

The Influence of Institutional Resources on Doctorate Degree Enrolment and Completion Rates in Selected Public Universities Kenya

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Received: August 24, 2023 Accepted: October 3, 2023 Published: October 16, 2023

doi:10.5296/ijld.v13i4.21392 URL: <https://doi.org/10.5296/ijld.v13i4.21392>

Abstract

Doctorates are fundamental pivot towards facilitating the social and economic transformation of a nation. Nevertheless, research on doctorate education point out that most candidates in Kenyan public universities spend lengthy period of time to earn their doctorate degrees. Furthermore, data of those enrolling in selected Kenyan public universities demonstrate that less students enroll for doctorate programmes in contrast with those who register for Master and Bachelors' programmes. Institutional resources have been cited as a critical ingredient toward enhanced students' enrolment into doctorate programmes. The purpose of this paper was, therefore, to establish the influence of institutional resources on doctorate degree enrolment and completion rates from selected Kenyan public universities. The study sought to

analyse institutional resources influence on doctorate degree programmes enrolment and completion rates from selected public universities in Kenya for the last fifteen years. The study employed the mixed methods research design. Data was collected from four purposively sampled universities using questionnaires, analysis of documents (on enrolment, completion and staff enrolments) and interview schedules. Qualitative data was coded and then thematically analysed guided by the study objectives while quantitative data was analysed using percentages and graphs. The study revealed that institutional resources influence enrolment and completion rates at doctorate level. Availability of qualified and sufficient academic staff, funding, mentorship programmes, well equipped libraries, reliable internet connections and ambient social environment to be critical in determining where one enrolls for a doctorate programme and how long it will take to complete. The study furthermore established that between 2003 and 2017, there was low doctorate programmes enrolment and completion rates at the selected public Universities Kenya. This was demonstrated from trends in the numbers of those who enrolled and those who graduated. The trends revealed that more males than females enrolled and completed their studies with the highest being between 2008 and 2013. The findings of this research would be resourceful to university policy makers, administrators and lecturers to improve on institutional policy framework with regard to institutional resources which could be used to enhance doctorate programme enrolment and completion in Kenyan public universities.

Keywords: Institutional Resources, Doctorate Degree Enrolment, Kenya, Public Universities

1. Background of the Study

Despite the increased demand for doctorates, the global trends in doctorate degree programme enrolment and graduation rates has two parallel fronts; upward trend in developed nations and stagnating or regressing trends in the developing nations. On one hand, doctorate graduation rates in developed nations of the world has reached a saturation point as in the case of China where over 50, 000 doctorate degrees were produced in the year 2011-2012 surpassing even the US and Japan. China's success is attributed to the policy of recruiting and retaining through hiring one thousand doctorate degree holders yearly (Majumder, 2014). Developing countries on the other hand has less than 53 doctorate holders per million of the total population while doctorate enrolment remain low at 87 per million of the population. Consequently, this low number of those enrolling and graduating with doctorate degrees and the long time to attainment of a doctorate degree is creating shortages leading to inefficiencies (MacGregor, 2013; Molla & Cuthbert, 2015; Mohamedbhai, 2020).

Universities among the emerging economies have increased their doctorate enrolment and graduation rates. Indian universities have increased enrolment to 18 percent and graduated 24,300 doctorates per year by 2016. Chinese government through universities has increased fully- funded scholarships for doctorate students, retained, experienced staff at the same time offering mentorship programmes for doctorate students. China and India are poised to produce 40% of the world's doctorates by 2030. However, quality of the doctorates produced in China has been a concern rendering difficulties for such graduates to secure jobs beyond China (Huang, 2017). The Brazilian universities have increased doctorate production to 12, 000 per

year with the University of Sao Paulo alone graduating 2,244 doctorates in the 2010. The success had been credited to social support from the academic community, funding, four year period of study, political commitment, hosting of over 3,000 postgraduate programmes and publications becoming compulsory from the year 2005 (Huang, 2017). The number of students in Malaysia pursuing doctorate degree programmes has increased from about 4,000 in 2002 to almost 40,000 in 2012 while international doctorate degree students had improved from 25% in 2002 to nearly 50% in 2012 (Hansen, 2013). This had been attributed to the Malaysian government's open policies with regard to improved admission criteria, enhanced student-staff ratios, mobilizing finances, enhanced supervisor-student relationship and tracking of doctorate training programmes.

Doctorate education in Kenya like, in most nations of the world is experiencing slow expansion despite the surge in numbers of undergraduate and masters students who ought to be serviced by the very doctorate degree graduates. For instance, enrolment at bachelors and masters stands at over 537, 000 and 40, 173 respectively by 2017/2018 academic year while doctorate degree programmes' enrolment remained a meagre 7,146 in all Kenyan universities (Mukhwana et al., 2016; Nga'ng'a, 2019). Doctorate degree programmes enrolment among public universities in terms of gender indicates a big disparity standing at 5,352 male doctorate degree programme candidates by 2016 while 1,794 were female candidates (CUE, 2016). This translated to a dismal 1.11% of doctorate degree candidates to undergraduates and only 10% of all postgraduate enrolment. The gender also indicates that only 35.5% of the female are enrolled to study at doctorate degree level while the rest were males (CUE, 2016).

Majority of public universities in Kenya are ill-equipped. This has posed a big challenge since they do not possess adequate resources and infrastructure to mount high level quality doctorate degree programmes (Eshiwani, 2009; Okwakol, 2008; Rong'uno, 2016). Libraries and laboratories are poorly equipped with limited space, they lack modern ICT services, and most universities lack peer refereed journals to boost publications and above all, the academic staff is insufficient to match the large numbers of undergraduates seeking for training at this level. The number of academics working at the universities who possess doctorate degree remains low at 4,215 with 3,189 males and 1,026 females (CUE, 2016). These numbers of staff have challenges supervising doctorate students since they also undertake teaching of undergraduates and masters students. Furthermore, they as well discharge other administrative responsibilities such as being deans, chairpersons of departments among others. According to CUE (2016), only individuals with doctorate degrees will be allowed to lecture at the universities yet graduating of those much-needed doctorates remain all-time low.

Despite upward trends in enrolments into doctorate programmes, completion has continued to be low. The year 2016 saw only 396 doctorates graduate from Kenyan public universities against CUE target of 1000 per year while there were 5,352 had been enrolled for doctorate programmes. In a cohort of 388 students enrolled for doctorate programmes in faculties of education of Moi University, Kenyatta University and University of Nairobi between 2001 and 2015 only 63 candidates managed to complete their studies within five years of study. Majority (325) spent over ten years with only 252 completing within this period (Rong'uno, 2017). This indicates that the situation of doctorate graduation in Kenya is below expectations when

compared to countries like South Africa which produces over 1000 doctorates per year. The case is worse given the CUE recommendation and the Ministry of Education (MoE) that Kenya need to be producing 1000 doctorates per year by the year 2018 to meet her local demand of academicians, researchers and experienced human resource to boost the economy. The current study thus, endeavoured to establish how institutional resources have led to persistence of low doctorate degree enrolment and low doctorate degree graduation rates in Kenyan public universities.

2. Statement of the Problem

The developed and fast developing nations of the world are graduating doctorates at higher rates than their market absorption. In Kenya, doctorate training has dismally expanded in the past two decades. This is despite the increased number of students that doctorates are supposed to handle with over 400,000 undergraduate students, 40,177 Masters programmes students and over 6,000 doctorate degree programme students with no commensurate increase in the number of doctorate holders who are supposed to teach, examine, conduct research and undertake administrative duties in the universities.

This has further been compounded by the low number of individuals with doctorate degrees graduating on a yearly basis from public universities compared to what the policies articulated by the Ministry of Education through the State Department of University Education of producing at least 1000 doctorates yearly. This had therefore necessitated the current study to establish how institutional resources contribute to low enrolments into doctorate programmes, poor quality and low completion rates in Kenyan public universities.

3. Methodology

This study employed a mixed method approach, embedded design in nature to examine institutional practices influencing trends in enrolment and completion rates in doctorate programmes from selected Kenyan public universities. Creswell and Clark (2011) opine that a mixed method approach encompasses gathering, examining, and interpreting qualitative and quantitative data in a single study in investigating the same underlying phenomenon

The mixed method approach, embedded design in nature was deemed ideal since the study sought to establish both statistically recorded facts and thoughts from the respondents who were involved in the study. According to Creswell (2012), each research design selected for a study contains some degree of weaknesses. Thus, by selecting mixed methods approach, prejudice is minimised and reliability of the study enhanced.

This study was conducted in four selected Kenyan public universities. The study targeted all 6000 doctorate degree programme students from all public universities in Kenya. The particular focus was on doctorate students in Education, Arts and Social Sciences and Pure and Applied Sciences disciplines, deans of schools offering disciplines in Education, Arts and Social Sciences and Pure and Applied Sciences, and faculty members teaching these disciplines

The study adopted a multi-stage sampling technique, first step, the universities were identified, followed by the schools and finally the departments. As such, Purposive sampling was used to

select the specific department to pitch the study. Purposive sampling technique is employed when the researcher knows where to obtain the required data with regard to the objectives of the study

In order to arrive at the eventual study participants, the researcher sampled four public universities from the thirty one (31) public chartered universities in Kenya. The choice of four public universities was guided by the fact that they are the first four oldest universities in terms of establishment in Kenya

Stratified sampling was used to sample schools and faculties into three major categories; Education, Arts and Social Sciences, Pure and Applied Sciences. Further, stratified sampling was used to select departments in order of their establishment. This was necessitated by the fact that the researcher was interested in getting specific participants possessing particular characteristics that could meet the objectives of the study.

A simple random sampling was used to select the male and female faculty members and doctorate students who participated in the study. All deans of schools or faculties and chairpersons of departments were included in the sample. Therefore, including participants with information concerning the area of study was critical for this study (Orodho, 2008).

Table 1. Sample size of doctorate students

Schools	Departments	Public universities								Total
		UoN		KU		MU		EU		
		M	F	M	F	M	F	M	F	
Education	1	27	24	25	16	12	9	11	9	141
	2	11	6	13	9	10	7	18	30	119
	3	9	4	6	3	3	2	-	-	27
	4	10	9	4	1	-	-	4	2	45
Pure and Applied Sciences	1	6	2	5	4	4	2	2	0	29
	2	3	2	4	2	4	1	5	4	30
	3	8	6	6	3	4	4	4	2	42
	4	7	6	4	3	3	2	6	5	40
Arts and Social Sciences	1	16	14	13	11	6	4	10	7	87
	2	13	9	9	8	3	2	11	7	69
	3	23	19	16	11	6	5	5	3	93
	4	16	19	11	12	5	7	9	6	96
TOTAL	12	149	120	116	83	60	45	85	75	826

Sources: Universities' enrolment statistics (2017).

Information from Table 1 above indicate the sample size distribution of the respondents in the four universities. A total of 826 candidates enrolled for various doctorate degree programmes in the sampled universities.

Table 2. Sample size for university administrators

Officers	Public Universities				TOTALS
	UoN	KU	MU	EU	
Deans	3	3	3	3	12
CPD/ HoD	12	12	12	12	48
Lecturers	89	93	58	49	289
TOTALS	104	108	73	64	349

Source: Universities' Human Resource Departments (2017).

Using the sample size of 30%, the study targeted 105 university deans of schools and members of the academic staff. The study employed the following tools in data collection; questionnaires, interview schedule and documentary analysis.

Data obtained from the study were analysed both qualitatively and quantitatively guided by the study objectives. The questionnaires had both the open-ended and closed-ended questions. Data obtained from the open-ended questions and interviews were coded and transcribed then organised and analysed in their thematic areas.

4. Literature Review

4.1 Institutional Resources and Doctorate Enrolment and Completion

Enhanced institutional resources are a parameter of measuring the quality of programmes mounted in higher education institutions. Resources such as well-equipped libraries, laboratories, funding, enough faculty members and lecture halls invaluablely promote research in doctorate studies. Equipped libraries form a critical component of research since they are known gateways to data thus according the researchers with ability to access to invaluable information (Rong'uno, 2016; Ruiz; 2002). Doctorate students who have navigated well through their studies have had access to sufficient resources, enhanced research practices, collections of research resources, knowledgeable researchers and dedicated places which offer an enhanced atmosphere for researchers (Ivankova & Stick 2007). Nevertheless, there are studies showing that most Kenyan public Universities are not sufficiently furnished with physical amenities such as print and electronic journals, instruction and research materials. Doctorate students and researchers are forced to operate under deplorable conditions (Eshiwani, 2009).

Okwakol (2008) in a survey study reported that many universities in Africa have insufficient

physical facilities. Cheboi (2006) concurred by arguing that inadequate amenities compromise the quality of university education. The CUE Report (2016) indicated that insufficient learning resources affect considerably the worth of teaching and research in Kenyan universities. This is further compounded by the increased enrolment at undergraduate and master's level without considerable expansion of the learning resources. The ripple effect is evidenced at doctorate programme studies where the faculty is overworked without sufficient requisite facilities.

Doctorate funding stands out as a major variable that influences productivity of doctorate students. Caillaud et al. (2009) observe that poor financing is one of the main problems facing doctorate studies. The result of reduced public spending on doctorate has adverse impacts in terms of quality and teaching, and research training. Similarly, Mouton and Cloete (2011) in a study observe that insufficient financing for university education has stagnated research in most African universities. The reduction of the budget targeting university education continue to hurt research output. Koen (2007) concurs while considering insufficient funding of doctorate programme studies as a scenario in which students have difficulties in concentrating on their research work as they have to combine it with a job to help them raise sufficient funds to cater for their needs. For this reason, obtaining a doctorate may take longer or even abandoning it altogether. Financial difficulty or ability is thought to be a serious motivating or de-motivating factor on completing a doctorate programme. Stock et al. (2009) concur by emphasizing that the influence of financial assistance on timely completion of doctorate degree is an important aspect. This is true because as self-supporting doctorate student and graduate teaching assistant posts increase the time to doctorate programme completion. (Mohamedbhai et al. 2011).

On the other hand, the likelihood of non-completion of doctorate due to lack of funds is also high (Cobb, 2013). This has an overall impact in that candidates for doctorate are likely to stay longer since they lack research funds that may enable them to collect data or even do experiments and even write their final thesis which is a culmination of doctorate studies. Wao et al (2011) agrees by stating that availability of funding determines the length of time taken to study doctorate. The World Bank report (2010) also indicates that in the past two decades, the African universities tripled enrolment while the budget to those universities continued dwindling. This means that enrolment is increasing at a rate which governments are not able to cope with and invest an equivalent amount of money towards it.

Mouton and Cloete (2011) asserts that significant increment in funding aimed ensuring that institutional resources are improved is urgently required. However, it is unfortunate that most African economies will not manage to support these demands. Certainly, this has exposed the state of research and doctorate productivity in Africa and Kenya in particular. Indeed, this is a precarious state in Kenya as public universities receive funding majorly from the exchequer. This study intends to establish the level of funding the Kenyan government and public universities has dedicated to research and doctorate studies. The World Bank (2010) report gave a raft of measures to ensure viable financing of university education. These measures pointed to cost-sharing as a way of reducing public expenditure on the university education. This study will establish the extent to which funding of doctorate education in Kenya is a variable influencing trends in enrolment and completion at this level of education.

Due to proliferation of online literature coupled with information seeking behavior patterns, doctorate students need to be guided on how to filter and pick relevant materials. Catalano (2013) emphasise that learners may need assistance on the best methods of accessing useful online research information. Such support can only be handled better by the librarian or anyone with knowledge on online information management skills. Due to information overload and failure for adult users to acknowledge they need help with certain aspects of their research, lack of access to quality information useful for research may affect the rate of completion of a doctorate programme (Secker, 2012; Sewell, 2017).

The university librarians play an important part in arranging information and availing it to the end-users among them, doctorate students. Consequently, they need to be proactive and demonstrate their ability of coping with the fast changing research terrain (Groenewegen, 2017; Sewell, 2017). Furthermore, universities with well-equipped libraries will endeavour to avail critical information for answering research projects questions. It is assumed that doctorate programme students possess some basic research skills (Jackson, MacMillan, & Sinotte, 2014). However, the doctorate learning process and research environment are dynamic. The duo is often influenced by technology, time and the discipline where the research students are engaged. University librarians come in handy due to their expertise, skills and knowledge about information searching. They also have deep understanding on proper utilization of databases and therefore are better placed to stand in the gap that overwhelms the research community. To serve the doctorate programme students better, librarians ought to be in a position to identify user's needs. This will then be followed with seamless provision of resources according to the individual needs identified, provide appropriate support and ensure resources accessibility. The challenge most universities face is inadequate library staff or even poorly trained ones who make the life of doctorate programme students difficult.

Mukiri, (2011) reported that most of those who teach at the university, mostly utilize personal materials to carry out research. The study further reported that those who teach at the universities are reluctant to utilize their materials to deliver content at the university without any form of reimbursement. The study established that resources at the universities is a serious setback. Lecturers have no computers or functional internet, lack office space and thus skeptical of utilizing e-learning. Similarly, a study by Kang'ethe, Simiyu, Kihoro and Gichuru (2008) observed that scientific difficulties are experienced in most Kenyan universities with serious shortages of modern computers and uncertainty of reliable internet to stem e-learning. This affects online delivery modes for doctorate programmes since meeting cannot be held virtually. The study thus sought to establish how ICT resources influence doctorate programmes enrolment and completion among the Kenyan public universities.

An audit report by CUE (2016) indicates acute shortage of university faculty in Kenyan universities. This is against the university standards and guidelines established by the commission on the faculty to student ratio. Moreover, the standards guides that medical and technical courses ought to have a small student-faculty ratio. This is due to the fact that they need personalized attention and therefore manageable number will ensure that. The standards further outline the ratio for courses in social science which is a serious challenge in most public universities. The study sought to establish the influence faculty as a resource has towards

influencing doctorate programme enrolment and completion rates in Kenyan public universities.

4.2 Summary of Literature Review and Gaps

The literature established that there was an acute shortage of funds mostly in developing nations dedicated for research. Most countries had fewer doctorate holders which hinders mounting of quality programmes. Offices, current reading materials and internet were posed as serious challenges for doctorate programmes in Kenya. Inadequate library materials coupled with insufficient staff or poorly trained ones. These literature helped to identify gaps for the current study.

5. Findings

5.1 Doctorate Students' Demographic Information

The doctorate students' demographic data was considered vital because it has a link to the variables which influence enrolment and completion of the doctorate programmes. The demographic information obtained was gender and area of study, age and the mode the study was delivered through. The gender and academic programmes of the candidates who participated in the study were also captured. The aim was to determine their gender and doctorate programme of study distribution across schools and departments in the selected public universities in Kenya and how this influenced doctorate enrolment and completion from public universities.

The gender dispersion of the doctorate programme students who took part in the study were as follows: University A had 76 males and 84 females, University B had 97 males and 68 females, University C had 69 males and 54 females while University D had 30 males and 24 female respondents respectively. Overall, the majority number of the doctorate programme students who were engaged in the study were male accounting for 54.18% whereas the female doctorate students were 45.82% of the students' respondents. This was summarized and presented in Table 3 below.

Table 3. Doctorate Candidates Respondents Percentage Distribution

University	Male	Female
University A	76	84
University B	97	68
University C	69	54
University D	30	24
Total	272	230
Percentage	54.18	45.82

Sources: Researcher's Fieldwork Analysis.

The doctorate candidate percentage distribution is in line with a study carried out by Yusuf, Felicia and Aina (2018) on demographic information. The study reported that in any study, the respondents' demographic information demonstrate whether they were representative enough. The percentage distribution confirms that the representation was sufficient for the study.

5.2 Age Bracket of the Doctorate Students

The study also sought to find out the age bracket of doctorate programme students. Data regarding the age of the doctorate programme students was considered significant since it envisages probable socioeconomic duties of the doctorate candidates, which may have influence on the enrolment into a doctorate degree programme and consequent time of completion. The researcher encountered difficulty in accessing admission data since part of the data was recorded and stored manually, this forced the researcher to engage a tracer tool to retrieve, collect and collate critical enrolment statistics. This led to the final number of the respondents for the current study as summarised in the table below.

Table 4. Summary dispersion of age and gender of doctorate students

Universities	UoN		KU		MU		EU		Totals		Percentage	
	M	F	M	F	M	F	M	F	M	F	M	F
18-28 years	-	-	-	-	-	-	-	-	-	-	-	-
29-39 years	12	13	18	21	19	15	9	7	58	56	21.32	24.35
40-49 years	51	56	63	39	36	28	13	11	163	134	59.93	58.26
Over 50 years	13	15	16	8	14	11	8	6	51	40	18.75	17.39
Totals	76	84	97	68	69	54	30	24	272	230	100.00	100.00

(Sources: Researcher's Fieldwork Analysis).

The data in Table 4 above indicates that the highest percentage (59.93% for males and for 58.26% females) of the doctorate students who took part in the study fall between 40-49 years. The findings that the average age for enrolling for doctorate studies is in agreement with Wamala, Ocaya and Oonyu (2012) whose studies established that the median age for enrolling for doctorate studies was 37 years while Jairam and Kahl (2012) established the age as 43 years. Those who fall between 29-39 years of age consisted of 21.32% males and 24.35% respectively. Those in the age bracket of 28-38 years of age were considered young and majority may be settling down in life therefore doctorate degree programme may not be of priority to them.

5.3 Institutional Resources and Doctorate enrolment and Completion Rates

The paper was to establish the influence of institutional resources on enrolment and completion rates in doctorate programmes among the selected public universities in Kenya. Various items were presented to both lecturers and doctorate programme students to give their responses. The respondents were to rate the items that were given in order to establish the influence of institutional resources on doctorate programme enrolment and completion rates in selected public universities in Kenya. This was based on the Likert Scale with 4= Strongly Agree (SA), 3= Agree (A), 2= Disagree (D) and 1=Strongly Disagree (SD). Their responses collated, analysed and presented at two levels; students' level and lecturers' level. This has been presented in Tables 5 and 6 respectively.

Table 5. Students' Responses on Institutional Resources, doctorate programmes enrolment and Completion rates

S/No	Item	Strongly Agree		Agree		Disagree		Strongly Disagree	
		N	%	N	%	N	%	N	%
1	There is sufficient physical facilities such as library space for doctorate students	107	21.31	103	20.52	135	26.90	157	31.27
2	Inadequate access to ICT materials have also hindered access to information for doctorate students.	96	19.12	88	17.53	151	30.08	167	33.27
3	Funding for doctorate students is inadequate for public universities.	196	39.04	174	34.66	54	10.76	78	15.54
4	There is insufficient number of qualified academic members in the schools to enhance doctorate programmes	263	52.39	186	37.05	22	4.38	31	6.18
5	Doctorate students are funded to attend academic conferences	93	18.53	98	19.52	142	28.28	169	33.67
6	The universities host high indexed and quality peer reviewed journals with regular publications	195	38.84	174	34.66	52	10.36	81	16.14

7	There are International linkages and collaborations	256	50.99	193	38.45	24	4.78	29	5.78
8	The cost of doctorate programme is within the reach.	5	1.00	2	0.39	189	37.65	306	60.96
9	Finding a doctorate programme scholarship is easy.	18	3.59	14	2.79	178	35.46	292	58.16
10	It is easier to access off-campus e-resources	236	46.01	183	36.45	46	9.16	37	7.37

(Sources: Fieldwork Analysis).

Table 5 gives a summary of doctorate students' responses on the institutional resources and their impact on doctorate programme enrolment and completion rate from selected public universities in Kenya. When asked about the availability of the physical facilities such as the library space, 31.27% strongly disagreed while 26.90% disagreed. However, through interview, doctorate students commended universities for their effort to create a reading section for postgraduate students. However, they were concerned with lack of control for such spaces since undergraduate students mostly occupy them. Furthermore, majority of doctorate students; 30.08% strongly disagreed and 33.27% disagreed respectively with the statement that inadequacy of access to ICT materials have also hindered access to information for doctorate students. They noted that universities have heavily invested on ICT equipment and internet services. They, however, raised the issue of frequent internet fluctuations. A doctorate student observed that;

'Whereas the university has created reading cubicles for doctorate students,

Most of them have broken furniture and electrical cables dangerously exposed. I have repeatedly told the librarian in-charge but there seems to be no action taken. The internet cable and ports are not working. This is coupled with frequent internet interruptions. Many a times I feel frustrated since I pay extra money for that service.' A doctorate student from University C (RS/24/CS/FE/CU)

The doctorate students were asked to comment on availability of funding for doctorate programmes. Approximately 39.04% strongly agreed while 34.66% agreed that there is acute shortage of funding for doctorate students. In course of interview, doctorate students noted that they fund their studies. They noted that doctorate programmes in universities are overly expensive which prompt them to take long in raising the required school fees. When asked to comment on the sufficiency of the academic members of staff, they overwhelmingly agreed that universities are seriously understaffed with qualified academic members. Another 52.39% strongly agreed while 37.05% agreed that indeed universities have inadequate members of staff. Students observed that as a result of this, some processes are delayed such as decisions on topic

selection, reading and returning the students' work by their academic supervisors. One of the student observed the following during an interview;

.I would wish that there was sufficient time dedicated to me as a doctorate student. I was assigned supervisors, yes, but we have never met to chat the way forward. Whenever I look for them, they explain to me that they are overwhelmed. Always in meetings, teaching undergraduate students and no time for me.' A doctorate student from University B (RS/32/CS/FE/BU)

Doctorate students also confirmed that they have a serious challenge of attending international academic conferences. Analysis from the questionnaires indicated that 33.67% strongly disagreed while 28.28% disagreed that universities fund them to attend conferences. They noted that conference charges are high which puts them off from attending. They however, noted that universities host high indexed peer reviewed journals where they could publish. This was supported with 38.84% who strongly agreed while 34.66% agreed. This was closely tied with whether universities had international linkages and collaborations. 50.99% strongly agreed while 38.45% agreed that linkages and collaborations existed. This sometimes led to student exchange programmes which exposed them more on their fields of specialization. Furthermore, they were asked to comment on the cost of various doctorate programmes and how easy could one access a scholarship. Majority, 60.96% strongly disagreed while 37.65% disagreed that the cost of doctorate programme is within reach. They observed that universities charge highly for the programmes citing a cost of not less than a half a million Kenya shillings per programme which is actually out of reach for many potential candidates. On how easy to access a scholarship, they cited difficulties in this with 58.16% strongly disagreeing that is easy while 35.46% disagreeing which demonstrates that chances of getting a scholarship for doctorate programmes is almost zero in Kenyan public universities. This is because, students have to work to fund their studies. In support, a student in university A observed during an interview that;

"I joined a doctorate degree programme with the hope of earning a scholarship mid –way to no avail. Income from all sources does not meet my financial requirements. I sometimes go without meals in order to save something for printing. Family demands are also heavy on me. This has left me to sometimes undertake menial jobs to fend for the family" a doctorate respondent from University A (RS/15/CS/FE/UA)

Doctorate students also complained of critical information missing on the universities online libraries. They however applauded the universities for embracing e-resources with easy access to them. This was supported by 46.01% who strongly agreed while 36.45% agreeing. But with the physical libraries, they rated the universities as doing poorly on this. One doctorate student from university B observed that;

"I regularly visit my university library with the hope of finding latest collection in my area of study. However, to my surprise, little is found. Often, those that are available are not actually sufficient for all doctorate students." A doctorate candidate from University B (RS/15/CS/FE/BU)

“Sometimes I cannot access library since we are studying on weekends and evening and when we access there is no space and the librarians are not willing or are unable to help in accessing the online journals and other materials needed” University D (RS/15/CS/FE/DU)

The findings above are supported by Nyangau (2014) and Munene (2016) who underscore that severe shortage of teaching and learning amenities in many public universities are revealed in many forms. Firstly, public universities experience shortages of lecture theatres with existing ones being dilapidated. Secondly, public universities are also synonymous with the lack of spacious libraries that are sufficiently stocked with current reading materials (Munene 2016). This is despite surge in student numbers while libraries tend to have outdated collections and restricted internet connectivity as a result of funding cuts. This means that students and faculty often work without access to essential components of university work, such as current textbooks and academic journals. A doctorate student from University B observed that;

“My area of study involves complex practical sessions which sometimes are not comprehensively available in my country. This compelled my supervisor to seek sponsorship for me. I had to travel outside the country to undertake some practical sessions.... And so, when I travelled to Europe, I got more exposed and am happy. I enjoy new academic partnerships with the new friendship I established.” (RS/15/CS/SPAS/BU)

The doctorate students underscored on the need to improve on infrastructural facilities for doctorate programme. They observed that universities were generally ill-equipped. Tied to this was the lecturer’s responses on institutional resources, doctorate programmes enrolment and Completion rates. This was collated and presented in Table 6.

Table 6. Lecturers’ Responses on Institutional Resources, doctorate programmes enrolment and Completion Rates

S/No	Item	Strongly Agree		Agree		Disagree		Strongly Disagree	
		N	%	N	%	N	%	N	%
1	There is sufficient physical facilities in the universities	8	9.88	5	6.17	27	33.33	41	50.62
2	Inadequate access to ICT materials have also hindered access to information	10	12.35	9	11.11	19	23.46	43	53.08
3	Funding for doctorate students is inadequate for public universities.	34	41.98	28	34.57	13	16.04	6	7.41
4	There is insufficient number of qualified lecturers in the schools to mount doctorate programmes	45	55.56	20	24.69	7	8.64	9	11.11
5	Academic members of staff are funded to attend academic	28	34.57	26	32.10	12	14.81	15	18.52

	conferences								
6	The universities host high indexed and quality peer reviewed journals with regular publications	44	54.32	21	25.93	11	13.58	5	6.17
7	There are International linkages and collaborations on doctorate programmes	38	46.91	29	35.80	10	12.35	4	4.94
8	There are readily available scholarships for those who want to pursue doctorate degree programmes.	8	9.88	13	16.05	27	33.33	33	40.74

(Sources: Fieldwork Analysis).

Table 6 is a summary of the lecturers' responses on the institutional resources influencing enrolment and completion rates of the doctorate degree programmes. Eight (8) items were presented for them to comment on. Lecturers were asked to comment on the sufficiency of the physical facilities such as the library space and office space. 50.62% of the respondents strongly disagreed while 33.33% disagreed with the statement. Those who agreed and strongly agreed were 6.17% and 9.88% respectively. Lecturers noted that universities have made strides in establishing modern libraries. However, those libraries are not sufficiently stocked with latest reading materials for doctorate programmes. Lecturers also decried on office space which seemed to be a challenge to most of them. This hindered their operations which need to be carried out from the office. Carrying students' theses along with them was risky as cited by some lecturers.

"The office space is a challenge for me. I share the tiny space allocated to me with my colleagues. Sometimes I am compelled to meet the students in my car or along the university corridors. My car is a small library as it carries books and student theses. They are never secure and sometimes I misplace crucial documents..... no option I Must continue working" a lecturer at University D (RL/15/CS/FE/DU)

Lecturers were asked to comment on whether Information Communication and Technology (ICT) was inadequately established thus hindering access to online learning materials. 53.08% of the lecturers strongly disagreed while 23.46% disagreed with the statement. They observed that universities have invested in ICT infrastructural development however; internet connectivity was low and in most cases down time was frequent affecting the sites which host materials for doctorate programmes. This findings are supported by Nyangau (2014) who established that inadequate teaching and learning facilities in public universities have been perpetually manifested through lack of adequately installed computer laboratories which restricts students from current source of information. This especially occurs whenever there is internet interruptions due to connectivity fluctuations. They further noted that universities have subscribed to several online materials. They demonstrated this through logging on into

subscribed journals. Funding for doctorate students was also put to the respondents to comment on, 41.98% of the lecturers strongly agreed while 34.57% agreed that universities are facing serious funding challenges for doctorate students. Most candidates for these programmes fund their studies which may explain why they take long to complete their studies. This is in agreement with Mukhwana et al. (2016) who established in a study on the ‘State of Postgraduate Research and Training in Kenya’ that public universities have a serious challenge in providing scholarships for growing number of the doctorate students. They established that there are fewer scholarships programmes in form of tutorial fellows and graduate assistants positions which is part of staff development schemes. In addition, the respondents were asked to comment on the number of academic staff in their universities. 55.56% strongly agreed while 24.69% agreed that universities were seriously understaffed with qualified academic members of staff. They observed that they are overworked citing teaching both undergraduates and postgraduates, undertaking administrative responsibilities and supervising the postgraduate students. When asked whether academic members of staff are funded by universities to attend academic conferences, 34.57% strongly agreed while 32.10% agreed that indeed they are facilitated to attend conferences. They however noted that the funding has been dwindling over time. During an interview, a lecturer from University A observed that;

“Funding is now a big time challenge in the universities. You know well that public universities are funded from the government ex-chequer. Yet, over time, the same government has been reducing capitation while the number of students remain the same. I tell you that from where I sit, university education has never been a priority to the government. In simple terms, universities are indeed paining. Doctorate students could be worst hit by this.”
(RL/13/CS/FE/UA)

The finding from the research are consistent with Gudo (2016) who established in a study that insufficient funding facing universities has led to acute shortage of basic learning resources, qualified academic staff and inherent weaknesses on administration. This is supported by Zeleza (2019) who asserts that most Kenyan universities are bankrupt and unable to perennially meet their basic financial needs. This thus points to a serious challenge facing public universities in mounting quality doctorate programme studies.

Furthermore, 46.91% of the respondents strongly agreed that universities host high indexed peer reviewed journals while 35.80% agreed with that. They underscored that this has helped doctorate students to publish which is a requirement before they can be conferred with their degrees. On whether universities had international linkages and collaborations, 46.91% strongly agreed while 33.33% agreed and confirmed that the existence of these collaboration has exposed them well. The two items are consistent with studies which have been carried out on the importance of journals and linkages. Gudo (2016) in a study established that research output is felt in the academia when it is published. The publication will expose the researchers to a third eye who will objectively critique and the outcome is of benefit to the academia and the general economy.

6. Conclusion

The paper concluded that the influence of institutional resources on doctorate degree enrolment

and completion rates in selected public universities Kenyan had an impact on enrolment and completion rates. There were insufficient resources in selected universities to mount quality doctorate programmes. The human resources in form of lecturers to teach and supervise were not enough. Those available were overwhelmed with other administrative positions besides teaching and supervision. The internet was found to fluctuate that affecting the rate at which information was obtained. Graduate spaces in the libraries were either insufficient or having faulty equipment such as power sockets and internet ports. Some books were not recent while access to other online sources deemed limited. Funding was equally not available for those who could want to pursue doctorate studies. Whatever is available is a drop in the ocean through government funding. It would be imperative therefore for universities to enhance the number of lecturers who could supervise besides teaching. Furthermore, universities to continue updating their books and online sources. The graduate spaces must remain so not to be occupied by undergraduates.

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