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## Quality Graduate: Level of Preparedness in the Universities in Kenya

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### Abstract

Fundamentally universities are key drivers in contributing to the economic development of any nation. Universities develop manpower which is a significant driver of economic growth and development. Given this, universities' success in their mandate is measured by the ability to nurture holistic graduates who have the necessary knowledge, skills, and attitudes that are required in a globally competitive society. However, universities in Africa and Kenya, in particular, have continued to be ranked lowly in terms of the quality of graduates. Persistent lagging behind is attributable to the inadequate acquisition of critical skills and application and transfer of knowledge among graduates in the universities. In this regard, this study set out to determine whether there is a significant difference in graduate perception on their level of preparedness with attributes of quality graduates in the universities in Kenya. The study used a descriptive survey research design. The target population was 66 universities in Kenya. A sample of 7 universities was selected based on the Webometric ranking of 2014. 3750 finalist students were targeted where 375 students were included in the study. The data were analyzed by use of inferential statistics using SPSS, where analysis of variance was computed and Duncan Multiple Range Test was conducted to determine where differences were found. The study found out that there was a difference in the acquisition of knowledge and its application and transfer among graduates from different universities. Specifically, there was a significant variation in connecting theory and practice; some universities did not have a well-established mechanism to connect students with the industry to promote knowledge transfer. Similarly, a significant difference was noted in dealing with professional values in the discipline areas and being able to create and implement business ideas in respective disciplines.

**Keywords:** Graduate, quality graduate, quality attributes

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## 1.0 Introduction

In the global arena, Mariene (2014) underscores the importance of training and development in institutions and organizations to develop an effective workforce. Policymakers have also realized the importance of investing in education and training as a way of improving the existing stock of skills and competencies of the workforce. Sharma (2012) argues that effective university education must prepare graduates for uncertainty, for responsible participation in development rather than indifferentism in the world of work. This emphasis on skills is also reflected in the Kenya Vision 2030 Strategy. One of the flagship initiatives for the Kenya Vision 2030 Strategy is the development of new stock of skills among graduates to effectively address the needs of the country (World Bank & Vision 2030, 2014). Through this initiative, the country aims to stimulate key stakeholders to better anticipate changes in the skills needed for the future, to realize a better matching between available skills and those required in the labor market, and to bridge the gap between theory and practice (Serafini, 2012). Further, Serafini observes that when these factors are operating optimally universities will produce quality graduates.

On the same note, the Republic of Kenya (2006) observes that universities in Kenya are charged with the responsibility to train quality graduates with relevant knowledge, skills, competencies, and attitudes required in the industry. However, universities in Africa and Kenya in particular, have been lagging in the yearly rankings of the universities worldwide (World Bank and Vision 2030, 2014). Regardless of the criteria used, whether in terms of research output, presence in the web, or skills and competencies of graduates, Kenyan universities have continued to trail behind. A report by the Inter-University Council of East Africa (IUCEA) (2014) indicated that at least half of graduates produced by East African universities are not prepared for the job market. The study showed that graduates lacked employability skills which include technical, mastery, and basic work-related capabilities. The study showed that Uganda had the worst record with at least 63% of graduates found to lack job market skills, followed by Tanzania with 61%, then Burundi and Rwanda with 55% and 52% respectively, and Kenya 51%. The report further revealed that while thousands of young people are graduating each year, their qualifications are unable to secure jobs for many of them. This is a worrying trend that needs urgent redress by a multi-faceted approach.

Similarly, the Policy Framework for Education as presented in the Ministry of Education (2012) noted that the trailing of universities in Kenya in yearly ranking is mainly attributed to inadequate acquisition and application of knowledge and skills among the graduates. Archer and Davison (2008) also argued that there have been inherent mismatches in skills possessed by graduates and those demanded by employers. Archer and Davison further posit that universities have typically failed to instill in their graduates' appropriate skills and dispositions that enable them to add value to the labor market. Graduates mainly lack application and functional skills. This argument is further supported by Renzulli (2012) who observed that graduates produced by universities lacked 21<sup>st</sup>-century skills that are needed in a globally competitive society. This study was carried to determine finalist students' perception of the acquisition and application of attributes of quality graduates in the universities in Kenya.

## 1.1 Research Problem

Largely universities provide fertile grounds for training quality graduates. CUE (2014) indicates that universities are accredited legal bodies to offer programs of study in various discipline areas. Enormously universities are assumed to have approved curricula, physical and human resources, qualified students and faculty, governance and management structures, and appropriate management practices. The fact that universities are accredited is subsumed they have met minimum requirements to train graduates with the necessary knowledge, skills, and attitudes to meet the developmental needs of society. However, available literature indicates there are significant differences in the level of graduate preparedness with quality attributes of a graduate. The study sought to determine whether there is a significant difference in graduate perception on the level of preparedness with attributes of quality graduates across the universities in Kenya.

## 2.0 Literature Review

For many years, employers have been concerned about the ability of graduates to work in a modern organization. This concern pre-dates the recent rapid expansion in higher education and the concomitant concerns, expressed in different quarters, about the standards and abilities of graduates in the 21<sup>st</sup> century (Renzulli, 2012). The real issue is not whether graduates are better or worse in absolute terms than they were in previous decades. Rather it is the integration of graduates into an organization and the speed at which they can contribute effectively that has become a critical factor to contribute optimally towards the performance thereafter increasing the productivity of the organization. According to Sharma (2012), the quality attributes of graduates are now more critical for several reasons. First, in a rapidly changing world, there is less time for graduates to become acclimatized to a particular setting. Increasingly graduates are expected to be able to 'hit the deck running'. This implies that graduates of today must be able to perform tasks without having to undergo further training. Second, although many larger organizations train graduates, the growing numbers of small and medium firms have fewer resources for training and expected a more rapid return on their investment in the graduates. Third, the growth of the world market means that if countries are to remain internationally competitive then graduates need to be versatile and flexible as well as knowledgeable. Fourth, and more fundamental in the educational context, is the shift to addressing the student perspective and the need to respond by empowering students for life-long learning through enhancing a wide range of skills and abilities as well as knowledge in the information and knowledge society.

A study by Serafini (2012), indicates that employers want graduates who not only add value but are likely to take the organization forward in the face of continuous and rapid change; the five broad areas of graduate attributes that emerge from the research as of major importance to employers are knowledge; intellectual ability; ability to work in a modern organization; interpersonal skills and communication. Therefore, the shift from an industrial society to an information and knowledge-based society has far-reaching implications for the kind of skills needed by the workforce and the population at large. Voogt and Roblin (2012), Allen and Velden (2012) and Meeropol (2015), noted that in the early 1990s, there was an increased need for both knowledge and socio-communicative skills among the workforce.

Allen and Velden (2012) pointed out that the 21<sup>st</sup>-century skills do not exist in a vacuum, but form part of a complete interdependent package comprising basic and specific skills as well as 21st-century skills. The skill areas include; professional expertise, general academic skills,

innovative/creative skills, strategic/organizational skills, interpersonal skills, and commercial/entrepreneurial skills. Professional expertise refers to the more specific knowledge and skills needed to solve occupation-specific problems; general academic skills are defined as analytical thinking, reflectiveness, and the ability to see the limitations of one's discipline (Voogt & Roblin, 2012; Allen & Velden, 2012). The ability to come up with new ideas and to approach problems from a different angle has been summarized as innovative/creative skills. Organizational skills describe the ability to act strategically towards the achievement of organizational goals and priorities. Interpersonal skills refer to the ability to work in a team and communicate and cooperate effectively with diverse colleagues and clients (Voogst and Pareja, 2012). Further, Renzulli (2012) indicates that "The most valued people in the 21<sup>st</sup> century are those who can survey a wide range of sources, decide which is most important and worth paying attention to, and then put this information together in ways that make sense to oneself and, ultimately, to others."

Voogt and Pareja (2012) also support the proposition by Renzulli (2012) on 21<sup>st</sup> Century skills by asserting that although the changes are taking place in widely differing sectors of the economy, these are a common set of the core '21<sup>st</sup>-century skills that are needed in virtually all domains which the universities should seek to inculcate in their graduates to be able to contribute in the modern society. These include communication skills, critical thinking and research, professional values, and entrepreneurship skills. According to Serafini (2012), there are sixteen competencies quality graduates must-have. The competencies are divided into two categories with eight competencies grouped under each category: Professional competencies: in-depth knowledge of the field; wide scope within the field; language skills; IT skills; communicative skills; business knowledge; application of theoretical knowledge; and ability to create results. Personal and social competencies: flexibility; commitment; cooperative skills; adaptability; motivation to learn/try new things; intercultural understanding through specific course themes; results orientation; and management skills.

Additionally, Serafini (2012) perceives these competencies as important for business graduates. The character of many of the mentioned competencies is however so generic that they could also apply for higher education graduates from any other study programs (Serafini, 2012). Further, a study on competencies in graduate recruitment and selection by Industrial Relations Services (2003), as cited in Duque (2014), analyzed 367 competencies from 38 competency frameworks. This extensive analysis identified 51 different competencies, and even though it is based on many competencies from many competency frameworks with some varieties, "there is a reasonable amount of consensus about recruiters' priorities" where the study showed – in descending order – the 32 competencies that are most commonly used in graduate recruitment according to employers. These include: communication, results in orientation, teamwork, analysis, business acumen, motivation, problem-solving, flexibility, persuasiveness, interpersonal skills, customer focus, decision-making, leadership, management skills, relevant technical skills, resilience, creativity, learning orientation, and self-confidence. It also includes being initiative, planning, relationship building, change orientation, quality focus, integrity, self-management, continuous improvement, developing others, intellectual ability, foreign languages, IT skills, and diversity.

Sultan and Wong (2013), as well as Brown (2016), observed that when graduates possess professional and social competencies, they can effectively integrate with the job market by contributing to the organization with new theories, new methods and tools, new forms of cooperation, new approaches to solutions, professional strengths, and new energy. This in the

long run improves the performance and quality of the output of the organization. Besides, Murthi and Sondergaard (2012) argue that there exist several studies that provide a list of advantages of employing graduates in an organization including such attributes as graduates demonstrating flexibility, ambition, logical thinking, quick learning, high levels of motivation, good communication skills, creativity, maturity, specialist knowledge, analytic skills, and initiative.

According to World Bank and Vision 2030 (2014) report, Vision 2030 should envisage a shift in emphasis “from knowledge reproduction to knowledge production” through an education system fit to provide knowledge, skills, competencies, and values that helps learners to move from education into the world of work with further academic, technical and vocational education. On this basis, the Policy Framework for Education as presented in the Ministry of Education (2012) has proposed an educational reform focusing on core educational outcomes and on developing a standard repertoire of skills and competencies across all levels of education, and required by learners and teachers. These include literacy, numeracy and inquiry skills, thinking skills, communication skills, observation and investigative skills, application, and transferable skills, social and ethical skills, and entrepreneurial skills.

Based on the literature reviewed, scholars seemed to have a consensus that for a university to produce quality graduates, specific attributes or competencies should be exhibited by any graduate in all the disciplines. These include; Scientific knowledge; communication skills; critical thinking and research; leadership and management; professional values, attitudes, behavior, and ethics; information communication and technology, and entrepreneurship skills. This formed the basis of this study.

### **3.0 Research Methodology**

A descriptive survey design was used to collect perceptions on the extent to which students in the final year of the study felt prepared with quality graduate attributes as they exit to contribute to society. Seven (7) universities formed the sample which included Kenyatta University (A), University of Nairobi (B), African Nazarene University (C) Kenya Methodist University (D), Meru University of Science and Technology (E), Strathmore University (F) and University of Embu (G). Six universities participated in the study. University G did not participate in the study. A total of 286 students were included in the study. Self-administered questionnaires were used to collect data.

### **4.0 Results and Discussion**

#### **4.1 Response rate**

Out of sixty-six (66), targeted universities a total of seven (7) universities were included in the study. Out of seven (7) sampled universities six (6) participated in the study which accounted for an 85.7% participation rate. Three hundred and seventy-five (375) finalist students from the six universities were included in the sample. However, 286 students participated in the study from six universities accounting for 81.7% response rate.

The researcher used analysis of variance (ANOVA) to determine whether there was a significant difference in terms of student's perception of the level of preparedness with quality graduate attributes across the universities studied. Where there are significant differences, the researcher conducted Duncan Multiple Range Test (DMRT) to establish where the differences were found. The study focused on seven qualities attributes which

included: Scientific knowledge; communication skills; critical thinking and research; leadership and management; professional values, attitudes, behaviour, and ethics; information communication and technology, and entrepreneurship skills. Analysis of variance for all attributes put together yielded  $P < 0.05$ . This allowed the researcher to conclude there were significant differences in acquiring quality attributes among students across the Universities. DMRT ranked universities from lowest to the highest also indicating universities that were comparable in terms of student preparedness. University F was noted to be ranked highly. The finalist students indicated that they felt exceedingly well prepared with quality attributes and exhibited higher levels of confidence in respect to getting integrated into the industry. The researcher focused on each quality indicator with a view of determining the significant differences in the extent to which students felt prepared with quality attributes across the universities under investigation. The results are presented as follows:

#### **4.2 Scientific Knowledge of the Discipline**

The study sought to determine whether there were significant differences in the extent to which students were grounded with scientific knowledge in the discipline area across the universities. ANOVA test results revealed  $P < 0.05$ . This allowed the researcher to conclude there were significant differences in acquiring scientific knowledge across the universities. DMRT result revealed where the differences existed. Based on DMRT results showed that students from University B and F ranked themselves highly as being prepared in terms of knowledge and skills in the discipline area. Students from Universities A, B, and D were somewhat comparable. University E was noted to perform lowly in grounding students with theories, principles, and concepts. University F, though comparable with Universities A, B, and D, it was observed to be far ahead in the acquisition of theories, principles, and concepts. The results also showed that students in Universities D and E felt less confident in the ability to connect theory and practice. Students from Universities: A, B, C, and F felt more confident in connecting theory and practice. Further, Universities B and E rated themselves lowly in having in place a liaison office to connect students with the industry to be able to apply knowledge and skills gained in the program of study. Serafini (2012) argues that employers want graduates who have important attributes such as knowledge; intellectual ability; ability to work in a modern organization; interpersonal skills and communication. This argument is further supported by Allen and Velden (2012) who recommended the skills of the 21<sup>st</sup> C, whereby professional expertise is a key attribute of any graduate.

#### **4.3 Communication Skills**

The study sought to determine whether there were significant differences to the extent to which finalist students felt prepared with appropriate communication skills. Analysis of variance generated  $P < 0.05$ . This allowed the researcher to conclude there were significant differences in gaining communication skills across the Universities. DMRT results showed that students in University E ranked low in terms of having developed appropriate communication skills. Students in University F ranked highly having gained the required skills to help them communicate effectively. Students from University F were exceedingly confident in having developed presentation skills as compared to the rest of the Universities. Students from University E scored themselves comparably low in the presentation of information based on audience needs. Universities A, B, C, and D were fairly similar and scored averagely similar marks. Students from University F scored themselves highly regarding synthesizing and presenting information based on the needs of the audience. Students from University E felt less confident in the ability to discuss plans that address the

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needs of society. Students from Universities B and F were comparably similar in having high confidence to discuss achievable plans that could address the needs of society). The findings are in line with; a study conducted by Industrial Relations Services (2003), as cited in Duque (2014), on key competencies that are used in graduate recruitment and selection by most organizations. These include but are not limited to communication, results in orientation, teamwork, analysis, business acumen, motivation, problem-solving, flexibility, persuasiveness, interpersonal skills, customer focus, decision-making, leadership, management skills, relevant technical skills, resilience, creativity, learning orientation, and self-confidence

#### **4.4 Critical Thinking and Research Skills**

The researcher set out to determine whether there were significant differences in student perceptions on the level of preparedness in terms of critical thinking and research from various universities. Analysis of variance resulted in  $P < 0.05$ . The DMRT results showed that students from Universities D and E ranked themselves lowly as compared to the rest of the Universities. This allowed the researcher to conclude there is some level of significant differences in student level of preparedness with critical thinking and research skills across the Universities. Students from University F exhibited higher levels of confidence in having gained critical thinking and research skills. The results further showed that students from University F felt confident to use personal judgment for analytical and problem solving as compared to students from other Universities. It was observed that students from Universities A, B, C, and F were fairly comparable in the ability to identify, formulate and solve problems using scientific methods. Similarly, students from the same Universities were more confident in applying principles and processes of problem-solving. Universities E and D were lagging. Students from Universities B and F felt more encouraged to examine problems using different approaches to problem-solving. Results also showed that while students from the five Universities could be classified together in terms of students having acquired interrogation skills, students from University F were exceedingly confident that they can examine and interrogate issues and recommend solutions.

#### **4.5 Leadership and Management**

The study sought to establish whether there were significant differences in the extent to which students from various Universities felt prepared to take up leadership and management roles. Analysis of variance resulted in  $P < 0.05$ . This pointed out significant differences in the acquisition of management and leadership skills across the Universities. The DMRT results revealed that Universities A, C, D, and E ranked themselves comparably low in having acquired leadership and management skills. Students from Universities B and F exhibited higher confidence levels in having acquired and developed leadership and management skills. Based on the results it was observed that students from Universities A, B, and F exhibited a higher level of confidence in taking up responsibility for their learning as compared to the rest of the Universities under investigation. Further, the results showed that students in Universities B and F felt more confident to accept leadership roles when required to do so. Students from Universities C and D ranked themselves low in being flexible when dealing with issues relating to their discipline areas. However, students from Universities A, B, and F expressed higher levels of confidence in dealing with issues dynamically and flexibly in respect to their discipline areas.



#### **4.6 Professional Values, Attitudes, Behaviour and Ethics**

The study sought to establish whether there were significant differences in the extent to which students' felt prepared with professional values, attitudes, behaviour, and ethics in their respective disciplines. Analysis of variance yielded  $P < 0.05$ . Following these results, the researcher conducted DMRT to confirm whether the differences observed in respect to professional values, attitudes, behaviour, and ethics varied across the universities studied. The results showed that students from Universities B, C, and F felt more confident in having gained professional values, attitudes, and ethics in their discipline areas as compared to students from the other Universities under investigation. Further, the results indicated that whereas students understood moral and ethical principles and legal responsibilities underlying their discipline areas, there exist significant differences in embracing professional values ( $P < 0.05$ ), becoming effective team members ( $P < 0.05$ ), and also the ability to deal with diversity ( $P < 0.05$ ) across the Universities. The DMRT results showed that students from Universities B, D, and F exhibited a higher level of confidence in embracing professional values such as excellence, altruism, responsibility, compassion, accountability, honesty, integrity, and commitment to scientific methods as compared to the rest of the students from the other Universities. Students from University F showed a high level of confidence in working as a member of groups or in teams. Similarly, students from University F expressed high levels of confidence in being able to deal with diversity among members of the group.

#### **4.7 Information Communication and Technology**

The researcher sought to determine the extent to which students felt prepared with Information Communication Technology (ICT) skills to contribute effectively in the world of work. Analysis of variance yielded  $P < 0.05$ . This indicated a high level of significant differences in acquiring ICT skills among students across the Universities. This implied that the development and application of ICT skills were different among students from various Universities. The DMRT results showed that students from Universities B and F felt more confident to use technology to search, collect and organize information from different sources. Students from Universities A, C, D and, E who were similar in the use of technology ranked themselves comparably low. Students from Universities B and F were far ahead in the integration of technology in their discipline areas. Based on the results it was observed that students from Universities B and F, though similar with Universities A and C, were ranked ahead in the application and understanding of the limitations of technology in their respective discipline areas.

#### **4.8 Entrepreneurship Skills**

The World Bank and Vision 2030 (2014) report, as stated in Vision 2030 education should envisage a shift in emphasis "from knowledge reproduction to knowledge production" through an education system fit to provide knowledge, skills, competencies, and values that help learners to move from education into the world of work with further academic, technical and vocational education. The study set out to establish the extent to which students felt prepared with entrepreneurship skills to create business opportunities in their discipline area. ANOVA results yielded  $P < 0.05$ . This was an indication of the significant difference in acquiring entrepreneurship skills across the Universities. Following this result, the researcher conducted DMRT to establish where the differences existed across the universities. DMRT results revealed that Universities B and F students felt more confident having gained entrepreneurship skills compared to students from Universities A, C, D, and E. Results

indicated that students from Universities A, B, and F compared fairly well by having gained skills to develop and manage business ideas. Similarly, students from the same universities felt more confident and ready to move out and contribute to society.

## 5.0 Conclusion

The findings indicated significant differences in acquiring attributes of quality graduates across the Universities where the  $P < 0.05$ . The findings further revealed that students from some Universities showed a low level of confidence in having adequate scientific knowledge of the discipline areas, the  $P < 0.05$ . Specifically, students felt incompetent in the application of theory into practice. Students also exhibited a low level of confidence,  $P < 0.05$ , in having developed appropriate communication skills to enable them to articulate ideas, make presentations and engage in productive discussions to address the needs of the society.

Results on critical thinking and research yielded  $P < 0.05$  which showed that students from different Universities had different levels of confidence in having developed analytical and problem-solving skills. Some exhibited low levels of confidence in using scientific methods to address the problems of society. Findings on leadership and management skills indicated that students from different Universities showed different levels of acquisition of skills in leadership and management, the  $P < 0.05$ . Some students felt that they were not quite prepared to take up leadership positions. Results indicated that students showed low levels of confidence in embracing professional values and becoming effective team members, the  $P < 0.05$ . Specifically, students felt not quite well prepared to deal with a wide range of people and being active team members.

Further, it was noted that there was a low confidence level on the integration of technology in the discipline areas. The study revealed that students were not quite well prepared to use technology to search, collect, organize and interpret information from various sources. Significant differences were noted in the development of appropriate entrepreneurship skills,  $P < 0.05$ . Students felt they were not quite prepared to create business opportunities in their respective discipline areas. Similarly, students indicated that they were not quite competent to develop and manage business ideas to address their individual and societal needs.

## 6.0 Recommendations

The study indicated that there were significant differences among graduates produced in the universities. To facilitate the training of quality graduates, universities need to focus on critical skills such as communication skills, ICT, critical thinking and problem-solving skills, leadership and management, and entrepreneurship skills.

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