

Redefining Quality in Higher Education: The Concept of Juakalization *

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University education is the epitome of education that countries leverage for the delivery of national strategic plans, through the creation of skilled workforce for socio-economic development. Kenyan public universities have experienced massification in the past three decades, a phenomenon resulting from the democratization of education, the advent of knowledge economy, and globalization. The purpose of this study was to investigate whether the consequences of massification caused Juakalization in higher education in Kenya. Juakalization is the dilution and conversion of high quality university education to assume an artisan nature of mass production of low quality and unstandardized educational product. The study used a systematic review of literature and public documents to analyze the consequences of massification in Kenya's higher education. Findings indicate that the consequences of massification of overcapacity and insufficient infrastructure led to mass production of a low quality non-standardized university product. The researcher compares the Kenyan Jua Kali artisan production process to that of higher education, where both work under adverse conditions to produce mass low quality products. This analogy acts as a metaphor to describe the dilution and conversion of higher education to that of artisanship and coins the term Juakalization to describe this process in higher education.

Keywords: Juakalization, artisanship, massification, Jua Kali, unstandardized, mass production

Introduction

A university's key functions include the discovery, propagation and perpetuation of ideas, knowledge, and the dissemination of truth (Akaranga & Ongong'a, 2013). Higher education is the engine for socio-economic growth, arming the populace with innovative knowledge and skills essential for management of governments and businesses. According to the World Bank Report (1994), global university enrollment rose by an average of 6.2% and 7.3% annually in developing and developed countries respectively, between 1974 and 1994. Enrollment statistics revealed that the world has experienced mass enrollment of students in universities, outstripping resources, a phenomenon described as massification (Mohammedhai, 2008). Massification is a global

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phenomenon caused by the democratization of education, the advent of knowledge economy, and globalization (Inyang, 2013).

China, Korea, Japan, Mongolia, Western Europe, and countries in North America have experienced massification challenges, as well as Nigeria, Ghana, Ethiopia, Uganda, Kenya, and Malawi (Postiglione & Tan, 2007; Okebukola, 2014). In Africa, massification led to constraining both physical infrastructure and human resources available to support higher education, with a negative impact on the quality of higher education in the region (Ahemba, 2006; Okebukola, 2014; Mwirichia, Jagero, & Barchok, 2017). These changes witnessed at the end of the 20th century such as increased enrollment, reduced government funding and competition for access, raised concerns about quality, and leadership challenges in higher education (UNESCO, 2017).

In Kenya, free primary education led to increased secondary school graduates, which then served as a catalyst for the increased demand for a university education. Other causes included the government's prioritization of higher education, the emergence of a more globalized society that calls for an educated and highly skilled labor force, introduction of Module II, and the population's perception that a degree guarantees a good job (Embeywa & Kimathi, 2014; Nyaboga, Okioga, & Onsongo, 2012). Module II or parallel programmes refer to students who are willingly admitted to public universities on their ability to pay the full cost of their entire university education without government assistance (Nyaboga et al., 2012).

The lack of adequate physical infrastructure and qualified teaching staff to match the increased enrollment casts doubts on the quality of education and university product churned out of Kenyan institutions. According to Bloom (2006), high quality university education transforms individuals and societies, ultimately reducing poverty and increasing global competitiveness among countries. The concept of quality in higher education has remained an important issue to stakeholders who maintain divergent views on defining high quality university education. However, there is convergence of views by scholars that the quality of higher education is paramount for universities mandate to be attained (Kalai, 2010).

This study related historical and current statuses of institutions of higher education in Kenya with the country's informal and economic artisan sector known as "Jua Kali," characterized by mass production of unstandardized products using basic skills, that are not automated. Using a systematic review of literature, the research sought to establish whether the consequences of massification caused Juakalization in higher education in Kenya. Juakalization, in this context, refers to the dilution and conversion of high quality university education to assume an artisan nature of mass production of low quality and unstandardized educational products.

Statement of the Problem

After independence in 1963, the government of Kenya offered higher education to the masses as a pathway for socio-economic growth following the world's emphasis on university education. As a result, a large portion of the education budget was channeled to finance primary and secondary education, but public universities' funding declined due to poor economic performance and a challenging donor environment. The focus in primary and secondary education without addressing how it feeds into higher education led to leadership challenges in higher education institutions. During the 1986-1987 and 1992 academic years, the government deployed a double intake strategy to direct the admission of two cohorts at the same time in universities. University students were greatly involved during the 1982 Coup, causing the closure of public universities for over one year. The changeover of

the education system from the British curriculum of 7-4-2-3 to the current American curriculum of 8-4-4 further led to a double enrollment as two cohorts graduated from high school at the same time (Gudo, Oanda, & Olel, 2011). The British system enrollment was seven years in primary school, four years in high school, two years in A-level (pre-university equivalent), and three years in university. On the other hand, students enrolled in the American curriculum take eight years in primary school, four years in high school, and four years in university. The new strategy caused an increase in university enrollment, leading to higher administrative costs and challenges in governance, leadership, and change management.

To cope with mass enrollment and low funding challenges, universities opened opportunities for self-sponsored degree and diploma students as a way of raising funds to bridge the financing gap, thus compromising effectiveness (two cohorts enrolled at the same time) in knowledge and skills transfer, leading to massification (Abagi, Nzomo, & Otieno, 2005; Mwiria & Nyakuri, 1994). Literature indicates that as African countries gained independence, business leaders, vibrant civil societies, and others, gained influence over the fragile states and yielded considerable power. This resulted in the erosion of state legitimacy, thus creating inequality and inefficiencies in most sectors of the economy (Odhiambo, 2011).

The consequences of massification led to the mass production of an outdated educational product, which did not meet the standards established by more mature educational systems in other countries. The result is that curriculum was unfit for the needs and demands of industry therefore limiting Kenya's ability to compete globally. The society was unable to cope efficiently with the world and could not transcend existing knowledge to usher progress in the educational systems (Kinyanjui, 2007; Munene, 2013; Odhiambo, 2011; Ojiambo, 2009). As a result, the government was unable to meet its objective of creating an entrepreneurial workforce that would start businesses and create products and jobs, both essential for national development and growth. Students produced by the current higher education systems do not possess precision and moral discipline and do not have the required work ethic to compete in a modern, industrial, and technological world (Kinyanjui, 2007; Munene, 2013; Odhiambo, 2011; Ojiambo, 2009). Therefore, the higher education product is unable to feed the labor market or support the needs of government and society. Mutisya (2011) alluded that African leaders made promises to improve the material welfare and economic growth of their societies, but the policies failed to have a lasting impact due to lack of leadership and resource, leading to an economy which is inefficient in creating growth and institutional change.

The lack of effective leadership attributed to political interference and lack of autonomy in the appointment of university executives to the position of vice chancellor is one of the key challenges in higher education (Munene, 2013, Odhiambo, 2010; Sifuna, 2012). This is because a vice chancellor is the chief executive officer whose position is critical for the success of the institution. This study therefore examines a convergence of factors that compromised the quality of higher education in Kenya, leading to Juakalization.

Background—Kenya in Context

Kenya, like most African countries, faces challenges of poverty and youth unemployment, which have led to the designing and implementation of various political and economic policies. Kenya's development blue print "Vision 2030" seeks to transform the country into an industrialized middle-income country that provides a high quality of life for its citizens (Ministry of Planning and National Development, 2007). It recognized education

and training as the keys to the transformation through technological innovation and the shift from knowledge reproduction to knowledge production. To actualize these ambitious outcomes, university reforms were instituted beginning in 2008 (British Council, 2016). Medium-term plans between 2013-2017 were geared towards transforming the higher education system to deliver accessible, equitable, and internationally competitive graduates. Other changes that have affected the education system in the country are the adoption of a new constitution in 2010, which led to legal and institutional reforms, such as the *Education Act of 2013* and a new higher education legal framework *Universities Act 2012*, all geared towards improving the management of public resources (Republic of Kenya, 2015).

Historical and Governance Challenges

According to the *Global Education Monitoring and Accountability Report*, education in any nation should be clearly defined and protected. This is achievable through legislation, financing, and monitoring by stakeholders (UNESCO, 2017). During the colonial period 1920 to 1963, Kenya's education was organized on racial lines offering superior education to European and Indian children. After the Second World War, European children pursued their university education in Britain or South Africa. Therefore, at independence, Kenya inherited a discriminatory education system geared towards producing an African workforce of clerical officers and artisans. This gave the new government the impetus to focus on providing access to the masses and improving the quality of education through curriculum reforms (Eshiwani, 2009; Abagi et al., 2012).

In 2008, the government instituted reforms in the education sector at all levels. Since then, the education sector continues to suffer from political interference through presidential decrees and political rhetoric that has replaced established policy-making systems (Munene, 2013; Sifuna, 2012). The Head of State was the chancellor of all public universities with the power to appoint or terminate a vice chancellor's services. In addition, the majority of university council members were nominees of the Head of State compromising council members' objectivity in overseeing the management of these institutions. Government involvement in universities stifled autonomy and academic freedom limiting scholarly research interests and general management of public universities and negatively affecting university leaders' ability to make decisions that would positively affect the quality of higher education in public universities (Munene, 2013; Sifuna, 2012).

Theoretical Approach

Anchored on the theory of massification (Mohammedhai, 2008), Juakalization traces the dilution of quality university education to the consequences of massification. Massification theory was developed in the late 1920s, building on the theory of mass society developed by Max Scheler, Jose Ortega, and Karl Mannheim. Max Scheler coined the term "massification" in 1927, Ortega coined the phrase "mass man", and the concept of "mass society" is attributed to Mannheim (Homans, 1979). The theory of massification unravels questions of quantitative and qualitative change of higher education evolution, and postulates that quality in higher education institutions is a compound concept of different factors, such as unity of development, standardization, adaptation, serving, and variety. The theory alludes to the fact that university management does not operate in isolation to determine university quality, but in conjunction with students, their parents and the society either directly or indirectly. This in turn affects the day-to-day operations of the university, causing the need for continuous monitoring and evaluation of university education to safeguard quality. Massification caused significant changes in the

perceptions, mission, structures, academic standards, functions, forms of establishing education, and management systems in universities.

The theory is congruent to Green and Harvey's (1993) research that higher education quality ought to be considered in terms of the process (input) and the proceeds (output) to evaluate the outcome. Their research examined both the inputs and outputs in institutions of higher learning in Kenya, caused by the consequences of massification.

Methodology

This study used a systematic review of literature with a quantitative synthesis of research findings on the impact of mass enrollment and massification in Kenyan institutions of higher learning. Literature searches were conducted using indexed google scholar to locate relevant literature published from 1990 to December, 2017. This search method was used due to the lack of indexed Kenyan studies in high profile indices, directing the researcher to quality grey literature from dissertations and international journals. Systematic review facilitated an in-depth, critical, and contextual analysis of available scholarly literature in gaining a deeper understanding and defining research direction and agenda of the consequences of massification on higher education in Kenya. Inclusion criteria were broad including studies with empirical data studying impacts of massification, over capacity, and inadequate infrastructure, while reviewing contextual studies on historical, political, and cultural influences on higher education, poor leadership, governance change management, and policies impact on higher education. A total of 65 studies published in English since 1990, which used qualitative, quantitative, or mixed methods designs to investigate and/or describe the consequences of: (a) massification; (b) institutions of higher education operating beyond capacity; (c) insufficient higher education infrastructure; or (d) contextual inputs within Kenyan higher education, were included in the review.

Findings

The objective of the study was to establish whether the consequences of massification led to dilution of high quality higher education in Kenya. Sixty-five documents published in English between 1990 to December, 2017 were reviewed through a systematic review of literature describing the consequences of massification, institutions of higher education operating beyond capacity, insufficient higher education infrastructure, or contextual inputs unique to higher education in Kenya.

Bloom's (1975) definition of quality leads to reduction of poverty and increased global competitiveness, while Crawford, Elvidge, Schindler, and Welzant (2015) suggested four broad conceptual themes within which quality in higher education should be defined: purposeful, transformative, exceptional, and accountable. These themes define quality in higher education as an institution's compliance with its mission, vision, and policies set by regulatory bodies. Quality is further measured by transformative learning evident in students' personal and professional development. Crawford et al. (2015) further suggested that quality in higher education is evident in an institution's accountability to stakeholders where resources are optimally utilized and the student output bears not defects.

Massification

Altbach (1982) used the term "massification in higher education" to describe massive increase in student

enrollment beyond the capacity of academic reproduction and training. The continuous rising demand for higher education in Kenya manifests through proliferation of universities, increased student enrollment, higher faculty to student ratios, and decreasing graduation trends. Challenges in Kenya's higher education system have been linked to poor leadership despite political and government interference (Munene, 2013; Odhiambo, 2011; Sifuna, 2012).

Consequences of Massification

Prolifereation of universities. In 1970, Kenya had only one public university, the University of Nairobi (UON), and one private university, the United States International University of Africa (USIU). Since 1972, Kenya has experienced massive growth in university education to have the largest university education system in East Africa (Embeywa & Kimathi, 2014). Following the creation of 14 new universities from middle-level colleges, there were 23 fully-fledged public universities. Table 1 indicates the growth of public and private universities in Kenya, their constituent colleges, and campuses from 2010 to 2014. In 2013, there was a decline due to the upgrading of several public constituent colleges to fully-fledged public universities. Constituent colleges were known as middle-level colleges, offering diploma and non-degree programmes, before being upgraded to branches of fully-fledged public universities (British Council, 2016).

Table 1

Growth of Universities in Kenya Between 2010-2014

Category	2010	2011	2012	2013	2014
Public universities	7	7	8	22	22
Public university constituent colleges	15	23	22	9	9
Public university campuses established	30	30	33	33	33
Chartered private universities	13	14	15	17	17
Universities with letter of interim authority	9	11	12	11	13
Newly registered universities (private)	3	2	2	2	1
Public university constituent colleges	-	4	4	5	5
Total	77	91	97	99	100

Note. Source: British Council (2016) adopted from Republic of Kenya 2015.

Trends in student enrollment. According to the Ministry of Education (MoE) enrollment in public universities increased steadily from 3,443 students by end of the 1970s to over 20,000 in 1989-1990 (Monitor ICEF, 2016). A sharp rise in enrollment was witnessed between 2004-2005 and 2008-2009 when student numbers doubled from 58,637 to 122,847 and further increased to 177,735 in 2009-2010, while in 2011, student enrollment increased by 40% (Commission for University Education, 2016; Liu & Mutinda, 2016; MoE, 2014; Nyangau, 2014; Odhiambo, 2011). The colossal rise in enrollment is attributed to a number of factors including industry demand for a workforce with a minimum degree for clerical employment opportunities, the introduction of self-sponsored programmes, the emergence of a knowledge-yearning society, constitutional requirement for a university degree for lucrative government positions, and higher transition rates from lower levels of education following the implementation of free primary education programme (Nyangau, 2014; Odhiambo, 2011; O'Neill & O'Donoghue, 2004). Figure 1 indicates massive increase in enrollment for university education as more pronounced in public universities as opposed to private universities, from 2005-2015.

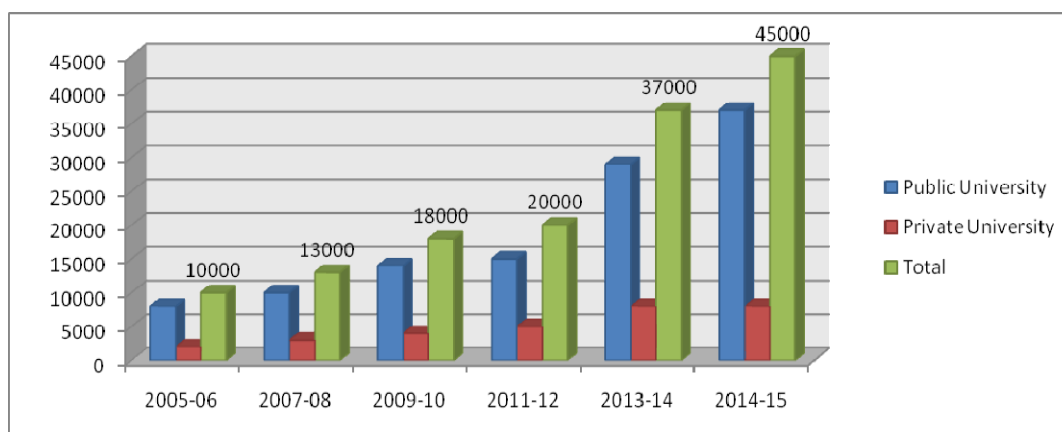


Figure 1. Trend in university enrollment in Kenya 2005-2015 (Source: Author's computation based on Republic of Kenya data).

Faculty to student ratio. According to the Commission for University Education (CUE), the recommended faculty-student ratio is 1:50 for theoretical-based courses and 1:20 for practical-based courses (Commission for University Education, 2016). Theoretical-based courses are generally classified as arts while practical-based are science courses. Public universities have been unable to comply with the set guidelines due to mass student enrollment.

Table 2

Academic Staff to Student Ratio in 2014 in Public Universities

Clusters	No. of staff	No. of students	Ratio
Agriculture, Forestry and Fisheries	819	26,648	1:33
Architecture	231	5,057	1:22
Business and Administration	1,883	93,331	1:50
Computing	452	15,137	1:34
Education (Arts)	1,048	69,188	1:66
Education (Science)	144	26,772	1:186
Engineering	761	21,710	1:29
Environment	433	9,587	1:22
Health and Welfare	1,338	23,599	1:18
Humanities and Arts	962	40,179	1:42
Journalism and Information	248	11,298	1:46
Law	210	3,642	1:17
Life and Physical Sciences	1,484	34,385	1:23
Manufacturing	50	2,290	1:46
Mathematics and Statistics	431	14,396	1:33
Security and Conflict Resolution	128	5,126	1:40
Services	172	8,934	1:52
Social and behavioral sciences	694	33,491	1:48
Teacher training	124	5,673	1:46
Veterinary	193	1,122	1:6
Other	23	10,255	1:446

Note. Source: Own computation from Kenya National Bureau of Statistics (KNBS) data.

Data presented in Table 2 show that the teacher student ratio in public universities is not compliant with the regulator standards, as indicated by three clusters in Science (1:186), Arts (1:66), and Business and Administration (1:50). Embeywa and Kimathi (2014) noted that the Commission for University Education recommended a faculty-student ratio of 1:18 for the faculty of Education and Social Science for quality education to be guaranteed. Three clusters stand out as having a relatively high faculty-student ratio. These were Education (Science) (1:186), Education (Arts) (1:66), and Business and Administration (1:50). The clusters with the lowest ratio included Veterinary, Law, Environment, Health and Welfare, and Architecture. The overall staff: student ratio in public universities in 2014 was 1:39.

Resource Constraint in Higher Education in Kenya

Government funding to higher education significantly reduced around the 1990s, when Breton Wood institutions pressured the Kenyan government to reduce subsidies in public universities, introduce fees, and stop paying students' allowances (Assié-Lumumba, 2006). Reduced funding affected the management and operations of universities including physical and human resources.

Inadequate physical facilities. Mass enrollment in universities without corresponding expansion of tuition and boarding facilities has resulted in congestion and overcrowding in lecture halls, libraries, laboratories, and recreation facilities. Gudo et al. (2011) conducted a study on university expansion in Kenya and observed a serious shortage of both tuition and boarding facilities. Specific findings of their study established that Masinde Muliro University, a public university in Kenya, only met 53% of its academic staff needs, while two private universities, USIU (25%) and Baraton University (58%) met higher percentages of staffing needs. The findings concluded that both private and public universities rely on part-time lecturers to fill the shortfall of teaching staff, resulting in a higher number of adjunct lecturers than tenured faculty, compromising the quality of education, scholarship, and knowledge creation opportunities (Ngolovoi, 2008; Waituru, 1999). Other researchers support that institutions of higher learning in Kenya lacked the capacity to handle the increasing number of the students being enrolled at the institutions (Gudo & Olel, 2011).

Relevant programs and human resources inadequacy. Mukhwana et al. (2016) conducted a study on the state of university education in Kenya and established that a total 3,408 programs were offered at bachelors, masters, doctoral, and postgraduate diploma levels. Research findings established that most of the programs offered were completely new despite the lack of experienced faculty to teach these new courses which caused a rise in quality teaching concerns. Groombridge and Kulski (2004) explained that excellent teachers are identified by their mastery of the subject matter which to a large extent is dependent on the number of years of teaching the subject. The enormous number of programs offered in universities raises quality concerns due to the limited capabilities of the institutions and faculty entrusted to impart knowledge. According to a study by Chickering and Gamson (1999) on the principles of good practice in undergraduate education, quality teaching leads to quality learning. Figure 2 indicates programs offered at the institutions of higher learning in Kenya as of 2015.

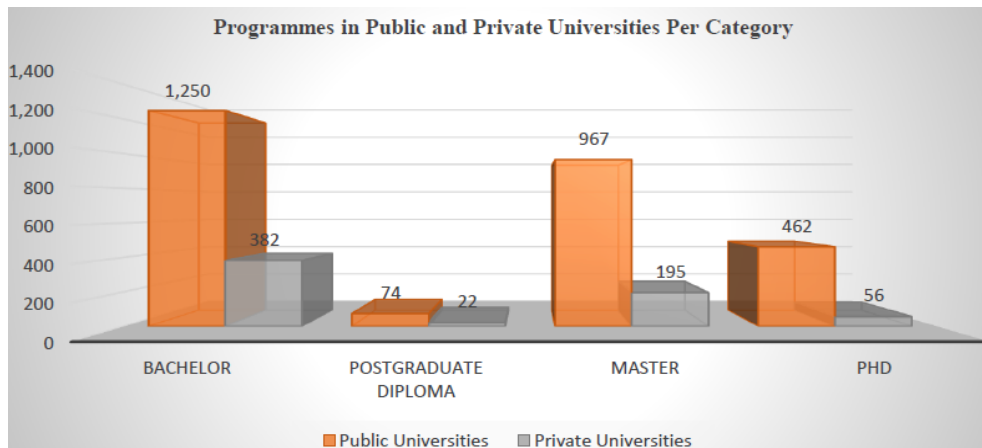


Figure 2. Programs in Kenya’s Public and Private Universities per Category in 2015 (Source: Mukhwana et al., 2016).

Faculty qualification. According to the Commission for University Education (2016) as of 2015, about 53% of the teaching staff were master’s holders, 34% had doctorate degrees, and 9% were bachelor’s degree holders. When compared with the massive enrollment numbers, a serious shortage of qualified teaching staff in the country is evident, especially those who have doctorate qualifications. The few available faculty have dealt with large class sizes, increased workload, congested lecture halls, increased number of disobedient students, less motivated students, congested laboratories that are not well-equipped, and inadequate instructional facilities (Abagi, 1999; Mukhwana et al., 2016; Cash, 1993; Nightgale & O’Neil, 1997). Figure 3 gives a breakdown of the number of academic staff in Kenyan universities based on their qualifications.

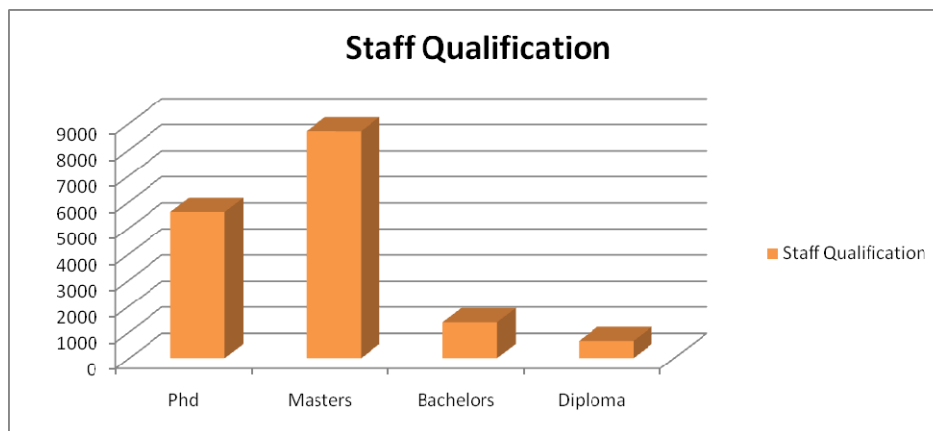


Figure 3. Staff Qualification in Public and Private Universities (Source: CUE, 2016).

Graduation trends in Kenyan universities. According to the Commission for University Education (2016), the number of graduating students increased by 93% in 2015 at 71,347 from a total of 36,847 students in 2012. The rise in the number of graduates in the job market meant availability of more skilled labor force. Doctoral students’ proportion of graduates was as low as 0.7% of overall graduating students in 2015, which was an increase of 0.2% from the year 2012. The causes of the low completion rates at the post-graduate level is attributed to a number of factors, such as extended research timelines, few qualified academic staff to supervise post-graduate students, and overreliance on adjunct faculty (Mukhwana et al., 2016). This was a clear indication

that universities in Kenya are more than likely to face a shortage of faculty with doctorates. It is important to note that graduating Kenyan doctoral students from universities in other nations do not necessarily go back to teach in Kenyan universities, as some of them seek other opportunities locally and abroad. Table 3 shows the graduation trend in Kenyan universities during the period 2012 to 2015.

Table 3

Graduation Trends in Public and Private University Between 2012-2015

Programme levels	2012		2013		2014		2015		Total		Grand total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Bachelor	17,412	14,311	21,537	18,628	28,986	23,783	32,995	27,866	100,930	84,588	185,518
Post graduate Students	336	244	507	304	1282	853	858	568	2,983	1,969	4,952
Masters	2,415	1,932	2,949	2,340	4,022	3,248	4,865	3,726	14,251	11,246	25,497
PhD	134	63	167	102	268	159	295	174	864	498	1,362
Total	20,297	16,550	25,160	21,374	34,558	28,043	39,013	32,334	119,028	98,301	217,329

Note. Source: Own computation from KNBS data.

Graduation trends and gender disparities. Gender disparities are evident in Table 3 between female and male students. Graduating student numbers indicated gender disparities at all levels, most notable being the low number of female doctoral students who graduated between 2012 and 2015, was 498 students, which was 57% of their male counterparts. However, a remarkable graduation trend is noted for undergraduate programs between the genders with a small variance during the period 2012 to 2014. A larger variance is noted in 2015 between graduating male and female students despite an increase in female students during the same year. The increase in the number of graduates indicated massification of students in the universities in Kenya.

Inequality in educational opportunity. University massification in response to globalization has had a negative impact on equality of opportunities in higher learning institutions. According to the *Education for All (EFA) Global Monitoring Report* by UNESCO (2005), education inequality between the “haves” and “have-nots” in Kenya is overwhelming. While the actual enrollment in higher education increased, class-based disparities have occurred due to groupings between government-sponsored and privately-sponsored students. For the small percentage of students who persist through the primary and secondary school systems, they face challenges in the higher education admissions’ process and have financial barriers that create barriers of access to higher education.

Juakalization Concept

According to Srikanthan and Dalrymple (2003), defining quality was challenging due to the different interpretations and views held by the four groups of stakeholders in higher education: the providers, users, consumers, and employees. On the one hand, students associate quality with the institution and program they enrolled in while employers define quality of a university product (graduate) according to their ability to create value for the company and building a pool of dependable employees (Harvey & Knight, 1996). For the purpose of this study, the operative definition of quality was anchored on the outcomes proposed by Bloom’s definition of quality and McCowan’s (2018) three assessment factors of resources, pedagogical culture, and governance. Quality was reviewed in terms of adequate physical and human resources, while governance observed an

insitution's political interference and lack of autonomy. Poor policy decisions, implementation, and leadership are key factors in dilution of quality education (Crawford et al., 2015). Pedagogical culture, the third measure of quality, reviews curriculum and graduate suitability for industry and asserts that of "half baked graduates" were attributed to irrelevant curricula, thus adopting the formula.

Quality = F (resources, pedagogical culture and governance)

This study reviewed the consequences of massification, which include mass enrollment of students, exponential expansion of universities, inadequate teaching, learning facilities and inadequate and poorly-trained academic staff, and poor governance. In formulating a relationship between massification outcomes, Mulinge, Arasa, and Wawire (2017) expressed quality as:

$$Q = F (X_1, X_2, X_3, X_4)$$

where Q: Quality of education at university level

X₁: Large class size

X₂: Unsatisfactory exam supervision

X₃: Inadequate time for research

X₄: Large exam scripts

Reviewed literature indicated that massification has indeed occurred in Kenyan universities following the inability to contain mass enrollment and expansion of universities, operating under adverse conditions, such as overcrowding, lack of physical and human resources, deteriorating physical facilities, deterioration of quality teaching, scholarships, and lack of resources. Consequently, the inadequacy of the resources resulted in the overutilisation of the limited resources, which has compromised quality of learning and its outcome.

Utilitarian scholars argued that massification has both positive and negative impact, such that the benefits of democratization of university education grants access to a larger segment of the population resulting in immense transfer of knowledge, which outweighs its drawbacks (Hornsby & Osman, 2014). The drawbacks have been summarized as watering down quality of university education, inability to create employment for the rising number of graduates, and the transfer of low quality knowledge to the masses, with possible multiplier effect to the society. Scholars supported that post-massification features have diluted quality education pointing to inadequate physical and human resources, compromised teaching, learning, and research, the introduction of irrelevant courses, and government strategies and policies that continued to cause mass enrollment over decades all resulting in low quality teaching in universities, and subsequently producing poor quality graduates for the job market. As a result, all of these factors caused Juakalization.

Contextually, Juakalization is used in this study to conceptualize low quality education standards witnessed in Kenya's higher education sector. This study hypothesized that Juakalization is a consequence of massification in Kenyan universities. "Juakali" is a Swahili word in Kenya that literally translated reads "*fierce sun*" but, the actual meaning is the Kenyan word for "get it done", or a person, businessman, or entrepreneur that can undoubtedly fix or practically do anything upon request. To define Juakalization, the artisan referred to in this study as one who produces metal products working under the fierce sun to produce unstandardized products for the mass market. Similarly, the consequences of massification have led to declined quality of education in universities and mass-production of low quality educational product unfit for industry. Therefore, students produced by juakalized education systems are unable to feed the labor market, governance structure, or the social structures.

Conclusion and Recommendations

To reverse the effects of Juakalization manifested in higher education in Kenya, transformative leadership is the key to effective educational reform. Whereas no single leadership theory or practice is most suitable for educational leadership challenges of the 21st century, Yukl (2012) linked effective leadership to transformational leadership. Northouse's (2010) identified transformational leadership approach to be more effective with better outcomes than traditional transactional leadership approach in academic institutions. To transform higher education in Kenya, the implementation of strategic change that combines people empowerment, new technology, and business re-engineering processes is necessary (Northouse, 2010). This is best achieved by leveraging opportunities presented by globalization, changing technology, and embracing and developing global competencies while aligning curriculum with international standards (Sifuna & Sawamura, 2010).

Literature indicated that Juakalization of higher education is not unique to Kenya, as similar phenomenon manifests in other economies in the world, such as China, Korea, Japan, Mongolia, Western Europe, and countries in North America (Postiglione & Tan, 2007; Trows, 2000). Other developing countries in Africa, as Nigeria, Ghana, Ethiopia, Uganda, South Africa and Malawi, like Kenya, have juakalized university products in all sectors and face similar consequences of massification. Future research across continents is necessary to establish the global extent of Juakalization, while seeking a unique solution of restoring quality education in institutions of higher learning.

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