www.unibulletin.com
UNIVERSITEPARK BULTEN | BULLETIN
ISSN 2147-351X | e-ISSN 2564-8039
2023| ÜNİVERSİTEPARK

RESEARCH ARTICLE

Examining the status of Flagship Universities in Africa

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Received May 06, 2022
Accepted September 17, 2022
Published Online December 30, 2022

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To cite this article: *Moshi, G. J. (2022). Examining the status of Flagship Universities in Africa, Üniversitepark Bülten, 11(2): 93-120.*

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ABSTRACT

Background/purpose – This article explores the social history of flagship universities in Africa through marketing, research output, and academic knowledge. The study highlights the social, academic, political, and economic significance of each African flagship university within their respective countries.

Materials/methods – The study was conducted according to three top university global rankings, the Academic Ranking of World Universities (ARWU), the QS World University Rankings (QS) and the Times Higher Education World University Rankings (THEs). The study attempts to analyze a hybrid list of African flagship universities listed commonly among the best between 2015 and 2017.

Results – The study revealed that, between 2015 and 2017, the University of Cape Town, South Africa, maintained a higher ARWU status than the American University in Cairo, Egypt. The next-highest ranked university was South Africa's University of Witwatersrand. Regardless of each university's respective long history, the findings further highlight the universities' research innovations and achievements over time. The results that emerged from this study were that most of Africa's national elite universities strive to attract the best caliber of candidates from the competitive global academic scene, and that few African universities have achieved high global rankings. Despite innovations, Africa has produced little research, and has the lowest higher education investment level. This article suggests that governments in African countries should increase the level of research support, improve funding initiatives, and facilitate universities' research policies. These efforts would have the potential to boost academic reputations of African universities as well as curriculum innovation.

Conclusion – The findings suggest that as a development marketing strategy for flagship universities in Africa, a few institutions should be selected into which significant investment could be made to bolster funding and research resources.

Keywords – flagship universities, global university ranking, quality research, higher education, Africa

To link to this article – https://dx.doi.org/10.22521/unibulletin.2022.112.6

1. INTRODUCTION

This article investigates the social history of flagship universities in Africa according to their marketing, research output, and academic knowledge. It is argued that the quality and level of education that individual institutions receive contribute to the higher education sector in general. The assumption that African higher education institutions have feasible policies and plans that support the development of research universities in their respective countries has been called into question. African higher education, as a whole, struggles to promote its research output, whilst also confronting various challenges and mechanisms that limit the sector's scientific development – the net result is research and teaching in Africa faces a backwards trend (Altbach & Salmi, 2011).

Currently, only three to five universities from South Africa and Egypt have been ranked in the top 500 universities worldwide. Flagship universities in Africa are considered contemporary institutions of social, academic, political, and economic significance in their respective countries. Building dynamic national research universities in Africa (with strong groundings in the politics, economy, and history of their respective countries) is a subject worthy of academic examination. Nevertheless, many potential world-class universities have attempted to make the top-ranking lists. More broadly, research universities strive to transform into recognized world-class institutions. In recent times, several developing countries have created supportive higher education environments, and in so doing have improved their country's reputation to influence regulatory settings that enable and encourage their universities to compete on the world stage (Forster, 2017). However, this analysis is somewhat subjective, and is based on numerous indicators against which the excellence and relevance of a university's quality are measured. The categories employed include reputation, awards granted, numbers of international students and faculty, and research grants having been secured. The ranking of universities worldwide has been conducted by various groups; among them, the Academic Ranking of World Universities (ARWU), the Times Higher Education World University Rankings (THEs), and the Quacquarelli-Symonds World-University Ranking (QS) are seen as the most prominent and influential in the sector.

However, studies have shown that in 2017, the world ranking systems created significant controversy in terms of African institutions. The countries' universities dropped by almost double digits from the previous year (QS Top Universities, n.d.); however, in light of the different ranking systems, there is growing recognition of a need to establish world-class universities able to compete effectively on a global scale. In addition, the creation of such institutions in Africa would bring those universities to the global stage and thereby improve their lasting research and teaching capacity towards solving the continent's problems.

It is necessary to note here that higher education is one of the leading sectors which contributes and supports the economic growth and future development and welfare of African societies, and is the backbone of knowledge provision and technological advancement of African countries. Flagship universities contribute by adding value to the welfare of their respective societies. Furthermore, the higher education system has its focus on diversity and developing a blend of elite and mass higher education institutions. In this respect, the top-ranked universities foster the quality element of life in society. According to Teferra (2016), Africa has no continuous university tradition, partly because the planners of the majority of new African universities have been academics drawn from other continents, and have

naturally drawn inspiration from (and modeled these new institutions upon) foreign universities. Indeed, university rankings reflect the general recognition that knowledge increasingly drives economic growth and global competitiveness. Research universities therefore play a vital role in that context. Notably, scholars who have attempted to define world flagship universities have identified various common features, which are: 1) highly qualified faculty; 2) excellence in research; 3) quality teaching; and 4) high levels of both government and non-governmental funding (Shin, 2013). In developing countries, quality in higher education needs to be the focus in order to positively impact on the development of the country.

It is argued that international and highly talented students, academic freedom, well-defined self-governing structures, and well-equipped facilities for teaching, research, administration, and often student life open a wave for internationalization and quality advancement in education (Goodall, 2006). However, for universities to achieve this step-change, university rankings has become the recognized method of measurement of universities' academic performance, and the means through which universally recognized world-class universities are revealed. Numerous studies have examined the functions and effects of world-class university rankings (e.g., Aguillo et al., 2010; Hazelkorn, 2013; Rauhvargers, 2013). The current study therefore draws focus on the three most prominent and influential global ranking mechanisms, THEs, QS, and ARWU. As such, the current research aims to address the following questions:

1. What is the history behind the selected African world flagship universities?
2. What is the diversity between the selected African world flagship universities?
3. What is the level of development and progress for the selected African world flagship universities?
4. What are the current achievements and curriculum innovation and policy direction of the selected African world flagship universities?

In line with these research questions and focus, the current study aims to contribute to the existing literature by determining the historical diversity of African higher education institutional research towards recognition as the top world flagship African universities. The study aims to reveal the contribution of African countries to higher education achievement, and to contribute to the body of knowledge on the best way forward for these universities. The findings of the current study aim to consciously aid the informing of governments of specific countries in Africa, and to articulate to stakeholders as investors in higher education to pay the necessary attention to the universities identified by this study, in particular their achievement and curriculum innovation in today's higher education in Africa. It is argued that, beside the main focus on African universities, the study's findings may also serve as a roadmap and guide for the designing and planning of national higher education systems based on international standards as a means to advancing the elite African universities on the global stage. Hence, there is a need for proper policy direction that contributes to the funding of the top institutions, as well as their academic performance, research productivity, and curriculum innovation.

The remainder of this paper is organized and structured in a way that speculates and describes information about African flagship universities, as well as their profiling which anchors curriculum innovation and policy direction. This review is then followed by the

research methodology and data of the study; after which the findings are presented and discussed, before conclusions are drawn on the basis of African flagship universities.

1.1. Insightful Historical Inquiry on African Flagship Universities and their Profiling

1.1.1. Role played by the African flagship

The African continent has a long history stretching back to its colonialist past at the turn of the 19th century. Various forms of learning have existed in Africa ever since the emergence of a scramble for independence and partition in Africa. However, the history and patterns of contemporary higher education in Africa is relatively short, but its roots are always a reminder of the dawn of independence and colonial power. Hence, efforts to establish flagship universities are effectively outcomes of colonial legacy (Teferra & Altbach, 2003). Over the past few years, the African higher education landscape has changed considerably. The aspiring population across Africa is now much more diverse than in the past, which has placed tremendous pressure on national governments. The idea of flagship universities underline the role of these institutions in the development of human resources to meet the needs of the economy.

State and public sector institutions are central to the development strategy of any newly independent African country, and reflect a drive to enhance the state of research in order to symbolize national pride, self-respect, and self-reliance. Despite Africa's unique social context, the 1960s to the 1980s saw the establishment of many new universities in various African countries. Analysis has shown that many factors contextualize the history and position of higher education in Africa. As a continent, Africa is becoming an increasingly strong economic force in the world, as a geographic giant endowed with substantial natural resources, democratization, and a growing educated population. In line with the importance of higher education, and of African flagship universities in particular, significant attention has been noted from stakeholders that has dramatically expanded both at the national level in various African countries, as well as internationally.

1.1.2. The flagship university concept

In reference to universities, the term flagship is frequently used in connection with research universities and academic discussion. According to Altbach (2007), flagship universities may also be considered as simply research universities that lead the academic field or are at the top of their respective national higher education system. As such, they are primarily emerging capacity builders and trend-setters in their respective countries and subregions, not only within Africa but also globally. Most are public institutions which are typically the most prestigious or largest in their respective system. Effectively, they are the largest and most prestigious universities on the continent. Most descriptions of prominent public universities focus on broad vision and mission statements (Altbatch, 2007; Cloete et al., 2011; Lim, 2008). Worldwide, the top academic institutions known to be committed to the creation of knowledge across a range of disciplines and fields, and generally feature teaching and research at the highest level in highly complex and multifaceted institutions that serve many societal roles. Flagship universities generally meet the following performance and marketing criteria:

- Have a high academic ranking;
- Are a center of academic excellence;

- Deliver knowledge products that enhance both national and regional development;
- Engage in high academic excellence;
- Engage in high levels of research and scholarship;
- Include appropriate laboratories, libraries, and other infrastructural elements that facilitate teaching and research at the highest level.

2. LITERATURE REVIEW

2.1. Profiling Representative African flagship Universities

The current study presents information relevant to flagship universities in Africa based on world rankings according to their respective histories, academic achievement, and curriculum innovation related to the aim and research questions of the current study. Most of the empirical literature analyzed in the study highlights the profile, achievement, curriculum innovation, and policy direction in moving towards flagship university status. In addition to increased knowledge, the study aims to reveal the performance of individual institutions, and whether their advancement has been considered slow or fast towards achieving visual excellence. Recent publications on flagship universities (Altbach, 2007; Cloete et al., 2015; Prayuth et al., 2014; Salmi, 2016) have extensively elaborated that many developed countries' governments have responded efficiently in terms of global reputational competition through increased funding levels to promote their national elite universities. This has also been widely illustrated through various "excellence initiatives" in countries such as China, Denmark, Germany, Nigeria, Russia, South Korea, Spain, and Taiwan.

In Africa, the nations of South Africa, Ghana, Egypt, and Uganda have been noted as developing the fastest in terms of their higher education achievements (Chaleunphonh, 2013). According to statistics drawn from web rankings (2017), from 2014 to 2017 the University of Cape Town, the University of Ghana, the American University in Cairo (Egypt), and Makerere University (Uganda) have each shown tremendous progress in the world ranking over that 3-year period. The international ranking of universities through bibliometric studies has received considerable attention in recent years, with most developing countries working to bolster their infrastructure for research and postgraduate training over the past 2 years (Baty, 2013). In line with this, different authors have tackled the issue of world-class universities from various angles, mostly to show how countries differ in their being geared towards performance in higher education (Byun et al., 2013). African countries should first consider what flagship universities are, how to become one, how to maintain a certain level or progress through growth, and to understand in what ways they genuinely contribute to national, economic, and social development efforts (Altbach & Engberg, 2018). According to Altbach (2004), there is a need for every nation to maintain at least one world-class university. In some countries, governments have encouraged its top universities to merge in order to achieve economies of scale and hence reach a better position to compete nationally and even globally (Kasozi, 2003).

According to Wang and Liu (2014), flagship universities are commonly recognized globally as being prestigious research universities, essential for the development of a nation's competitiveness in today's global knowledge economy. However, in the past decade, the development of world-class universities was higher on the policy agenda of various stakeholders across the globe. Nevertheless, there is a need for various policy reforms and development strategies to be outlined and observed at both national and institutional levels.

Each affiliated higher learning policy should be reinforced and strengthened through the observance of international league tables (Isah & Ayeni, 2010; Rauhvargers, 2013; Salmi, 1992; Yonezawa & Shimmi, 2015). Table 1 lists four key flagship universities in Africa. In order to explore this area, these prominent African universities were selected based on their different locations within the continent as a sample to be examined within the current study.

Table 1. Flagship Universities in Africa (ARWU, n.d.; QS, n.d.; THE, n.d.)

Rank	University	Country	Location
1	University of Cape Town	South Africa	Southern Africa
2	The American University in Cairo	Egypt	North Africa
3	Makerere University	Uganda	East Africa
4	University of Ghana	Ghana	West Africa

2.1.1. Profile: University of Cape Town (South Africa)

In brief, the University of Cape Town is a public research university located in the city of Cape Town, South Africa. The institution was founded in 1829 as the South African College, and is the oldest, premier higher education institution in South Africa. Notably, in 1918 it gained full university status, allowing it to award degrees and since then has been known as the University of Cape Town. The university's motto "Spes Bona," which means "Good Hope," reflects the university's official creed of optimism, dating back to when the university was a center of opposition to government policy during the years of apartheid. More recently, the university has claimed to have one of the most diverse campuses within South Africa. Its stated aim is "to promote equal opportunity for everyone" (University of Cape Town, n.d.). Through expansion, the university is now split into six different faculties: Commerce, Engineering and the Built Environment, Science, Health Sciences, Law, and Humanities. The these faculties are supported by the university's Centre for Higher Education Development, which addresses all aspects of teaching and learning at the university (Dobbins et al., 2011).

2.1.2. Profile: The American University in Cairo (Egypt)

The American University in Cairo was founded in 1919, and has become a leading English-language, American-accredited institution of higher education, as well as a center for intellectual, social, and cultural life in the Arab world. Accordingly, the university presents itself as a crossroads for the world's cultures, and a vibrant forum for reasoned argument, spirited debate, and understanding across the diversity of languages, facilities, and human experiences. The vision is to be a world-class university, internationally recognized for its leadership and excellence in teaching, research, creative expression, and service. Initially, the American University in Cairo was intended to be both a preparatory school as well as a university. Being similar in many ways, the preparatory school opened in October 1920 with 142 students in two classes that were equivalent to the final 2 years of an American high school. Hence, the first diplomas issued were junior college-level certificates given to 20 students in 1923. In terms of the university, degree-level instruction was offered in the arts and sciences, as well as education.

In 1921, the School of Oriental Studies was formed at the university, followed in 1924 by the division of rapid extension. Notably, in 1993, the academic programs offered through the 13 departments were organized into three separate schools: Humanities and Social Sciences; Sciences and Engineering; and Business, Economics, and Communications. Comparably, today's university has expanded to become 25 departments and institutes which

chiefly offer bachelor's, master's, and graduate diploma programs, in addition to 13 cross-discipline research centers. Currently, The American University in Cairo offers 36 undergraduate programs, 44 at the master's level, plus two Ph.D. programs entrenched in liberal arts and education that encourages students to engage in critical thinking in order to find creative solutions to conflicts and to resolve curricula innovation issues facing both the region and the world at large (The American University in Cairo, n.d.).

2.1.3. Profile: Makerere University (Uganda)

According to information from the university's website (Makerere University, n.d.), Makerere University was initially established in 1922 as a technical school (soon renamed as Uganda Technical College) and offered courses in carpentry, construction, and mechanics; making it one of the oldest higher education institutions in Uganda. It then expanded into medical care, agriculture, veterinary science, and also teacher training. In 1949 it had become known as University College, affiliated to the University College of London, before being granted independent university status in 1970, providing various undergraduate and postgraduate degree programs. It is currently comprised of three campuses and describes itself as Uganda's "premier" higher education institution, and now has colleges of Agricultural and Environmental Sciences; Business and Management Science; Computing and Information Sciences; Education and External Studies; Engineering, Design, Art and Technology; Health Sciences; Humanities and Social Sciences; Natural Sciences; and Veterinary Medicine, Animal Resources, and Bio-security.

2.1.4. Profile: University of Ghana

The University of Ghana is a public university originally established in 1948 as University College of the Gold Coast. At the same time, it became an affiliated college to the University of London. The university is now the oldest and largest of Ghana's 10 public universities, and was granted degree-awarding status in 1961. The university's stated affiliated core mission is to "...create an enabling environment that makes the University of Ghana increasingly relevant to national and global development through cutting-edge research as well as high-quality teaching and learning." (University of Ghana, n.d.).

Starting from the 2014/2015 academic year, the University of Ghana adopted the collegiate educational system, with a College of the Core Basics in Applied Sciences, a College of Education, a College of Health Sciences, and a College of Humanities. The University of Ghana is one of only a few universities in Africa that offers study programs in the subjects of nuclear physics and nuclear engineering.

2.2. Curriculum Innovation and Policy Direction

Since the emergence of global ranking in 2013, several countries around the world have taken a collaborative approach to upgrading their flagship universities to a global standard. In particular, considering one of the movements seen in higher education, "the new concern on excellence in the context of competing universities." Higher education has expanded through innovation and the creation of advanced knowledge in order to play its role in the world. African nations, and developing countries in general, have expanded their primary education systems and increasingly transitioned towards a knowledge economy to meet sustainable development goals across multiple sectors (Cloete et al., 2015; Maassen & Cloete, 2002). Over time, the higher education landscape in Africa has changed dramatically due to increased demand and improved access to higher education. This has triggered varying

reactions of different nations regarding the innovation and economic aspirations of newly independent African countries. With widespread recognition and expansion of higher education, innovation and human capital have become the backbone to economic and social wellbeing in the 21st century (Cloete et al., 2011; Tijssen, 2015).

3. METHODOLOGY

This study presents a qualitative research with a focus on document analysis. In qualitative studies, researchers investigate the study in detail without any conflict of interest in terms of generalization of the study's findings. The methodology applied in the current study involves descriptive survey research using data from multiple sources. The sample used to reveal the African flagship universities was selected from each of the four subregions of the African continent (Sub-Saharan Africa, East Africa, and Central Africa). A case study of the qualitative research models was applied in this study which, according to Yin (2009), investigates a situation in real life, current context, or environment. Correspondingly, the design chosen included data from the world rankings, university webpages, and the UNESCO Institute for Statistics data on education in Africa. The UNESCO Institute for Statistics develops indicators to help governments, donors, and UN partners to better address curriculum innovation. In order to reveal and analyze which African universities are climbing in their status for excellence in the world rankings, the researcher collected data related to the period 2015 to 2017 from THEs, QS, and ARWU listings.

The current study involves overall ranking progression according to data from THE, QS, and ARWU. In addition to the overall ranking of each university, data and information is revealed in the study that includes each institution's history, world ranking status, location, and university capacity in terms of student ratio, government funding, international study students, as well as tertiary graduation ratios. The sorted hybrid list created in the study involves the random selection of African countries within the subdivisions (the University of Cape Town [South Africa], the American University in Cairo [Egypt], Makerere University [Uganda], and the University of Ghana). These four institutions of higher education were regarded by the researcher as representative of the frontier of African academic excellence regarding their respective research status, enrollment patterns, academic programs offered, expenditure by education level, and student mobility ratios.

4. RESULTS

4.1. Strategic Views of African Flagship Universities

This survey of African higher education offers an essential contribution to the building of a stronger society that aims to end extreme poverty and boost shared prosperity across the African continent. The aim being to serve the community by contributing extensive knowledge and advanced skills as well as the necessary competencies and research output. Knowledge plays a growing role in today's global economy, driving forward economic growth and productivity. Economic studies have shown a tangible link between education and economic growth, particularly in countries who take into account the quality of education growth (Cloete et al., 2015). Competition in the higher education market is strong, and to succeed institutions must offer modern or even state-of-the-art facilities and higher quality, relevant education programs taught by competent, motivated, highly qualified staff utilizing innovative teaching methods that integrate local knowledge with international perspectives (Cloete et al., 2006). Although it has been more challenging to identify the direct contribution of education, growing evidence suggests that counties with a greater proposition of educated

graduates in the labor force have higher productivity and increase their capacity to adopt technology and to be innovative.

The array of information provided by the world ranking systems compels universities to improve the quality of their teaching and research programs, and to identify areas in which improvements are needed in order to advance their global ranking. Flagship universities help nations to focus efforts on quality improvement to a global standard and to establish quality assurance mechanisms, and then to consider founding or developing a world-class university. This approach can lead to higher labor productivity and a nation's increased overall productivity factor. Although the demand for more educated workers is growing, there are also emerging concerns about the quality and relevance of higher education in today's society, and with regards the value for money and resource allocation across the sector (Cloete et al., 2006).

4.2. University Capacity in Student Ratio

Recently the enrollment of students in higher education institutions has increased significantly. Despite the establishment of new and essential targets to hold flagship universities accountable for providing educational opportunities to the developing world, enrollment rates have also increased within African higher education systems. Enrollment has significantly changed on a global scale over the past decade, and is projected to continue to reach approximately 5.9 million enrolled students by around 2020 and 8 million by 2025 (Altbach, 2004).

Higher education first started in around the 12th century and continued to grow steadily and at more or less an even pace until the Second World War (OECD, 2017), after which the trend changed and enrollment demand significantly increased in most developed countries. The UNESCO Institute for Statistics (n.d.) estimate that there are almost 33.4 million students enrolled in higher education worldwide. This translates into a 5.3% average annual growth in tertiary enrollment, representing a very rapid increase when compared to the 1.7% average world population growth over the same period.

An accelerated expansion of higher education started in the mid-1990s; however, most African counties and flagship universities are still struggling to meet the increased demand for enrollment in higher education. Sub-Saharan African has seen the fastest growth and expansion in its gross enrolment ratio (GER) from the 1990s to 2018 at an annual rate of 4.2% compared to the global average of 2.7%. Even with this rate of growth, sub-Saharan Africa has the lowest tertiary gross enrollment ratio globally, and is significantly lower than South Africa. This increased level of enrollment has reached almost universal levels in North American and European higher education, whilst Central Europe and Eastern Europe has seen mass higher education (Trow, 2007). The current rate of enrollment implies that Africa will achieve a higher enrollment ratio by 2020; however, higher education enrollment in Africa is still lower than in any other region worldwide. In South Africa, universities have achieved a great deal since the apartheid era. The latest statistics for South African higher education reveals that 938,201 students were enrolled in 23 public higher education institutions with 556,695 students (59%) enrolled in contact programs. It is projected that enrollment will reach 1.6 million by 2030. However, it is important to note that, for sub-Saharan Africa, not only has the enrollment ratio increased over the past decade, but that it is still the lowest worldwide (Knight, 2004).

4.3. University Capacity in Student Ratio

Top ranked universities contribute to the economic growth of countries in line with cultural social activities, employability, and tourism. Flagship universities often have the largest academic programs, especially for graduate studies, hence, they are perceived as significant to the internationalization of their respective nations. These institutions boast characteristics such as having the highest number of colleges, schools, departments, and institution centers. Interestingly, research universities from different parts of Africa have sought to expand their graduate program offerings over their undergraduate programs, such as has been seen in the case of Makerere University in Uganda. This apparent trend has increased the level of research and innovation at these institutions, as well as improvements in joint study teaching, international networking, and research partnerships.

Flagship universities in Africa are now better positioned to take on an advanced core mission in line with expected strategic planning targets to become leading powerhouse institutions in today's knowledge-based economy. In order to meet this target, some countries have implemented significant and fast-paced changes in their higher education institutions. Despite a long history of differences in their social, political, economic, and financial contributions, they have effectively and successfully contributed to the achievement and development of their respective countries.

Global competitiveness is rated according to the overall contribution in research, scholarly publication, and global knowledge production. In general, African universities face considerable and at times very significant shortages in academic staff. For example, in 2007, the total number of academics needed within the Nigerian higher education system was estimated at 50,000, whilst the actual number was only 30,452, representing a shortfall of 40%. Despite challenges in recruiting academic staff, African flagship universities have continued to enjoy their level of social status and other appealing opportunities.

Table 2. Research and Citations – THE ranking (THE, n.d)

University	Research	Citations
University of Cape Town	41.5%	87.2%
University of Witwatersrand	40.8%	81.0%
Stellenbosch University	34.1%	65.8%
American University in Cairo	23.2%	22.2%
Benha University	7.7%	52.1%
Beni-Suef University	7.1%	64.3%
Makerere University	12.2%	69.2%
University of Ghana	13.6%	23.8%

The Times Higher Education (THE) ranking consists of component data on research survey (18%), research income (6%), research productivity (6%), citations or research influence (70%). Data in Table 2 presents the research and citation percentages for African flagship universities, with the University of Cape Town ranked the highest with research and citation at 41.5% and 87.2%, respectively, meaning that the South African university's scientific research was the most highly cited. This is an indication that African flagship

universities have achieved a certain level of recognition, due in part to their high percentage of international faculty and students (see Table 3).

Table 3. International Faculty and International Students – QS ranking [2017/2018] (QS, n.d.)

University	International faculty	International students
University of Cape Town	72.2%	44.8%
The American University in Cairo	91.4%	4.9%

Table 4 presents the percentage of international students enrolled to flagship universities in Africa. It is evident that Africa's representation according to its international student numbers in higher education is low, at less than 20% of the general student population. Hence, the much higher numbers at the University of Cape Town are significant, with 72.2% as international faculty and 44.8% as international students. Attracting international faculty and students in flagship universities is seen as a good indicator that African higher education is becoming more globally recognized.

Table 4. International Outlook and International Students [2018/2019] (THE, n.d.)

University	Country	International outlook	International students
University of Cape Town	South Africa	82.4%	18%
The American University in Cairo	Egypt	66.1%	4%
Makerere University	Uganda	59.4%	8%
University of Ghana	Ghana	48.8%	2%

Table 4 presents the international outlook and international student levels; the results show that the University of Cape Town has better international outlook (82.4%) and a comparably good international student acceptance ratio (18%) among four of the top four universities in Africa.

4.4. Government Funding in Binding of International Students

The flagship universities in Africa have mostly generated funds through internal revenue streams, whilst others are virtually public funded. Makerere University (Uganda) achieves 30% of its revenue through internal funding (Teferra, 2013). Ghana has seen a 450% increase in its internal funding, from 28 million GH₵ (US$11.2 million) in 2006 to 115 million GH₵ (US$70.5 million) in 2013, accounting for 25% of the country's higher education funding. The funds generated represent the second largest source of university funding, with other income streams for flagship universities including student fees and tuition fee-based services (Oboko, 2013).

There has been a rapid growth demand for higher education, but adequate funding levels are a necessity in order to ensure a strong infrastructure is in place with excellence in the respective research and innovation systems. Flagship universities must offer an attractive working environment and enticing salaries in order to remain competitive by attracting top scholars to join their faculty. African countries need to invest more to ensure that sufficient funding covers tuition fee shortfalls and the establishment of an appropriate infrastructure to facilitate excellence in teaching and academic research. Creative teaching and research requires appropriate state-of-the-art facilities (Tayeb, 2016), hence, appropriate levels of

funding are needed to ensure the right higher education environment is realized for teaching, research, and service to the community.

4.5. Need for Flagship Research Universities in Africa

It has been argued that research and teaching are fundamental to curriculum innovation and policy direction at flagship African universities. Higher education has come under considerable scrutiny in recent years based on important philosophical, sociological, pedagogic, architectural perspectives, among others (Blackmore, 2016). African flagship universities have achieved sufficient attention and priority of their research programs over teaching, and with basic research overriding applied research, and with significant attention paid to community engagement.

In the current global knowledge economy, knowledge production and technological innovation have become of significant importance to African flagship universities. Following independence during the 1950s and early 1960s, Africa's newer national universities were expected to become key research universities worldwide that, as part of an active community of institutions, share values, foci, and missions in their academic and research missions. However, not all universities are research establishments. The key contributor to the advancement of a nation lies in meeting the high-level human resource needs of the country, particularly in providing adequately for the professions and the bureaucratic establishment.

Altbach (2013) positioned that whilst research universities in the developing world have yet to achieve the upper levels in global rankings, they are extraordinarily important to their respective countries and regions, and are steadily improving their reputations and competitiveness on the international stage. Research universities represent a relatively small percentage within the higher education sector. According to Altbach (2013), the ratio in the United States is about 5% (i.e., 220 flagship universities within a system of more than 4,000 post-secondary institutions), whilst that figure is 25% in the United Kingdom (i.e., 25 research universities among 100 higher education institutions), but only 3% in China (i.e., 100 research universities out of more than 3,000 institutions nationwide). In the current context of world-class rankings, the starting point would be to consider how Africa is doing against the established global rankings. In some parts of the African continent and in developing countries, there is often only one research university and many countries have none. Therefore, empirical evidence can be said to demonstrate that flagship universities in Africa are sufficiently different from those in Asia or Latin America, for example.

Evidence about Africa's performance on the global research and science stage is not encouraging. However, whilst Africa is at the bottom of every indicator, one positive is in the growth of publications from Africa, which have increased from 11,776 in 2002 to 19,650 in 2008, representing a growth of 66.9% in comparison to a global rate of 34.5%.

Zeleza (2014) reported that there exists a considerable amount of literature, by both national and global agencies and several scholars, on the capacity constraints and problems facing African countries in building strong research systems. The most common issues highlighted have been:

- Critical issues on science policy on the technological advancement and industrial needs of the particular society and integrating it into national development plans, with an adequate and comprehensive range of stable open funding for implementation;
- Insignificant expansion of support for the higher education sector;

- Insufficient action to incentivize the business sector to invest more in capacity research and development, by itself and through industry and university collaboration;
- Inadequately promoting scientific literacy as a critical means of popularizing science, underlying technology, and innovation in society.

As illustrated in Table 5, the data provides a clear picture of the global ranking of selected African flagship universities. The information is presented as constructed hybrid list of flagship universities, showing world ranking data from 2015 to 2017.

Table 5. Constructed Hybrid Listing of Flagship Universities [2015-2017] (ARWU, n.d.; QS, n.d.; THE, n.d.)

University	Country		World Ranking		
			2015	2016	2017
University of Cape Town	South Africa	QS	141	171	191
		THE	120	148	171
		ARWU	201-300	201-300	301-400
The American University in Cairo	Egypt	QS	360	345	365
		THE	N/A	601-800	601-800
		ARWU	N/A	N/A	N/A
Makerere University	Uganda	QS	701+	701+	701+
		THE	401-500	401-500	401-500
		ARWU	N/A	N/A	N/A
University of Ghana	Ghana	QS	701+	701+	701+
		THE	601-800	601-800	801-1000
		ARWU	N/A	N/A	N/A

The Academic Ranking of World Universities (n.d.), as undertaken by the Centre for World-Class Universities of the Institute of Higher Education of Shanghai Jiao Tong University, China (hence often known as the Shanghai Jiao Tong Ranking), started in 2003 as the first global ranking of universities. The original goal was to establish the global standing of China's top universities, but the ranking system soon attracted worldwide attention. The ARWU now ranks the world's 500 top universities on an annual basis. Since 2009, the ARWU has been published by the Shanghai Ranking Consultancy, an entirely independent organization. The criteria used in their ranking includes the number of alumni awarded a Nobel prize or field award, the number of current academic staff awarded a Nobel Prize or field award, and the most highly cited researchers in 21 broad categories, and academic papers published in the Nature & Science journal (http://www.sciencepub.net/nature/). Papers are indexed according to the Science Citation Index and Social Science Citation Index, then per capita academic performance (with scores of 1-5 divided by the number of FTE academic staff).

Of equal significance, in 2004 the Times Higher Education (THE, n.d.) partnered with Quacquarelli-Symonds (QS, n.d.) to publish a new set of world university rankings. However, by 2009, THE and QS had ended their partnership, with each opting to release their own rankings. In 2010, with new data supplied by Thomson Reuters (a business data provider headquartered in New York, United States), THE published its ranking of global universities based on a different methodology. This new process uses 13 performance indicators grouped in five different areas, with much of the data provided by educational institutions, to rank the

world's top 400 universities each year. The five areas are teaching, research, citations, international outlook, plus income from industry.

The Quacquarelli-Symonds World University Ranking (QS) is also similar in many ways, operating as a global career and education company specializing in education and studying abroad. QS has offices worldwide, including in Johannesburg, South Africa. Between 2004 and 2009, QS jointly published their rankings in conjunction with THE based on the fundamental criteria of research, employability, teaching, and internationalization. However, during this period, the only African universities ranked among the top 600 were usually those of Cape Town, Witwatersrand, Pretoria, and KwaZulu Natal. Additionally, in 2010, after separating from their partnership with THE, QS continued to offer virtually the same criteria in its annual rankings. The only real change was with regards to the weighting used to reveal the 700 top universities worldwide, and with ranking based on academic reputation, employer reputation, faculty/student ratio, citations per faculty, and the international faculty/student ratio.

On the basis of research evidence from the ARWU rankings, Table 3 indicates that African flagship universities have made and continue to make significant contributions to globally ranked universities. Despite the known constraints that faces African higher education in terms of social, technological, and economic advancement, African universities are starting to be ranked on global terms. However, no African institutions are recorded in the top 20, top 100, or even the top 200 of ARWU rankings, and with only one ranked in the top 300.

Table 6. 2017 Status of Flagship Universities (Academic Ranking of World Universities, n.d.)

Region	Top 20	Top 100	Top 200	Top 300	Top 400	Top 500	501-800
Americas	16	52	79	113	142	164	76
Europe	4	35	82	122	157	198	97
Asia/Oceania	-	13	39	64	99	132	122
Africa	-	-	-	1	2	6	5
Total	20	100	200	300	400	500	300

4.6. Strategic Views and Marketing of African Flagship Universities

Various strategies are employed by universities meet world-class flagship status; however, there is broad agreement that three areas are of key significance: 1) Excellence in education of students; 2) Research, development, and dissemination of knowledge; and 3) Activities contributing to the cultural, scientific, and civic life of society. With many industrializing nations entering an age of increased prosperity and rapid economic growth, it is common for them to have significant societal and educational aspirations when it comes to excellence in higher education. Among these are quests to raise their existing universities to a world-class stature and/or the establishment from scratch of world-class institutions. Even though most indicators are internationally comparable, "For universities, world-class standing built on reputation and perception –often seen as subjective and uncertain– requires outstanding performance in many events" (Liu et al., 2016). The term "world-class," is defined by the Oxford English dictionary as "ranking among the foremost in the world; or an international

standard of excellence" (as cited in Zhang et al., 2017). According to Teferra (2016), flagship universities stand at the very center of current knowledge and society.

Flagship universities represent the most critical institution within the complex process of knowledge creation and distribution, since they are the principal provider for most academic training in an ever-expanding field of specializations and an organization that increasingly serves as a center of political thought, and sometimes of action. The flagship universities of Africa are those which appear mostly in world rankings as a reflection of their social, academic, political, and economic significance in their respective country. Flagship universities almost hail from English-speaking countries, and are postsecondary institutions that represent the pinnacle of a nation state or excel among its peers in their country's higher education system. This interpretation usually means that they are generally the most significant, oldest, most traditional, and most highly regarded of institutions within an extensive system of colleges and universities (Marginson, 2006; Yonezawa & Shimmi, 2015). The most archetypal flagship universities are based in capital cities and are at the heart of a nation's social, cultural, educational, and political fabric.

In recent years, higher education in Africa has undergone unprecedented transformation, including a phenomenal sectorial expansion in terms of the numbers and diversity of institutions and the academic programs that they offer. Due to the enhancement of institutional governance, the sector has seen rapid growth in student enrollment and the revolutionary development of quality assurance frameworks. In the case of African institutions of higher education, these transformations are as a consequence of many new developments at both the local/national level as well as global changes which have enabled the sector to start to regain its former vital position in terms of Africa's future development. It is consequential, however, that with these new and expanded opportunities, lie certain challenges and attendant risks which demand closer analysis and understanding of the role that higher education plays in Africa's sustainable social, political, and economic development.

Similarly, higher education in Africa has been identified and recognized as a significant player in facilitating Africa's development process. It has, however, persistently faced several challenges, particularly with growing societal demands. With limited resources, inadequate capacity, and a history of neglect, the sector has struggled for many years to respond positively to the increasing demands placed upon it, leading to significant gaps in terms of enrollment, expenditure, international student movement, and tertiary graduate level studies.

In terms of enrollment trends in higher education, the literature has revealed that Africa has the lowest enrollment rates worldwide. In the analysis, the tertiary, gross enrollment ratio (GER) for Anglophone countries averaged 6.7%, in comparison with 2.9% for Francophone nations. Despite rapid enrollment growth, sub-Saharan Africa's GER has remained the lowest in the world, trailing South Asia (10%), East Asia (19%), North Africa (23%), and the Middle East (23%). Although the sector in Africa has made great strides, the gap is closing only very slowly, due in part to high rates of population growth across the continent (World Bank, 2008). In terms of the information collected for the 3-year period of the current study, it should be noted that there has been exceptional expansion seen in the number of FTE Students in 2017 (see Table 7). As such, the University of Ghana led the enrollment numbers with 39,436, followed by Makerere University in Uganda with 36,688, the University of Cape Town in South Africa with 20,775, and the American University in

Cairo, Egypt, with 6,093. In relation to the key research questions of the study, the impact of international students has increased intercultural knowledge and a more significant number of cross-cultural interactions across all areas of student life.

In terms of benefit outweighing cost when it comes to the internationalization of higher education institutions, over the past two decades New Zealand has moved from an aid to trade orientation with its international economics and education. Currently, there are approximately 7,000 international students and 11,000 in New Zealand's tertiary sector, and student enrollment in higher education increased by 32.5% from 2006 to 2015. So, with enrollment having increased from 700,000 students in 2006 to almost 1 million in 2015, the financial status of higher education institutions by 2015 showed that university enrollment has been on the increase since 2006 (see Table 7).

Table 7. Selected African Universities' Enrollment status [2015-2017] (THE, n.d.)

University	Country	Year	FTE students	Students per staff	International students	Student female/male ratio
University of Cape Town	South Africa	2015	20,040	12.1	18%	53 / 47
		2016	20,061	11.6	17%	53 / 47
		2017	20,775	11.7	18%	53 / 47
American University in Cairo	Egypt	2015	-	-	-	-
		2016	5,875	13.9	6%	53 / 47
		2017	6,093	12.4	5%	54 / 46
Makerere University	Uganda	2015	37,340	29.4	9%	50 / 50
		2016	37,423	29.2	9%	51 / 49
		2017	36,688	28.8	8%	52 / 48
University of Ghana	Ghana	2015	37,274	37.5	2%	41 / 59
		2016	37,804	31.7	2%	44 / 56
		2017	39,436	35.1	2%	43 / 57

Significant increases in literacy across these four African countries (South Africa, Egypt, Uganda, and Ghana) have shown a considerable level of change from 2010 to 2015, with the ratio of illiterate population having decreased, and where South Africa is now seeing stabilization (see Figure 1).

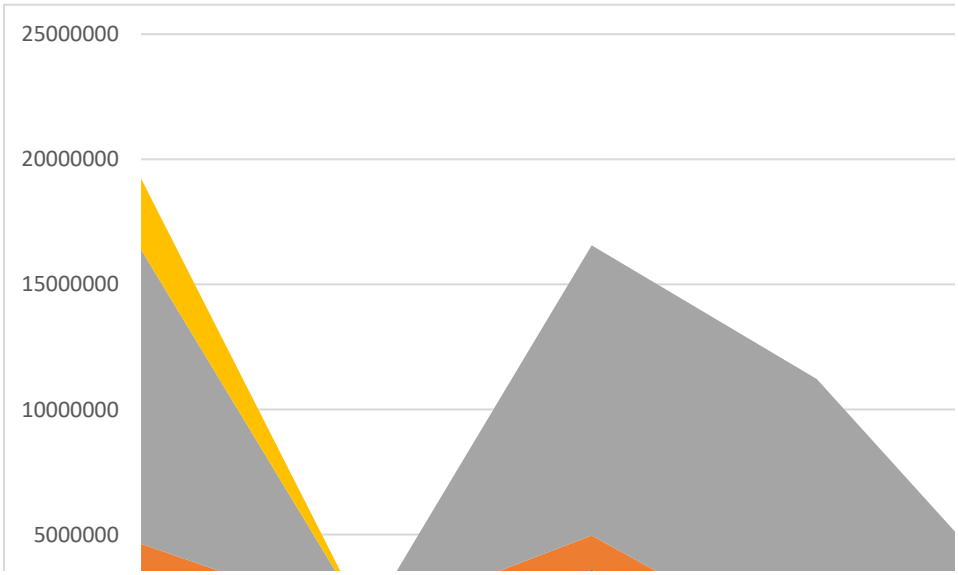


Figure 1. Illiterate population for 25-64 year-old age group [2010-2015] (UNESCO Institute for Statistics, n.d.).

4.7. Expenditure on Education as Percentage of Gross Domestic Product (GDP)

There exists a tremendous differential in expenditure on education between 2009 and 2014 at the tertiary level of education. Ghana and South Africa have what can be described as a high percentage of expenditure when compared to other countries, as can be seen in Figure 2. However, South Africa has a much higher rate of inbound international students at 18%, whereas for Ghana it is only 2%. According to different studies, education expenditure should be geared towards ensuring balanced overall government spending (Liu et al., 2011; Teferra & Altbach, 2003).

It can be said that flagship universities are also crucial in the international dimension of higher education. Contrary to a broadly held view, the current enrollment trend of African flagship universities has shown exponential growth; however, other factors also come into play such as institutional and national policies, access to education, funding, equity, as well as international imperative. Taking, for example, countries such as Kenya, Ghana, and Ethiopia, they have each seen increased enrollment through the establishment of new universities (Teferra, 2016). However, in their attempt to increase their number of higher education institutions, it is important to note that some African countries have failed to establish a top unit in their field of ranking, but have achieved a recognized level of competitive advantage in their field. Essentially, global university rankings provide an effective and efficient means of assessing the current status and trends of the higher education sector in local, regional, and global terms (Liu et al., 2016).

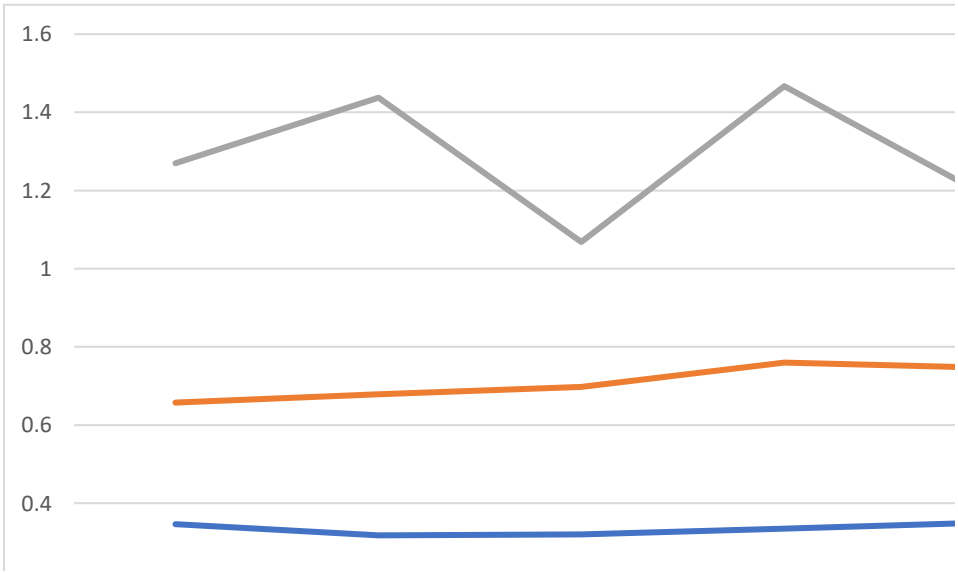


Figure 2. Expenditure on education as Percentage of GDP [2009-2014]
(UNESCO Institute for Statistics, n.d.)

Despite these circumstances, the government of Ghana has seen relative success with its increased funding for education which, over the past 5 years, had been at the level of between 20% and 27% of the national budget, representing 6% of the country's gross domestic product. The expansion of secondary education in Ghana following the introduction of the free senior high school policy would significantly impact on the growth and enrollment ratio of higher education from 2020.

4.8. Tertiary Graduates by their Level of Education

In this category, data is available for Egypt, South Africa, and Ghana from 2012. The rate for all three countries increased in 2013, but then slowed significantly as from 2014. Therefore, two countries that have shown the differences in graduate's level are Ghana and South Africa. On the bright side the other countries show no expansion at all.

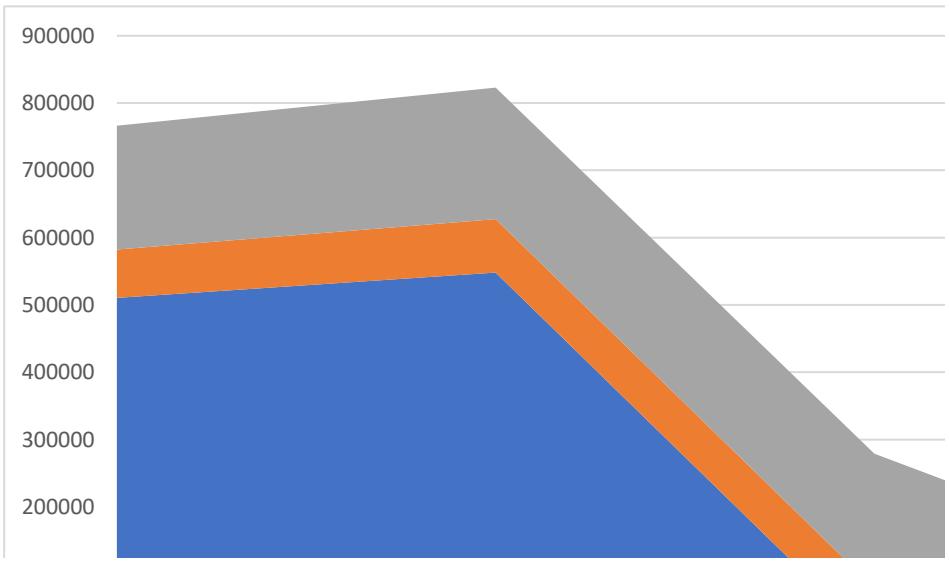


Figure 3. Tertiary graduates level of education [2012-2015]
(UNESCO Institute for Statistics, n.d.)

4.9. Status of Total Inbound of International Students

From 2011 to 2016, both Egypt and Ghana received a higher level of inbound international students, whereas both South Africa and Uganda showed a level of stabilization reached with no discernable numerical increase in terms of inbound international students. In Egypt, the Ministry of Education and Scientific Research bears overall responsibility for developing and implementing national educational policy, with international students subjected to fees as determined by the Egyptian Ministry of Higher Education. Improving the quality of higher education has received huge government support in Egypt over the past few years, hence many Egyptian scholars have benefited from bilateral exchange programs with various other countries such as the United States, Canada, France, the United Kingdom, and Germany.

Beyond this, countries of the Middle East have, in recent years, begun to offer scholarships to attract international students, as educational attainment levels have started to creep up across Africa. From 2006 to 2014, the number of African students pursuing post-secondary degrees abroad grew 24%, rising from 343,370 to 427,311. The French- and English-speaking African nations account for about 99% of all international students from Africa. The UNESCO Institute for Statistics (n.d.) reported that Nigeria has some 1.4 million students enrolled at home, but has also sent 71,351 degree-seeking students abroad, whereas for Ghana the figure was 11,116, with the top destination country being the United States, attracting more than 3,142 Ghanian students. However, rapid expansion over a short period, especially in the private sector, has occurred at the expense of quality control, according to the Times Higher Education (Lee, 2013; Salmi, 1992; Schmoch, 2015).

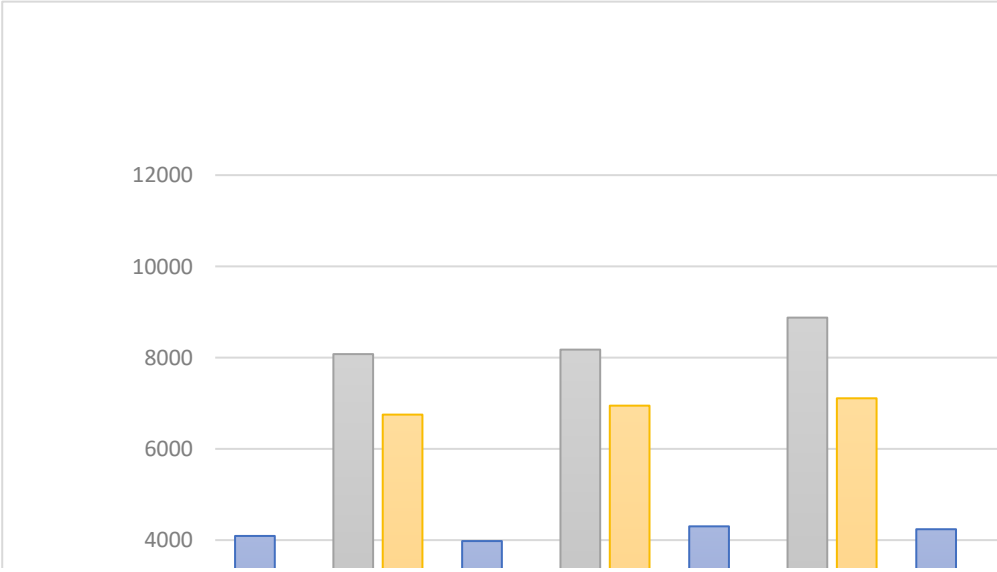


Figure 4. Total numbers of inbound internationally mobile students [2011-2016] (UNESCO Institute for Statistics, n.d.)

5. DISCUSSION

The findings of the current study are summarized as follows:

Whilst Africa's research capacity still lags behind the rest of the world, the current study aimed to examine the global ranking of African flagship universities from 2015 to 2017, and to reveal insight into their history, research output, and academic knowledge. The presented data were collected from the world university rankings of ARWU, QS, and THE. African flagship universities hail from a small number of countries, and mostly from the

southern part of the continent. From the available ranking data, the universities reported within this study are considered the elite, and each with a long respective history of expansion since their establishment (ARWU, n.d.; QS, n.d.; THE, n.d.).

Flagship universities are usually key institutions in their respective countries. For example, the University of Cape Town (founded in 1829) is the oldest university in South Africa and has seen significant improvement in its ranking, whilst the American University in Cairo, Egypt was founded in 1919 and is regarded as the leading English language American accredited institution. Furthermore, Makerere University was founded in Uganda in 1922 and is one of the oldest universities in the country, whilst the University of Ghana similarly dates back to 1948. As such, each boasts the status of being the oldest and most important university in their respective country.

In terms of identifiable patterns, universities from countries in the southern part of the African continent are growing the fastest, and is from where a large number of the world's leading African universities are located, followed by Egypt, Uganda, and Ghana, for example. The current study examined the 3-year period from 2014 to 2017. During that period, according to data ranked by the ARWU, Cairo University maintained its status rather than the American University in Cairo, which is the leading African university according to rankings from both THE and QS. Additionally, it was noted that the University of Witwatersrand in South Africa improved its status during 2017 in the ARWU ranking. Accordingly, there are a number of universities in both South Africa and Egypt which have maintained their reputational standing among the globally ranked universities. The fluctuation and rise of African universities also includes most universities located in Egypt and South Africa.

In 2015, Alexandria University in Egypt was ranked 601-800 by THE; however, by 2016 it had dropped out of ranking (to > 800), whilst the American University in Cairo maintained its position and status.

In terms of ARWU ranking, many universities in Egypt have their sights set on flagship status. The Cairo University ranked at 401-500, while Ain Shams University ranked 701-800 and Alexandria University's ranking was > 800, whereas South Africa's University of Witwatersrand was ranked 201-300 and the University of Cape Town was 301-400.

Regardless of their profile, curriculum innovation, or academic achievement, the current study revealed that most elite universities in Africa are striving towards achieving flagship status as the best in Africa and also securing their position and place on the world stage (Musisi & Muwanga, 2003). In recent years, the quest for countries to produce "world-class" universities has become increasingly important for many higher education institutions, attracting local and national governmental support and even becoming something of a modern phenomenon. Achieving flagship statis in Africa requires significant effort and collaboration, with a focus in partnerships turning to skills development and the enhancement of academic capacity in African universities (Lee, 2013).

It may be argued that despite limited financial support available in the current higher education scene in Africa, collaboration between institutions and also with other organizations has helped to supplement the low-level budget most institutions receive from their respective central government body. Of specific critical importance is considering alternative approaches to defining what a world flagship university is, and to examine the essential factors that qualify success for such a status. A report by the World Bank (as cited in

Salmi, 1992) suggested that there are three interrelated factors that are essential indicators of success which distinguish a world-class university:

- There should be a high concentration of talent, both in terms of faculty and students;
- Tertiary education institutions in some countries face the potential risk of academic inbreeding where there exists limited internal mobility of students and faculty. Universities that rely principally upon their undergraduates to continue on to graduate programs, or that recruit their own graduates primarily to join the teaching staff, are unlikely to be at the leading edge of intellectual development or academic prosperity;
- Sufficient resources should be available to provide universities with an extensive, comprehensive learning environment and a rich context in which to operate and foster a culture of competitiveness, free scientific inquiry, critical thinking, innovation, and creativity (Baty, 2013);
- Developing an institutional environment that focuses on advanced research will aid higher education institutions towards maturity and regional/international competitiveness;
- Favorable governance is considered critical in order to encourage autonomy, strategic vision, innovation, and efficient resource management;
- Governments should consider upgrading a small number of existing universities that have the potential of excelling academically, as well as in their management and flexibility.

5.1. Achievements indicators

The following are four areas considered important indicators of achievement for higher education institutions.

Enrollment status: Most prominent universities claim to be the most diverse institutions with full university status, with the highest level of meeting students' needs and demands, increased breadth of departments and faculties, and a corresponding enrollment ratio. For example, the University of Cape Town started out as a small technical college, and now boasts six faculties in operation, and is considered a leading center of higher education in southern Africa.

University expansion: The American University in Cairo, Egypt, which started out as a preparatory school, has now become one of the leading English-language universities and an American-accredited institution of higher education. It has become a key center for intellectual, social, and cultural Arab life in the world. Initially, in 1920, the American University in Cairo offered 142 students instruction only in the arts, sciences, and in education. Academic programs are now offered through a total of 25 departments and institutes.

Expansion in size: Makerere University in Uganda started off as a technical school offering courses in carpentry, but has since expanding considerably into areas such as medical care, agriculture, veterinary sciences, and teacher training. As a consequence, the university was granted independent status in 1970, and is currently comprised of three campuses.

Affiliation status and unique programs offered: The University of Ghana started out as a college affiliated to the University of London. By the 2014/2015 academic year, it had

adopted the collegiate system and is now divided into four colleges, and remains one of only a few universities in Africa to offer programs in nuclear physics and nuclear engineering.

6. CONCLUSION

The aim of the current study has been to discuss the higher education sector in Africa, and the historical diversity of its flagship universities. African countries need at least one flagship university, since they are a key instrument in any nation's development. Griffiths (1968) discussed three levels at which the quality of education should be assessed: 1) classroom conception of quality; 2) broader social criteria; and 3) productivity and quality of education. Therefore, these metrics are the standard by which higher education should be measured in all countries. One area of research is the definition of a scientific framework that specifies the effect of flagship universities on a nation's economy and its impact on other sectors.

The notion of flagship universities relates to the early development of the American higher education system; however, on occasion, the notion of flagship universities has also emerged in other parts of the world. The current study's findings indicate that during the post-Second-World-War era and into the 1960s, the South Korean government established so-called flagship national universities in their provinces and cities. In total, eight sub-Saharan universities are currently under development in Cape Town, and each has used the term "flagship" within its title to underscore the current vibrancy, goals, and curriculum innovations they have implemented (Altbach, 2007). Upon examination, South Africa has established an active higher education sector that has invested extensively to improve the quality of its institutional research capability.

Based on a survey of three long-established international rankings and other reports, the current study concludes by examining certain lessons drawn from recent and ongoing experiences in the setting up of new research universities within emerging economies, and the continent of Africa at large. Flagship universities play a critical role in that context, since they can help countries to build globally competitive economies by developing a skilled, productive, and flexible labor force, and in creating, applying, and fostering new ideas and technological solutions. Despite several methodological limitations of any ranking system, world-class universities are recognized in part for their superior academic output. Flagship universities produce well-qualified graduates who are in high demand by the local, regional, and global labor market; hence, they conduct leading-edge research published in the top scientific journals as a means of publicizing their institution's work and achievement level. In the case of science-and-technology–oriented institutions, they aim to contribute through technical innovations that are patented and licensed.

Regardless of curriculum innovation, the pressure behind the aim to achieve flagship status for research universities needs to be examined within their proper context in order to avoid including unrelated values in assessing the importance of world-class institutions without distortions linked to resource allocation limitations within national tertiary education systems. The current study explores the profile, curriculum innovation, and achievements involved in setting up globally competitive research universities in African countries that are expected to compete efficiently with the best of the best on the global stage. Therefore, a need exists for a specific pattern or template that might be followed to allow more rapid advancement of universities to world-class status. Comparatively, rather than through self-declaration, the leading status of flagship universities relies upon a system of international recognition (Ajayi et al., 1996; Chaleunphonh, 2013; White, 1998).

Meanwhile, the African vision to create a world-class university has seen a compelling strategy to sustain and continually improve its status across different subregions of the continent. Many flagship universities have experienced curriculum innovations arising from national, political, and economic crises which have impacted upon the standard of research output and academic standard.

African universities should therefore concentrate their efforts on revitalizing their higher education institutions by continuing to strengthen their administrative structures, to attract and maintain a high-quality of academic staff, offer a rich diversity of university disciplines, a high capacity for postgraduate education and research, and a high level of quality research and graduate output. Specifically, universities should continue to protect and strengthen these quality areas in order to achieve global competitiveness, or to remain in that sphere, and to improve their standing as leading universities in Africa. As an example, South African universities are maintaining their position as a result of their academic strengths and reputation, whilst other universities could also utilize their external partnerships in order to foster and advance their vision and to serve as a role model for other African universities.

According to Wende (2008), African universities should protect and continue to strengthen their position and reputation in order to benefit from the massive growth seen in student enrollment over the past decade. Leading universities should work to remain the powerhouse and professional center for training the requisite skills and expertise needed both by their respective countries and in terms of the wider international labor market. They should also aim to be regarded as central to their nation's internationalization and the heart of the academic landscape of their respective countries. More effort is needed in prime institutions since they are the largest producers of graduate students, research, and academic literature, and hence play an essential role in national capacity building and innovation. Through various activities, the international dimension of higher education in Africa forms a vital link to the significant role that Africa plays in the development of the continent, including strategies for newly independent countries of Africa to meet the economic and human resource needs of today's knowledge economy. African flagship universities should consider several components, with a focus on the following four aspects: Institutional autonomy; intensive research; internationalization; and technological advancement that includes improving learning and particularly its resources.

In addition to African universities contributing nationally through publication of its research, most have long histories and have significantly contributed over time to their nation's development. Despite many common social, economic, financial, and political disturbances, each country needs to aim to achieve a higher global position in order to advance their unfulfilled mission of creating prominent institutions. Therefore, a need exists to promote African universities and international African partnerships. However, Africa suffers the lowest overall higher education enrollment, and therefore in marketing terms, each institution and country must learn from one another, and to actively seek out support from different regional and international players. It is also essential to recognize the enormous expansion of enrollment to African higher education institutions. Moreover, a need exists to increase the number of academic study programs and accelerate research productivity in today's challenging African educational landscape.

As a final analysis, there is a need for future research to be conducted on the ranking of African higher education institutions. Consequently, the current study may spark discussions at universities (especially across African flagship universities) and foster increased

debate on higher education and open collaboration within the regional sector. This would allow academics to connect with other universities' philosophies and curricula innovations for the purpose of shared knowledge.

7. SUGGESTIONS

The current study suggests that overall higher education policies (as well as the specific issues explored in this study) would benefit if universities undertook certain steps. Namely, the establishment of strategies, methods, and specific practices to legitimize their knowledge mechanisms. This study draws conclusions with insight drawn from established world university ranking mechanisms that have real impact in terms of the African continent's higher education systems; namely, on how education is delivered and research is conducted. Flagship universities are valued extensively for their ability to ensure that high quality teaching and research-based activities are continued. Thus, the current study contributes to the existing body of knowledge through the provision of empirical evidence on Africa's flagship universities. The study provides evidence for (and the status of) flagship universities as mechanisms for widespread curriculum innovation and policy direction. The study results are expected to encourage and explore future debate on management opportunities in African higher education, as well as the marketing drivers deemed essential in building flagship universities such as the improvement of institutional research productivity, fostering increased student mobility, regional collaboration, and strong national-level initiatives.

DECLARATIONS

Author Contributions: The sole author was responsible for all parts of the study. The author has read and approved the published on the final version of the article.

Conflicts of Interest: The author declares no potential conflict of interest for this research study.

Funding: The study received no funding.

Ethical Approval: No ethical approval was sought as the article did not present any study of human or animal subjects.

Data availability Statement: The author declares that all the data used in this study are publicly available from the global university rankings of ARWU, THE, QS, and university websites.

Acknowledgement: The author would like to acknowledge and express sincere gratitude to the anonymous reviewers for their constructive comments and suggestions given for the earlier versions that helped to significantly improve the quality of this manuscript. The author also profoundly thanks colleagues at Nanjing Agricultural University for their opinions and comprehensive support to complete this study. Also, the journal editor's help and guidance throughout the process of publishing this manuscript was very much appreciated.

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