</td>
<td>60</td>
<td>61.2</td>
</tr>
<tr>
<td>Bank</td>
<td>4</td>
<td>4.1</td>
</tr>
<tr>
<td>Private Companies /Factories</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>National Irrigation Board</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>County Cooperative Offices</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>Home Affairs</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>Business/Self Employed</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>Ngo/Un</td>
<td>6</td>
<td>6.1</td>
</tr>
<tr>
<td>Insurance Firms</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Ministry of Defence</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>County Agricultural Offices</td>
<td>10</td>
<td>10.2</td>
</tr>
<tr>
<td>Private Academic Bodies Of Higher Learning</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Private Farms/Ranches</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>Public Academic Bodies Of Higher Learning</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.5 Relevance of Courses Offered

There is a need for higher education to prepare graduates for the demands of industry (Graham, 2001). However, because of a fast-paced, ever-changing world, researchers have noted the challenges University education has in preparing graduates for the skills required by industry (University of Minnesota, 1981). With these challenges in mind, higher education should adjust their curriculum to meet the needs of students (Hoerne & Thomas, 1965) and prepare them for the workforce (Shinn & Cheek, 1981). To make the necessary adjustments, educators should understand which employability skills are most needed by graduates because, given the appropriate skills, they will likely possess a positive attitude toward performing the tasks of the job. In addition to teaching agriculture in public schools, graduates of university agricultural education programs enter professions outside of school-based teaching.

Cartmell and Garton (2000) revealed that slightly more than one-third of agricultural education graduates entered professions outside of school-based teaching. Because of the diversity of career interests and the variety of opportunities agricultural education graduates have available, university faculty often find it challenging to prepare students for the array of skills required for success in their respective employment.

Chizek & Jerry (1983) stated that “if agricultural education programs are to survive, they must be dynamic and able to adjust to new situations and environments that help to improve the on-the-job effectiveness of future graduates”. Therefore, adjustments need to continually be made to the curriculum to meet the needs of students in an ever-changing workforce. Such adjustments also assist in ensuring the agricultural education program is not too narrowly focused. Respondents were asked to rate the appropriateness of the curriculum to their career placement. Out of the 78 courses that were offered during their four year study, 72.54% were rated most useful, 18.91% were useful while 5.82% were not useful and 1.09% not useful at all as shown in Figure 3.

Figure 3: Relevance of AGED & EXT courses
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References


[17] Regional Land Management Unit (RELMA), technical report no. 25.

