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# Creation of the Next Generation of Thinkers and Innovators: Doctoral Training in Ugandan Universities

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**Abstract.** This paper underlines the need for researchers and innovators trained at the doctoral level in Uganda. Making reference to various sources, it estimates the number of PhD holders in the country. This is with the conclusion that the number is too small for the country's development aspirations, notably Vision 2040. Thereafter, the paper discusses the state of postgraduate training in the country, with specific reference to the doctoral level. Recommendations for reducing the dearth of PhD holders are made.

**Keywords**: Doctoral training; Knowledge workers; Research for development.

# 1 The Need for Doctorate Holders in the Country

Uganda does not only need more qualified academic staff but also well trained researchers to perform the triple functions of knowledge production, its dissemination, and proper application in society. The people who perform theses triple functions are, in most cases, PhD holders. PhD holders undertake research, the creation of the next generation of academics and help in the application of researched knowledge in society. Researchers and innovators are linked and doctorate holders are needed to do both. PhD holders are key in executing tasks that need high level thinking power. The major functions of PhD holders, therefore, include but are not limited to, the following:

- 1. The production of knowledge through research and innovation;
- 2. The dissemination of knowledge through teaching, publications, transformation of knowledge into goods and services for society;
- 3. The creation of the next generation of academics and researchers through teaching, supervising and providing example; and

4. Defining locally appropriate conceptual models of development.

### 2 The Dearth of Doctorate Holders in Uganda

This research has established that there is an alarming shortage of PhD holders. The number of PhD holders in the country is so low that it is wishful thinking that Uganda can be transformed into a modern society by 2040 as the official plan would make us believe. This shortage cannot be bridged in the next one hundred years if current production rates of these individuals are not accelerated. My survey of research activities and postgraduate training in Uganda indicates that currently, there are about 1000 to 14000 PhD holders though the figure of about 974 of PhD holders in institutions of higher education as recorded in 2011/12 by NCHE was approximately correct at that time. In a population of 35 million people, the ratio is about one PhD holder per 35000 people.

These estimates are derived from two sources: First, the National Council for Higher Education collects numerous data on higher education each year from universities and other tertiary institutions. Qualifications of staff are a major item of focus. The NCHE has been publishing data on qualification of staff since 2004 showing their qualifications and status in various higher education institutions. I used the NCHE data to estimate the number of PhD holders in institutions of higher learning. However, the NCHE data has the following problems:

- 1. Its data is collected, and restricted to, only PhD holders who are within the higher education system. Those working elsewhere in the country are not included; and
- 2. A number of PhD holders teach in more than one higher education institution (i.e., they moonlight). There is therefore a possibility of multiple counting of one individual.

The second source of information on PhD holders in Uganda that I have used is the 2012 Uganda National Council for Science and Technology survey *The Careers and Productivity of Doctorate Holders (CDC)* conducted by Professor Vincent Ssembatya, now head of the Directorate of Quality Assurance, Makerere University. The survey is very good on the characteristics of PhD holders but its calculation of actual numbers and where they work is, like that of NCHE and my survey, not complete. Nevertheless it concurs with the NCHE and my surveys as to the estimated number of PhD holders. Ssembatya feels that by December 2015, there were probably 1300 PhD holders in Uganda (Interview 24<sup>th</sup> February 2016). The third source is data collected by myself between 2015 and 2016. In that period, my research assistant and myself visited over 75% of Uganda's universities and read numerous documents pertaining to postgraduate training.

It is evident that the numbers are far below the country's needs in both the education sector and the rest of society. Uganda with about 250000 higher education students, of whom more than 150000 are in universities, does not only have a low ratio of PhD to students, PhD training programmes are not well structured in our universities as I shall discuss below. Thus in 2011/2, the PhD to staff ratio was about 1:150, for universities and about 1:208 if all tertiary students are factored in. None of Uganda's universities had the NCHE ideal of 60% staff with PhDs although Makerere with about 40% was moving towards that goal.

The average percentage of PhD holders in each of Uganda's university was found to be 11.7% (NCS&T) and 11% (NCHE) of total staff. To create more universities without funding the creation of the key staff we need to manage these institutions has always baffled me. Assuming that all lecturers in universities are required to have a PhD, as Makerere has stipulated, the PhD deficit in the higher education sub-sector is alarming. To achieve the NCHE ideal staff to student ratio of one PhD holder to fifteen students (1:15) would need 18,700 PhD holders with the current enrolment of 250,000 higher education students. However, the current estimates of PhD holders is about 1200 to 1400, leaving a deficit of (60% of 18,700) or 11,250 if the lower figure was taken to be correct. To fill the gap and eliminate this deficit, the country needs to produce at least 1000 PhDs per year for the next eleven years. Based on normal productive capacity of three PhD graduates per academic staff every five years (or 0.6 PhD per year), Uganda's current PhD possible production capacity is about 212 PhD graduates each year (see Table 1). This translates into a production rate of one graduate per 165,000 people (Ssembatya, Vincent in Mak News Magazine, PhD Training in Uganda, January 2016, pp. 22-3). Actual production in 2014/14 was only one hundred individuals, 68 of whom were graduated by Makerere.

As noted earlier, most of Uganda's PhD capacity is at Makerere University. It is therefore obvious that the state should gradually make Makerere a trainer of high-level postgraduates and transfer the training of undergraduates to other universities. In locating new or improving existing institutions, emphasis should be put on disciplines rather than political appearaments. Establishing new "universities" to address political sentiments has led to the establishment of glorified high schools named universities in a number of locations in Uganda.

How will Uganda staff our higher education institutions? The Government can either massively fund the training of academic staff or fly in batches of expatriates to staff the opening universities. With student enrolments increasing by 15% each year, the system is registering a deficit of at least 1000 PhD holders annually. To counter this negative development, the country should aim at (a) filling the gap by massive training of postgraduate students and (b) developing capacity for research and training in two or more universities (where focused capacity development can be accelerated) to enable the country produce at least

one doctorate per one hundred thousand people in the general population. In comparison, South Africa produced 26 doctorates per one million people in 2007, Portugal 569, Korea 187 and Turkey 48 (*University World News*, 15<sup>th</sup> December 2013: *Understanding the demands of PhD production*).

But it is not only higher education institutions of learning that need more highly qualified people. The country needs more PhDs holders if it is to transform its economy into a knowledge-based one for universities are the factories of highlevel skilled workers. The PhD to population ratio of 1:35,000 is too low to constitute a thinking core that the country needs to become innovative enough to manage a knowledge-based economy. Research and other forms of knowledge production conducted by highly educated and skilled people is key to transformation into a knowledge economy. As the Uganda Vision 2040 has not specifically itemized how many PhDs the economy will need to transform into a "modern and prosperous nation", funds may not be allocated to fill this deficit. It is unfortunate.

### 3 Characteristics of Ugandan PhD Holders

Ssembatya's NCS&T survey gives us a glimpse of the characteristic of PhD holders. Using a sample of 534, the survey established that 99% of Uganda's PhD holders were employed. They are hot cakes on the market. They worked in higher education institutions, statutory bodies, research institutions, the private sector and multinational organizations. This high rate of employment reflects a very high demand for PhD holders in this country. Most PhD holders (85%) worked in education institutions. However, the majority of the sample, 76% were male, 24% female and the graduating age was 48, indicating either late start in embarking on doctoral studies by candidates, long completion rates or both. But it is not only numbers that Uganda has deficits of PhD holders. The study found the productive capacities of Ugandan PhD holders was low. Ugandan PhD holders were not intellectually productive. The average lifetime publication of a typical Ugandan PhD holder was ten pieces and they had very low patent grants (0.6 patents per person). There is therefore need to watch quality as we train these key individuals who train our kids in universities and construct our theoretical conceptions of our development plans. The major fields of study were 23% natural sciences, 23% agriculture and 6% health sciences/medical. Most Ugandan PhD holders did their studies in Uganda (53%), 13% from the UK, 8% from the USA and 6% from the South Africa. However, there were a number of PhD holders who got their degrees from other countries including the Netherlands, Norway, Germany, Canada, India, Sweden, Malaysia and other Asian and European countries. This study attributed this dearth of PhD holders

to Government's inability to fund Research and Development beyond 1% as a percentage of GDP.

## 4 The Training of Postgraduate Students in Uganda

PhD holders constitute the core of the academic and research communities in both universities and the general society. The Uganda state divested from funding postgraduate programmes in the early 1990s. For some time, universities financed staff training and postgraduate programmes from their budgets. The state's view was that any postgraduate training was to be aligned to civil service manpower needs. However, by 2012, following the example of public higher education institutions, private universities reduced allocations to the research and postgraduate functions of their budgets. By that year, on average, public universities spent only 1.06% and private universities 1.94% of their annual budgets on development and training of their staff (NCHE State of Higher Education, 2012/13 page 4). According to this NCHE publication, a total of 465 staff members were training for PhDs while 442 were studying for Masters degree in 2012/2013. Unfortunately, the NCHE report does not disaggregate these numbers by year of admission and expected completion dates. So, we do not know how many candidates were being enrolled or completed each year.

Although most of Uganda's thirty or so universities train post graduate students, the quality of products is questionable. Initially, the NCHE allowed only accredited universities (public and chartered ones) to offer postgraduate programmes. But this rule was neither kept by institutions nor enforced by the NCHE. Further, the NCHE developed its *Benchmarks for Conducting Postgraduate Programmes* only in 2014 when many institutions had already embarked on offering these programmes. During the said survey, I found that many universities, including those with no capacities in terms of staff and facilities, were offering postgraduate programmes. It is not surprising that the knowledge production level of PhD holders in Uganda was found to be low by the UNCS&T study quoted above.

The training of postgraduate students therefore needs thorough thought, both at Makerere and the other newer university institutions. Although the demand is high and urgent, the production of PhD graduates cannot be rushed. No nation can afford to have badly trained terminal degree holders. Until the NCHE benchmarks for conducting postgraduate programmes were approved last year, I was nervous, and I am still frightened, about the way doctoral studies were, and to some extent still are, conducted throughout Uganda. As Executive Director of the National Council for Higher Education, I had the difficult task in November 2012 of asking one Ugandan University to halt the award of some sixty doctoral

degrees it was about to grant to candidates on graduation day. I knew the training capacities of all universities in my care and none, except Makerere, had the capacity to graduate more than fifteen doctoral candidates in a single year. Indeed the task force of expert assessors who reviewed these awards later on vindicated my fears. A number of the awards were either refused recognition or were asked to undertake massive revisions of their dissertations. Many of the candidates had not gone through preliminary course work that is necessary to grind PhD candidates into the culture of research, writing and conducting lectures, seminars and public debates.

Of course, there are many ways that NCHE and institutions of higher learning can employ in training PhD candidates. In a recent book on the doctoral education in South Africa, (Cloete, et al., 2015, page 133) the following models/types of PhD training have been identified:

- 1. The traditional research based thesis-only PhD supervised by a scholar, (the British type of PhD),
- 2. The taught PhDs plus a thesis, often called the American type;
- 3. The PhD by publication through a series of academic papers;
- 4. The professional or work-based PhDs, where the field of study is within a profession rather than an academic discipline; and
- 5. The practice based PhDs awarded in creative and performing arts.

The NCHE guidelines on training postgraduates have a mix of the British and American models but the majority of institutions in Uganda use the British model of offering these degrees by thesis only. The NCHE needs massive campaigns to popularize its preferred model of teaching doctoral studies in Uganda. Exploiting the need for terminal degrees, many of the small universities in the country are rushing to produce PhD holders of questionable quality. In my visits to universities during this research, I observed and took notice on how our institutions were educating PhD graduates and the next generation of academics. Most institutions do not distinguish research from postgraduate training activities while others do not know which comes first: research or postgraduate training. For more than 99% of the universities surveyed, the two activities are always in one office, often called the Directorate of Postgraduate Studies and Research, though two institutions reversed the nomenclature. Over 60% of these offices supervise and put whatever money is allocated to postgraduate training rather than research. The next few pages will review some of the doctoral training activities I found in Uganda's institutions of learning.

#### 4.1 Makerere University

In the period 2009 to 2015/16, Makerere University graduated only 384 PhD holders (or about 55 individuals a year). In the same period, some 650 students

were admitted (i.e. an average of 93 a year). The completion rate was, therefore, on average, 55%. This rate is rather low in comparison to the institution's capacity and the national demand for PhD holders. Yet, all the smaller new universities in Uganda look to Makerere for supplying them with academic staff. The service Makerere can undertake in building for the future is to focus on good postgraduate training. This is a role only Makerere and the nation can play. Makerere University should therefore gradually focus on postgraduate training to produce academics for the many mushrooming higher education institutions, the public and private sectors. However, the decision to implement such a policy is not only political, it is likely, and possibly can only be taken in the context of Uganda's current centralized decision making behaviour that has characterized the country's management in the last twenty years or so. Institutions are rarely managed differently—or better—than the way the nation in which they are located is managed.

# 4.2 The Makerere Institute of Social Research Innovative Doctoral Offering

Makerere Institute of Social Research mounted PhD training programmes using the course work plus a thesis model (the American model as described above). Started in 2012, the five-year programme involves two years of coursework and three years of dissertation research and writing. Four broad themes have defined the programme's intellectual focus: Political Studies, Political Economy, Historical Studies, and Cultural Studies. Students are asked to specialize in one field, but must take classes across all four areas. This allows students to be grounded theoretically, while at the same time giving them a broad foundation in historically informed debates in the humanities and social sciences. In addition, there is a set of core courses with a focus on theory and historiography, required for all students. MISR academic staff, staff from other Makerere departments, and by prominent visiting scholars through the MISR Global Scholars Programme, teaches these courses. Since it was launched, the programme has become very popular and applicants increased in the years 2011/2 to 2015/6.

#### 4.3 Nkumba University

Nkumba University is a private chartered institution. It offers doctoral studies as part of its postgraduate training. With 13 PhD holders amongst a staff of 231, Nkumba's PhD holders constitute only 6% of staff, which is far below the NCHE ideal of 60%. It is no surprise that the completion rate of postgraduates at Nkumba is very low. The PhD production and therefore completion rates at Nkumba University from 2009 to 2015 which was 14 out of 99 (or 13.9%) is extremely low. Lack of staff capacity especially PhD holders to supervise

graduates partly explains the low completion rates. The PhD programme at Nkumba is a three year one and so in 2014 only 4 (four) out of 17 (seventeen students completed their studies; in 2015 only 5 (five) out nine (admitted in 2011/2) completed; in 2014 only 3 (three) completed out of twenty three admitted in 2011/2.

#### 4.4 Gulu University

Gulu University is a public university started and owned by the Government of Uganda. Gulu University has a low capacity for teaching and graduating doctoral students on its campus. Members of staff with PhDs are only 16. The rest of the 214 academic staff members have Masters, Bachelors of Medicine (or Veterinary) and Surgery and other first degrees. The PhD holders are about 8% of total staff, which is below the NCHE ideal of 60%. However, the core faculty of this university is Medicine whose lecturers emphasize professional rather than purely academic qualifications. Further, the figure of 16 doctorate holders does not include managers like the Vice Chancellor, his deputy or Academic Registrar

Gulu University has tried to produce the next generation of academics in a very innovative way. To make up for its low PhD staff capacity, Gulu University has collaborated with sister (public) universities in Uganda and abroad to train its human resources requirements. By 2016, some 92 of its staff were registered for PhDs and 119 for Masters Degrees with other universities. This strategy has a number of advantages, which include minimizing academic inbreeding, which often leads to shallow interpretations and personification of issues. Donor agencies have also assisted the University in postgraduate training. From the conversation I had with staff, most of the PhD graduates have been trained by the "thesis only" method though a few who have gone abroad have been exposed to the "coursework plus dissertation requirement" or what is often referred to as the American system of training PhD graduates.

# 4.5 Uganda Martyrs University

Uganda Martyrs University is a chartered institution owned by the Uganda Episcopal Conference. The institution is known for its careful balancing of student enrolments with the facilities it has. For that reason, it has turned out very good students. The University had 39 members of staff with PhDs in a total staff of 221 members or 18% of staff in 2014. This capacity is rather low compared to the 60% ideal requirement set by the NCHE.

The University registers a few students for the PhD degree. In the period 2009 to 2014, a total of sixteen students were admitted to do PhD programmes. Of those, six graduated representing a completion rate of 37.5%. This is not high but better than a number of accredited universities except Makerere University.

#### 4.6 Uganda Christian University

Uganda Christian University, which is located at Mukono, a few miles east of Kampala, was chartered in 2004. The Anglican community in Uganda who continue to steer its direction founded the University. The institution has attained a good reputation for excellence in academic deliveries. Like most universities in Uganda, the University's capacity in terms of staff with PhDs and, therefore, staff who can train the next generation of academics, needs improvements. With 10% of staff holding these terminal degrees, the University can turn out only (0.6 x 31) eighteen PhD holders a year if the NCHE guidelines are followed and if the staff are meticulous in their supervising responsibilities. However, it is rare that all PhD holders in an institution take on the responsibility of supervising PhD candidates.

### 4.7 Ndejje University

Ndejje University is a chartered institution with some 39 PhD holders as members of academic staff. Despite the shortage of PhD holders, Ndejje University offers PhD programmes.

#### 4.8 Bugema University

By 2016, Bugema was about to start offering PhD postgraduate programmes. With 40 academic staff having PhDs, the institution can graduate (25% i.e 10 x0.6) six PhDs a year starting five or so years from the date of first intake.

# 4.9 Islamic University in Uganda

The Islamic University in Uganda (IUIU) is jointly owned by the Organization of the Islamic Conference, Jeddah, and the Government of Uganda. An Act of Parliament governs it. Founded in 1988, IUIU was the second University in the country and, not surprisingly, it adopted the administrative practices of Makerere University from where most of its initial local staff was recruited. In December 2015, the institution had 42 members of staff with PhDs. Its capacity to offer PhD programmes was, therefore, limited to about six students a year (0.6 x 25% of 42).

#### 5 PhD Production Potential of Eleven Accredited Universities

After going round our universities and comparing them to international practice, I found the flowing can be the estimates of the PhD numbers that can be produced by Uganda given the following parameters:

#### 5.1 Staff Capacity

- 1. Surveys of doctoral trainings indicate that one seasoned PhD holder academic staff, given good education facilities and financing, can supervise three PhD students in five years in most good universities (Cloete et al. 2015). That is 0.6 students a year;
- 2. A seasoned academic holds a PhD, has taught for at least six years, written some five or more good articles and one or two books. Such a person is about 55 to 75 years of age and can make fundamental statements without looking them in books or the web;
- 3. For most universities, only about 25% of PhD academic staff holders are able to supervise PhD candidates because:
- a. The young PhD holder who has taught for less than six years is busy trying to manage the starting of life in the academic world, gaining confidence and setting himself up financially by, unfortunately for some in Uganda, moonlighting and doing consultancies. He/she cannot supervise PhD candidates;
- b. About half of PhD academic staff holders are sucked into searching for money rather than knowledge and are involved in consultancies, fighting for administrative positions in universities and the general society, getting involved in politics for monetary purposes and seeking positions of social honour rather than knowledge. Once they reach the age fifty-five without substantially contributing to human knowledge, such lost individuals cannot easily reroute into the academic world. They cannot supervise good PhD graduates because their mastery of disciplines is shallow.
- c. Due to the inadequate financing, lack of good infrastructure to support research and postgraduate training, many potential PhD supervisors amongst Ugandan academics are easily discouraged and give up supervising students as an impossible task. In this way, the country loses potential trainers.
- d. The retiring age requirement of 60 to 65 in a number of universities in Uganda removes the most seasoned academics from the system. Their removal contributes to the dearth of PhD holders who can supervise the next generation of academics in this country.

Taking into account the above factors, Uganda's current capacity in creating PhD holders based on academic staff capacity alone was about 210 in 2014/15 with Makerere producing three quarters the number as is shown in Table 1.

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Table 1: Potential PhD Production Capacity in Eleven Accredited Universities\*

University	PhD holders	Possible production based on 0.6 PhD unit production of 25% of PhD holders a year of total staff	Potential number institution can produce	Numbers produced in 2014/15					
					Makerere University	1000	250 x 0.6	150	68
					Gulu University	16	4 x 0.6	3	2
MUST	56	14 x 0.6	8	3					
Nkumba University	13	3 x 0.6	2	3					
Uganda Martyrs	39	10 x 0.6	6	2					
University									
Uganda Christian	31	8 x 0.6	5	2					
University									
Kampala	82	21 x 0.6	13	Probably 14					
International	estimates								
University									
Islamic University in	32	8 x 0.6	5	2					
Uganda									
Ndejje	39	10 x 0.6	6	1					
Bugema	40	10 x 0.6	6	Not grad yet					
Islamic University in	42	10 x 0.6	6	-					
Uganda, Mbale									
Total	1393	338 x 0.6 =202.8	210	100					

<sup>\*</sup> Based on 2014/15 figures of academic staff with PhDs (only) as reported to the author by universities; education facilities excluded.

However, according to my survey of research and postgraduate training in Ugandan universities, the nation produced one hundred individuals in 2014/15. But this potential does not take into account education facilities such as staff offices, students' reading rooms (carrels), library, laboratory equipment, science materials, field placement funds and a host of others. If the quality of the PhD holders Ugandan institutions are turning out is not the best as the NCS&T survey on Uganda PhD holders' indicates, the state should turn its attention to doctoral training.

#### 5.2 Education Facilities

The estimates above did not take into account the role of education facilities. These are dependent on the discipline but the following are crosscutting:

- 1. Staff offices are critical. A supervisor of a PhD student must have an office to meet, mentor and help the PhD candidate in a closed and personal environment for discussing intellectually demanding ideas;
- 2. A carrel or office space in the library or classroom block where the PhD candidate is free to pile his/her books or journals as the most relevant reading material are being sorted, is a necessity;
- 3. Access to hard and soft computer ware for word-processing and internet access are a must for a PhD student;
- 4. Full access to hard and electronic reading materials is always needed for any given programme. In the course of this research, we found one Uganda University that was not linked to international journal databases offering PhD programmes.
- 5. Good student inputs, that is, candidates who have performed well in their Bachelors and/ or Masters classes.
- 6. Sufficient financing both to the supervisors and students is essential. Elsewhere increases in funding have increased PhD production levels (Cloete et al., 2015).

#### 6 Conclusions

The following conclusions are also my recommendations.

1. There is a critical deficit of some 10,000 PhD holders in the higher education system that is adversely impacting on research and therefore creation of knowledge, critical evaluation of society, quality of higher education delivered and training the next generation of academics. The country needs to train at least 1,000 PhD holders annually for the next ten years to bridge

this deficit. But the current country's university capacities for training PhD holders can only be stretched to deliver about 200 individuals. Sadly, in the 2014/16 academic year, only 100 PhD holders were actually graduated. For those who graduate with PhDs, immediate employment is assured. The employment rate for PhD holders is 99%. However, due to the Pension Act stipulations, a PhD holders works for only 12 years and is retired (average graduating age is 48, retirement at 60). The National Planning Authority should also calculate the number of PhD holders needed in other sectors of the economy.

- 2. Although the higher education sub-sector has a PhD deficit of some 10,000 individuals and must produce at least one thousand PhD graduates each year if it wants to close the deficit and match with the current higher education enrolments of 15% each year, the training of PhD graduates cannot be rushed. Only universities with research and teaching capacities should be allowed to train postgraduate students. For now, only Makerere University has capacity to conduct sufficient and diversified research. The retiring age requirement of 60 to 65 in a number of universities in Uganda removes the most seasoned academics from the system. Their removal contributes to the dearth of PhD holders who can supervise the next generation of academics in this country. Universities respond to both national and global forces and are judged by using local and international benchmarks. The pension laws of the country should be amended to create exceptions for the sake of national development.
- 3. Makerere should be funded to gradually become a postgraduate training institution to produce academic staff for all other universities, high-level skilled and thinking personnel for the country's innovation system, the public and private sectors of Uganda and the region. Seven other universities, namely Mbarara University of Science and Technology, Uganda Christian University, Uganda Martyrs University, Bishop Stuart University, the Islamic University in Uganda, Ndejje University and Mountains of the Moon University have some infrastructure and allocate some money for research and knowledge production. But they are in their earliest stages of undertaking ground-breaking research. They should take on more undergraduates so as to decongest Makerere.
- 4. Unfortunately, postgraduate training which is the incubator of the next generation of academics is neither well organized nor linked to actual research conducted by institutions. A number of universities, even those that do not do impressive amount of research, conduct postgraduate training. Our research indicates that it is only Makerere University science based divisions that have the research and training capacity to train postgraduate students. This is not to say that staff capacity for postgraduate training is lacking in the Arts/Humanities division of the institution. As the data has shown, the

institution has such a people. However, as Mamdani observed, many of these faculties focus on teaching and consultancies, not research and publications (Mamdani, 2007). If they are not doing research, staff are likely to teach postgraduate students from secondary sources including the World Wide Web!

- 5. It is the responsibility of the state to properly finance universities especially their research function, for knowledge has become the driver of economic and social development. The university does not only train its workers but also all intellectual workers in the wider society. Unless we want to "vocationalise" institutions that are meant to develop the mind, the private sector should not be expected to fund the research function of universities because its interest is profit and focuses on "market-driven programmes" that are better delivered outside universities.
- 6. To improve University governance and therefore university functions, vice chancellors should know that the academic department is the cell of academic activities of any university. Teaching and research policy as well as the training and hiring of staff should be devolved to academic departments in all universities. Principals of the new administrative superstructure called colleges at Makerere, deans and administrators at the same university should rethink their involvements in areas that are traditionally handled by academic departments.
- 7. Uganda should desist from sending its PhD students abroad. A number of those who go overseas for training do not return. Many of those who come back lack the ability to ask "the right questions" as has been observed by Mamdani. They are often incapable of developing locally relevant theoretical models for solving local problems.
- 8. The state must be made to understand that external donations can never be a permanent source of funding for research in public universities. They are good while they last, but they have problems and are unsustainable (Musiige & Maassen, 2015:116). Vice Chancellors and other stakeholders must carry the cross to the corridors of Parliament to make our "honourable" members understand the importance of research in a university worth its name.

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