Conducting Graduate Tracer Studies for Quality Assurance in East African Universities: A Focus on Graduate Students Voices on Quality Culture

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Abstract

The purpose of this paper is to propose a guide for graduate trace studies (GTS) to be adopted by universities and other higher education institutions (HEIs) in East Africa. Their essential role notwithstanding, graduate tracer studies present viable opportunities through which quality assurance (QA) can be institutionalized and mainstreamed in activities of HEIs in East Africa (EA). Moi University is embracing graduate tracer studies triggered by the DAAD UNITRACE initiative much for the reason of generating from immediate users of university academic services, nuanced and evidenced information requisite for improvement of university education and service programmes. This paper is presented as a proposal for a GTS guide for East Africa higher institutions of learning (HEIs) that if accepted shall benchmark through GTS methodology and results for use to entrench a culture of quality assurance at universities. The objective of this paper thus, is to propose a methodological guide for graduate trace studies suitable for East Africa Universities. Using experiences, methodologies, results and lessons of a pioneer graduate tracer survey conducted at Moi University, the paper posits a seven staged GTS guide that fits the needs for East Africa. Information feedback, recommendations and evaluative proposals made by graduates about their experiences during degree study and transition to the job market immensely help to improve the quality of education and services at the University (table 1). This paper should arouse our desire to initiate and entrench GTS as means by which we can achieve quality assurance at universities and HEIs in East Africa. Originality and value of this paper lies in its first ever proposal for a guide for GTS suitable and domesticated for East Africa.

Key Words: GTS Guide, Methodology, Results Utilization, Quality Assurance, Higher Education Institutions.

1. Background

University Graduate Tracer Studies (GTS) are commonly becoming a recognizable practice worldwide. Graduate tracer studies involve identification and follow-up of graduates from higher education institutions (HEIs) worldwide spurred by the need to give careful consideration to how graduates view their experiences they underwent during their degree study and their transition to the job market. If universities are to improve their teaching and training of graduates the precedence should be to learn and garner improvements from graduates' nuanced experiences. Towards the end of the 20th Century, European Universities embraced the use of tracer studies for a plethora of reasons; especially to accredit their study programmes; to explain the link between study programmes and the job market; to show uniqueness and positioning of individual universities; and also to enable universities and institutions managing higher education in their respective countries make informed and evidence based decisions about improvements and quality education and services in higher education (Schomburg, 2011). East Africa (EA) universities and higher education institutions (HEIs) should not be an exception. In addition, importance of graduate tracer studies is to incorporate effective improvements into institutional programs of HEIs by collecting and analyzing information on graduate's study experiences, professional and personal careers. Such studies can be used to collect data on the employment situation of the most recent graduates in order to obtain indicators for their professional performance (Teichler, 1998). They can therefore, be used to contribute to causal explanations of the relevance and appropriateness of the study conditions, services and programmes provided by HEIs and the quality of the graduate product (Teichler 2011, Schomburg and Teichler 2011, Herrmann 2010). Such studies also emphasize programmatic issues, conditions, situations and contexts within which the graduates studied at the University; positing and interrogating the quality of these study provisions and conditions as this paper argues. We propose a guideline for graduate tracer study in East Africa with possible outcomes of entrenchment and nesting GTS in EA Universities in the region in order to judiciously harness the above profiled benefits. At Moi University, the AfriQ'Units project among others, has outlined a guide for the promotion of quality culture in East African University (AfriQ'Units, 2011),

and the authors recommend that this should be the basis for a guide in GTS for use by the University and the region.

Unique to graduate tracer surveys is its exigent but systematic and universal methodology. This paper proposes to domesticate these universal approaches to graduate tracer studies with a guide that will be most suitable and acceptable within the East African realm and context. Renown and ongoing graduate tracer studies such as KOAB, REFLEX, INDOTRACE, DEHEMS and CHEERS (Schomburg, 2007) have emphasized the interview phase, professional domain approach, national and university level domain reports and dissemination of tracer results as enduring methodological steps in graduate tracer studies (Braun, 2011). Basically, this speaks about research steps and outputs obtaining from GTSs. This paper argues that results of tracer surveys are smoothed out by robust methodological opportunities that can be presented through a process involving nascent tracer survey preparation, survey conduct and results dissemination (Heidemann 2010, Flotcher 2010, Herrmann 2010, Dillman 2008, Grooves, 1989). Paramount to graduate tracer surveys are the results and their utilization to improve quality of study programmes and services. Tracer survey results are used at complex dichotomous platforms aroused by intra-university needs such as improvement of study conditions and programmes as fronted by individual universities and HEIs such as CUE (commission for university Education, Kenya) and IUCEA (inter university council for East Africa). They can also be motivated by extrinsic expediencies of real life situations as prescribed by the job market. This paper proposes a seven steps methodological guide for graduate tracer studies in East Africa's HEIs.

First, this paper presents four methodological steps experienced during a recent graduate tracer survey at Moi University, Kenya (MUTRACE). Second, the paper presents select findings of the survey that we use in this paper to demonstrate how results obtained from GTS can be utilized for QA. Using selected results we argue that quality of education and services at universities in East Africa can improve through feedback obtaining from the immediate users of services (the graduate) about study facilities, conditions and programs (Egesah, Wahome, Langat and Wishitemi, 2014). Last, the paper presents an outline of a graduate tracer study methodological guide being developed for adoption and use among universities in the East African region. MUTRACE was part of a wider University Graduate Tracer colloquium; UNITRACE which was initiated in 2010 and has successfully studied experiences of graduates from Eastern Africa, South East Asia and Central America. Proposal for a GTS guide comes from this background experienced by the authors of this paper.

Objectives

The broad objective of this paper is to propose a methodological guide for graduate trace studies suitable for East Africa (EA) Universities. Specific objectives are to:

1. Present methodological procedures for graduate tracer studies that can be used by EA Universities to study graduates experiences useful for feedback into university programs and graduates' career.

2. Showcase how GTS results can be used for improvement for quality assurance, education and services at HEIs in East Africa, using the Moi University case.

2. Methodology; UNITRACE and MUTRACE Experience

Moi University graduate tracer study (MUTRACE) started in the year 2010 with the training of two researchers from Moi University in graduate tracer surveys in a series of three consecutive but iterative workshops. First, was graduate survey preparation, which encapsulated exposure to relevant theories, survey designs, and development of comprehensive accurate graduate address data banks, organization and conduct of data collection from graduates and approaches to ensure high response rate. Second, was data analysis and emphasis was laid on data entry, editing, cleaning, coding and analysis using SPSS and QTAFI computer programmes. In addition, this workshop laid a solid foundation in interpretation of findings and dissemination of graduate survey results including the role of comparisons, presentation of findings and development of consumer tailored reports and visuals. Third, were workshops on dissemination of findings of the graduate tracer survey. These workshops took place from the year 2010 to 2012 under the University graduate tracer studies initiative (UNITRACE) in collaboration with INCHER-Kassel University, Germany and DAAD. The training workshops brought on board researcher participants from Universities from Eastern Africa region (Moi, Kenyatta and Addis Ababa), from Central America (Costa Rica, Nicaragua and Guatemala) and from South East Asia (Indonesia, Vietnam and the Philippines). Besides intra-university and in-country specific interests gained during these workshops, the

participants were also presented with an opportunity to exchange and compare experiences from universities across three continents. For example, the 22 participants designed and used a universal questionnaire for graduate surveys nested in 12 universities drawn from 8 countries on 3 continents. All participants were mandated to conduct graduate surveys of the 2009 graduate cohorts at their respective universities. At Moi University, the researchers started by sensitization, seeking goodwill and obtaining authoritative support from the Moi University management and administration in order to carry out the survey. The survey was hosted by the research office of the University and was initiated through the consultative efforts bringing together the office of the Deputy Vice Chancellor in charge of Academics, Research and Extension, departments of alumni, career, international office, faculties/schools and academic departments of Moi University. Senior researchers and personages at the University were also consulted. Four methodological steps manifestly permeated the exercise.

2.1 Step one: Developing address data bank

An accurate and comprehensive address data bank of graduates is a precursor repository for any meaningful and successful graduate tracer survey. In this study, an accurate address data bank was sought by sourcing information from the alumni, schools and academic department offices to compile names, telephone, email and P.O. Box addresses of the graduates. Finally, the methodological quest was through telephone and email process. One postgraduate research assistant was engaged, trained and assigned to help develop the address data bank, confirm email addresses of graduates, make reminders, enter and clean data. Addresses of the 2009 graduate cohort were collated and filed by degree programme, in an Ms Excel data bank.

2.2Step two: Data collection

Conduct of the actual Graduate Tracer Survey was done using the universal questionnaire as aforementioned. A series of telephone calls were made to the graduates. The first call was to confirm email addresses, introduce the purpose of the survey and to seek consent from the graduates and asking for their participation in the survey. An email was sent to each sampled graduate with clear instructions regarding the process of opening and filling the questionnaire. A five-section; 55 item; 255 variables both structured and open ended question questionnaire was attached to the email. After the initial phone call and subsequent emailing of the questionnaire, responses from graduates were reinforced through antecedent calls as follow up to precursor telephone calls; also referred to as reminders. Thus, in a deliberate and systematic way and using the address data bank, researches made the first, second and third reminders, as a standard operations procedure in graduate tracer studies. Each iteration of reminders yielded additional responses from graduates, although the responses were fewer with each subsequent call. This was actually normal attrition, but the reminder strategy helped address the rebuttal associated with low response rates in tracer studies. It is argued that tracer studies with as low as 30-40% response rates are often regarded as credible given that these surveys are often not interviewer administered and also the fact that in tracer surveys there is high propensity not to trace the graduates after they leave the University (Schomburg 2007, Ramos 2006).

2.2.1 Sample size and response rate

From seven faculties (Law, Arts, Engineering, Information Sciences, Medicine, Nursing and Public Health), 470 Moi University graduates were sampled for the survey and 193 were able to score and return questionnaires successfully within a confine of 3 months, offering a credible response rate of 41%.

2.3 Step three: Data analysis, interpretation and report writing

Data obtained were entered and cleaned as well as checked for consistency and accuracy in an Ms Excel data sheet. Consequently, data were transposed into SPSS 17, again checked for accuracy and completeness before descriptive analyses were done using syntax. Key variables to the MUTRACE study objectives were identified for each objective using a simple matrix. Quantitative descriptive findings were documented in simple percentages and graphs and interpreted and explained meaningfully using text obtaining from the responses. Further detailed analyses seeking association between study programme variables and transition to the job market were done. To realize full potential of the survey, and important to this paper, is the interpretation and presentation to Moi University simplified and malleable consumer tailored results that are being used to improve specific education programmes and services at the University, as exemplified under the results section.

2.3.1 Analysis outline: Data Entry, cleaning, classification of variables by scales of measurement, level one descriptive output and level two comparisons and association of variables based on respective needs were done.

2.4 Step four: Dissemination and use of findings

Results of the survey have been disseminated so far as follows: UNITRACE workshops (Kassel, 2011, 2012); EXLIMA- International graduate tracer conference (Bali, 2012); Moi University- MUAIC (Eldoret, 2011, 2012, 2013); Committee of Deans and Senate through QA Directorate (Eldoret, 2013); UNITRACE regional workshop (Nairobi, 2013); 3rd IUCEA QA meeting (Kigali, 2013); EAQAN Arusha workshop (Arusha, 2014); 6 reports (VC, MU) and 6 scientific ways with 5 journal articles this far(MUAIC proceedings, EXLIMA proceedings, EAQAN website, JIARM journal, AJSTID journal, Journal of Education & Practice).

3. Results

3.1 Showcase of utilization of GTS results for QA in HEIs

Moi University graduate tracer survey (MUTRACE) used the universal UNITRACE questionnaire to obtain results from five key areas. The areas of interest were; sociobiographic characteristics of graduates, education and work before university admission; study conditions, provisions and experiences; job search and transition to work; employment and work, and; work and competencies pointing to relationships between study and work. From the foregoing, this paper presents by matrix a showcase of selected results voiced by graduates and how they can be utilized by QA departments to improve education and services and hence entrenching a QA culture in EA universities.

Table 1. Matrix depicting GTS result and QA in education and service delivery

Result	Improvement Action for Quality Education & Services	Indicator of Progress
55% graduates were males and 45% females	-Enrol more females -Enhance female specific needs	-Gender balance policy and programmes (IGERD)
Fewer graduates from the sample were enrolled in Medicine and Engineering and more in Arts	-Increase admissions in the fields & improve learning & teaching environments	-Evident expansion & enrollment (Aerospace)
Library, ICT and resource facilities were rated average (3 on scale of 5)	-Update lib with relevant & current hard and e-resources -Develop space, facilities & equipment (learning & teaching)	-ODL, devolution to faculty ICT labs (MU and partners e.g., CARTA)
Laboratory/clinical facilities were rated poor (2 on a scale of 5)	- Equip, expand & enhance lab and clinical resources	-Expansion policy at MU
Infrastructural facilities (learning/ teaching, medical, recreational & accommodation) were rated average (3 on scale of 5)	- Build and equip infrastructural facilities to set conducive learning/ teaching environments	-Evidence of infrastructural expansion (e.g., SPH, SON, SOL, SOBS)
Graduates undertook additional skills training during and soon after their degree study (e.g., CPA, SPS, GIS, HRM)	-Embrace skills, professional & competencies training for life skills & application on job	-Recent venture into targeted diploma and certificate skills oriented training

Lectures (78%) and field courses/ attachment (62%) are learning/teaching modes most emphasized, while outreach and community service oriented modes are neglected	-Why remain didactic and pedagogical? -Need to shift to innovative ways. Expand to community service as opportunity to learn e.g., free legal advice -Strengthen community service & learning programmes & structures	-ODL -COBES
92% graduates complete studies in time	-This is commendable, but can be pushed to 100%. -Address intrinsic & extrinsic service factors leading to 8% failure to complete on time	-High graduation rates -High progression rates (e.g., average 98% Anthropology)
Split 50-50% funding of studies between self and government (HELB)	- Quite encouraged for self sustainability in education	-PSSP -Cost sharing policy
Link between the field of study & area of work rated as **very high (70%)**	-Should be sustained. IUCEA 2014 study shows 78% rating by HEIs & 49% rating by employer. (Nkunya, EAQAN Arusha 2014)	-"MU graduates are highly rated on job market" (VC)
75% gained required competence for job & 64% indicate University contributed to this	-Bridge the 36% deficit gap	-Shift to competency based innovative training for relevance on job market
65% considered reputation of the University as important for the employer in recruiting. Surprisingly, 71% did not consider work experience as important	-Enhance University image further - Strengthen work study programme	-Expansion programme -Website & media imaging -increasing visibility
Whereas negligible numbers used the career office, job fairs, government and commercial agencies, to search jobs, 21% of MU graduates obtained jobs through work placement, internship and attachment	-Further explore attachment avenues for job link - Revitalize career and job search agencies including web job search	-Operational career office -Students initiated job fares (e.g., ISEC)
Graduates consider most salary in selecting their first job offer (42%) and not career and profession	-Strengthen career interests and professionalism in training	-Operational career office

3.2 Outline of proposed Graduate Tracer Study guide for East Africa HEIs

Step One: Pre- plans for Graduate Tracer Study.

• Identification for GTS researchers and champions including focal person;

• Forging and obtaining goodwill and (financial) support from University Management;

• Sensitization through consultation and planning meetings and workshops;

• Identification of GTS host for example in QA or Alumni office or as GTS center (INCHER);

- Budgets- sourced and mainstreamed into university almanac activity budgets.

Step Two: Training in GTS theory and methodology.

Step Three: Survey Preparation:

- Identification and justification of GTS study population and cycle;

- Development of an accurate graduates address data bank.

Step Four: Survey conduct:

- Online and/or paper surveys.

Step Five: Training in GTS data analysis, results dissemination and use.

Step Six: Results interpretation, dissemination and use.

Step Seven: Multiplication and scale-up effect:

- Within and outside universities to other EA universities and HEIs.

4. Discussion

Graduate Tracer Study guides can enable users to design and develop tracer studies using universal guidelines. Harald Schomburg (2003) developed a handbook for GTS that has been in use and from which we can borrow and domesticate for use in the EA region by developing a much more context driven GTS guide for East Africa. To enable us achieve this ambition, we have presented a methodology experience that we shall rely on to develop a guide suitable for East Africa. We have also argued the connection between utilization of GTS results in improvement of quality of study programmes and services at HEIs. According to Ulrich Teichler (1999) and Sanyal (1987) tracer study methodological approaches and appropriate designs and themes often yield desirable and utilizable results that we can use to improve study needs. Argued by Flotcher (2010), Herrmann (2010) and Dillman (2008), tracer studies have their unique but ubiquitous and rigorous methodologies. Moi University should be the greatest beneficiary of the results of its own tracer survey especially in terms of utilizing the feedback from graduates to address felt weaknesses in study programmes and services. Study facilities, conditions, provisions and infrastructure can be improved and quality standards of academic and service programmes enhanced if feedback obtained from the graduates can be put to appropriate use. There is clear indication for Moi University to underpin and strengthen specific areas that affect quality of study programmes and services such as learning and teaching infrastructure, facilities and community orientation. However, results from graduates also showed that the University was meeting quality services in areas such as timeliness for completion of academic programmes and relevance of study programmes and job competencies. Using improvement indicators for certain results, it is clear that despite challenges, the institution was in the right direction towards quality assurance in many ways to achieve quality gold standards. This can be seen in expansion programmes and reorientation in learning and teaching modes at the institution. Using these arguments as justification, we propose a guide for graduate tracer studies for HEIs in the East African region, to enable higher education institutions make evidenced and informed decisions in pursuit of quality programmes and services. The proposed seven step guide derives from ubiquitous methodological influences garnered from the UNITRACE and MUTRACE experiences. This notwithstanding, this paper argues further that tracer survey results are not only a domain of the University. These results are also beneficial to the outside world (Teichler, 2000). Parents and future graduates are interested in wellbeing and timely accomplishment of studies while at the University. Parents of graduates are financiers of their children's studies thus they are keen to know how studies lead into successful careers for their children. Continuing university students are interested in relevance of study programmes to connect with prospective employment opportunities. In this study, there are study-job transient variables that interest both the graduate and the employer. Proliferation of knowledge, skills and experiences gained by graduates as they transit from the University to the job world was highly regarded in this study and this fact is in line with observations from a study by Enders and Ulrich (1997) in a comparative tracer study of academics in Europe. In fact, Ulrich Teichler (1999) and Egesah et al., (2014) indicate that research approaches,

themes and results in graduate tracer studies and the world of work have been highly linked in the recent past decades. The same researchers and others also argue that study of the transition face of graduates as they move from graduation to employment is increasingly becoming an important area of interest (Schomburg 2007, Teichler 1998, Egesah, Wahome, Langat and Wishitemi 2014). The Ministry of Higher Education in Kenya (MoE), the Commission for University Education, Kenya (CUE), the Inter Universities Council for East Africa (IUCEA) and ISO are external institutional bodies that should be interested in selected results of such tracer surveys. Results indicating a connection between study programmes and work competencies assure such bodies about the contribution of HEIs to national development. According to Ulrich Teichler (2003) and OECD (1999), higher education and revelations from graduate tracer studies have potential for policy and practice change that can shape both academics and development. This is also argued for among most European universities (Teichler 2000, 1999). The fact that graduates achieve self actualization when they transit from study to work indicates relevance of university programmes to self and the job market. This credibility can be useful in accreditation of university programmes by CUE for example and for ISO certification of the University and even for university ranking in the region. Teichler, (2002) argues how national systems of higher education have recently diversified their interests in University study programmes and services and the link to prestige and reputation around Europe and the World. Donor institutions of higher learning in Kenya such as HELB, DAAD, Ford foundation, National Commission for Science, Technology and Innovation (NACOSTI) among others pride in the fact that such tracer studies can yield important information for key higher education stakeholders including universities, graduates, students, parents, employers and HEI managers.

5. Conclusion

Graduate tracer studies obtain both intrinsic and extrinsic results and benefits. If designed with rigor and inherent uniqueness, tracer study methodologies provide simple and utilizable   results that can be consumed appropriately at individual and institutional level. Intrinsic results from GTS can be used by universities to point at areas for improvement in study programmes and service delivery at universities. From the foregoing, we can conclude that to help contribute to improvement of study and service programmes, universities in the EA region using an appropriately developed standard GTS guide, should initiate in the near future GTS programmes, whose results can be utilized internally to improve quality of study programmes and service delivery. We are developing a seven step guide that will serve to translate this ambition into reality for HEIs in the East African region. In its recommendation, this paper asks commissions of University education in East Africa and the IUCEA to support the development of the standard GTS guide for East Africa. The paper calls upon the East African Quality Assurance Network (EAQAN) and its affiliate chapters from respective countries, to support the idea of entrenching graduate tracer studies in universities quality assurance programmes, as an additional tool by which a quality culture can be mainstreamed in institutions of higher learning in East Africa.

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