

Quality assurance cycle implementation and doctoral study cycle management in low resources economies

Abstract

The Bologna Process Accord 1999 has precisely identified three study cycles; Bachelor's degree cycle, Master's cycle and Doctoral cycle that ought to benefit from quality assurance Policy implementation. As mentioned in other chapters within this book, doctoral studies qualify students as potential resource persons that are capable of adding new knowledge to the existing stances. Knowledge economies have identified postgraduate qualifications (in this context PhD) as valuable means through which organizations can sturdily harness competitiveness in terms of innovation and creativity leading to the high-quality productivity of both goods and services. Technology advancement parse may not increase quality without brain workers to manipulate and direct production. There is a quest for increasing opportunities for doctoral enrollments and funding opportunities in low-resource countries.

Volume 7 Issue 2 - 2023

Moses Muhindo Kibalarwandi, Aloysius Rukundo, Adrian Rwekaza Mwesigye

Department of Educational Foundations & Psychology, Mbarara University of Science and Technology, Uganda

Correspondence: Moses Muhindo Kibalarwandi, Department of Educational Foundations & Psychology, Mbarara University of Science and Technology, Uganda, Tel +256-772-868882, Email kibalmo@gmail.com**Received:** April 09, 2023 | **Published:** April 20, 2023

Introduction

The Bologna Process accord progressively in its several communicués recognizes the three university study cycles; bachelor's degree cycle, master's degree cycle, and doctoral degree cycle which are significantly considered for quality assurance implementation. The focus in this chapter focuses on the doctoral study cycle from the institution admission process, knowledge and skill enhancement the education and training process of doctoral students, research and publication aiming at the creation of a research laboratory during a research project. Doctoral research requires a detailed and documented process of how to attain the research ethical committee's approval. The Uganda national council for Science and Technology provides guidelines detailed on how the protection of research participants who may be human, animals, and databases is also presented. However, along with the doctoral study program, several challenges have been highlighted that have increased, the "throughput" period for doctoral students. On average doctoral students sponsored; fully sponsored or partially in Ugandan universities graduate after 6 years, and privately sponsored students graduate on their 10th anniversary marked from the date of enrollment as doctoral students. There are several factors leading to prolonged study course periods that are not documented or given attention in any of the postgraduate manuals.

Five of the six universities that participated in the ongoing doctoral research had started with a third study cycle; the doctoral cycle. In their postgraduate policy books, they show that

- a) Full-time Doctoral studies shall last for a minimum period of six (6) semesters and a maximum period of ten (10) semesters.
- b) Part-time Doctoral studies shall last for a minimum period of ten (10) semesters and a maximum period of twelve (12) semesters.¹

In other words, 6 years are the maximum scheduled time for PhD studies. Doctoral graduates have partially complied with the full-filled scheduled period for the study period. Broadly successful doctoral candidates are less than 50% of the total enrollment complete doctoral studies.² Let us take 2014/2015 for Makerere University 420 PhD students enrolled and in 2018 only 77 graduated making 19% performance.³ In the same year 2014/2015 around 60 PhD students enrolled at MUST, and in 2018 only 11 PhD students graduated

making about 18.3% performance. This chapter explores deep into the causes of the low "throughput" of PhD students in low-resource economies taking the example of Uganda.

An applicant for the doctoral study cycle is expected to fill out an application form and submit a nine-page concept paper on a researchable topic. The department invites him/her for an oral presentation that after which two steps will be taken;

- 1) Names of two potential supervisors will be proposed to the Drgt and
- 2) Comments on the concept paper will be given with recommendations to be provisionally admitted for doctoral studies. The provisional admission will be issued with the names of two supervisors and such provisional admission remains valid for 12 months. The supervisors have got the following roles following Mbarara University of Science and Technology Postgraduate.¹

"The supervisors' roles and responsibilities to the doctoral student are;

1. Provide an environment that stimulates and encourages students to learn and work independently.
2. Guide the planning and execution of a suitable and manageable research project.
3. Guide the student on ethical considerations and intellectual property rights.
4. Create an ethos of collegiality so that learning takes place within a community of scholars.
5. Respect students' reasonable views and ideas on/her research.
6. Respond in a timely and thorough manner to written work submitted by the student, with constructive suggestions for improvement and continuation.
7. Make arrangements to ensure continuity of supervision when he/she will be absent for extended periods.
8. Assist the student in gaining access to facilities or research materials.

9. Assist the student in being aware of current graduate programmer requirements, deadlines and sources of funding.
10. Advise the student on relevant conferences and journals where to publish.
11. Encourage the student to finish up when it would not be in the student's best interest to extend the study programme.
12. Assist the student in complying with the changes suggested during the thesis defense.
13. Publish the student's work via joint authorship with the student.¹

The desired ratio of doctoral students to Masters Students is 1:4 yet it is still very high compared to the current enrollment standard of 1:7 in the year 2018/2019 for Makerere University.³ In universities where the author carried out research, the ratio between doctoral to master's cycle students is 1:10 compared to the required ratio of 1:4. The ratio of doctorates to bachelors is estimated at 1:128 which is still very low.

The criteria for ranking the best-performing universities consider the five major criteria; teaching, research, citation, industrial income and international outreach. These criteria are best addressed based on the three core activities of the university; teaching, research and community outreach. When discussing quality assurance in a university, teaching has five sub-criteria including; a ratio of doctoral holders to academic staff, PhD awards to bachelor's awards, total students to academic staff, reputation survey to staff, and institutional income to staff. The sub-criteria of teaching that identify the quality capacity of teaching for ranking best-performing universities. Doctoral studies are embraced by many universities on the continent as shown that out of the six universities under the study of the ongoing research by the author, five universities were already offering doctoral studies. However, the question of universities implementing a quality assurance policy with the three study cycles; bachelor, master, and doctorate cycle is being discussed.

Fundamental factors for quality assurance implementation in higher education institutions

The fundamental requisite to establish high-quality education in a university is to establish staff that is capable of participating in the three core activities for which institutions of higher learning are identified; teaching, research and community outreach. Successful teaching and research combined define the level of quality education in performing universities. Doctoral holders who engage in teaching and research account for output that is evidenced based learning experience. As mentioned that anthropoanagogy is a professional approach to inspiring learners to be innovative and creative academically based on the quality of work done by the professor or lecturer in higher education institutions. The concept of pedagogy may be inappropriate to be applied in universities that do not have children since pedagogy means a professional approach to leading a child through the learning experience. The original meaning of the concept (pedagogy) refers to a slave leading a master's child to school. While teachers are praised to be exceptional in determining the future of a nation, their determination and inspiration are frustrated by the compensation given at the end of the monthly work. It calls back to thinking about the original concept of pedagogy in Greece time when slaves could take care of their master's children. The polemic characteristics of pedagogy need correction to link professional training and real-world experience in the management of resources and creativity in sharing knowledge.⁴ The concept of pedagogy is having imbroglia tendencies that the course is theoretical in practice and teachers verbalism, not a

theory. Learners in this 21st century need more practical skills than verbalism in the spirit of pedagogy. The truth is that universities do not have children but adults above 18 years of age. Universities have mature individuals who can reason and explain the process with the guidance of the teacher hence anthropoanagogy is required.² Pedagogy is teacher-led but anthropoanagogy is where learning takes place with learner-teacher engagement in research and innovation. It is an inspiration of the people (anthropoi and anagogy), not pedagogy.

The future of school functioning shall not be learning to write and read, but also learning to be creative and innovative for the productivity of new products on market. Improving quality education is crucial as theories of learning and practice are concerned with higher education. Knowles as quoted by Bo stock & Wood arguably says, "Professional tutor activity is designed to give practical knowledge through the placement of learners in real job world experience". Knowles is quoted here that adults are different from children in four ways; a self-concept that leads to self-directing, experience has shown that adult has a reservoir of experiences, a readiness to learners which motivates them to participate actively in the learning process, and an orientation to learning. Therefore concepts and theories show that in universities we do not use pedagogy but andragogy, heutogy and anthropoanagogy.² Anthropoanagogy is where people are inspired by skilful persons based on research and teaching. Learners are inspired to be critical thinkers by combining research and teaching. Teachers' verbalism does not inspire learners but their documented facts and findings are researched and published. In this chapter, the author agrees that pedagogy can be a university course unit to be taught to educators who are to teach children in primary and secondary since pedagogy is a professional way of teaching children.⁴

Therefore, qualified teaching staff with a ratio of PhD holders 1:4 would be adequate, while all university study cycles are operational for purpose of promoting research and innovations. The cost-benefit of establishing doctoral studies is high than the marginal costs hence it is important to have a doctoral study cycle rolled in any university that intends to continue in operation in this competitive world. Countries would invest in university education to increase skilled manpower; human resource development that is above 40% of the national population with tertiary education qualifications. The national population housing census of 2014 revealed that the Ugandan population has only 4.3% of tertiary education qualifications.

In 2011 and 2012, the worst experience was that 66 PhD awards were recalled by the National Council for higher education in Uganda which was right to ensure the quality of higher education in Uganda.⁵ It is believed that across many countries in East Africa and beyond universities, employees are not satisfied with the current salary pay whereas in Ugandan universities employees are not on the government payroll annual gross salary is less than US\$10,000.² The scenario where one doctoral supervisor supervised 14 doctoral candidates and another supervised 20 doctoral candidates may be associated with the consumerist mentality. All the said doctoral awards were cancelled by the Uganda National Council for higher education.⁵ Low employee salaries may not be the only problem associated with the poor quality of higher education in Africa. Degrees awarded from; sex for marks, political degrees by high-profile individuals and a consumerist mentality all affect the quality of higher education. Many universities are implicated and suffer disgrace because of unholy academic relationships that sometimes is known as consensual relationships. In such, relationships "sexually transmitted degrees" have been awarded.⁶ However, it is accepted that academically weak female students who want to be "super girls" lure male lecturers in sex for marks.⁷ The problems identified are not only in the postgraduate; Master's cycle and Doctoral cycle but also Bachelor's degree cycle.

Bachelor's degrees have not been recalled from particular universities where some universities still maintain unqualified staff with bachelor's degree holder's teaching fellow degree courses to students. Research laboratories, with interdisciplinary research teams to document the process and measure the quality of products on market, are desirable for universities to increase knowledge. These research laboratories can be managed by doctoral graduates and professors.

Research has shown that several factors include; low engagement in research, doctoral students enrolling before securing sponsorship and along with the journey they dropout, lack of financial support for tuition fees and research, lack of competent supervisor that feedback is never given to the student in time have remained drawback on timely "throughput" of doctoral students in low resources economies. It may further be agreed that students related factors such as family challenges as most doctoral students are married people.² Another factor hindering timely throughput is the heavy workload for the employed PhD students they fail to balance studies and workload. For instance, in 2018 PhD candidates who graduated from MUST all were privately sponsored students who were even employed either in the main referral hospital or the university itself. Some universities do not have a designed plan that can provide "studentship employment" for self-sponsored PhD students which would reduce some financial shortfalls. These students sometimes go several months without funds to enable them to move for research and other requisite courses towards their coursework required for the award of Doctor of Philosophy. Lack of employee compensation in terms of salary and allowances also leads to the delayed throughput of some students as they find themselves "crushed between the jaws" of revenge.

In the events where external examiners for research projects have not been paid their allowances, the directorate of research and graduate training (Drgrt) is rendered ineffective. The broken link between the unappreciated examiner and Drgrt becomes sour. Students pay for their studies yet delayed authorization of examiners' allowances is an indication of low performance by the Drgrt in most universities. For example financing graduate studies, governments have failed to provide sufficient funds to public universities. Financial challenges also affect university budget performance as it is shown that 52% and 59% of the annual budget in both public and private universities is usually spent on employees' salaries.⁸ The same report⁸ shows that less than 1% of the budget is allocated for research. Such little appropriation for research funds is not adequate to support research and innovation in universities. In private universities, employee turnover is high due to low morale caused by a poor working environment and low salary compensation. Research funding and other activities aimed at facilitating doctoral studies and emolument to external examinees have been a challenge. Government expenditure on postgraduate studies in public institutions was only The Bologna Process Accord has continually identified three study cycles; Bachelor's degree cycle, Master's cycle and Doctoral cycle that ought to benefit from quality assurance implementation. As mentioned in other chapters within this book, doctoral studies qualify students as potential resource persons that are capable of adding new knowledge to the existing stances. Knowledge economies have identified postgraduate qualifications (in this context PhD) be more valuable means through which organizations can sturdily harness competitiveness in terms of innovation and creativity leading to the high-quality productivity of both goods and services. Technology advancement parse may not increase quality without brain workers to manipulate and direct production. There is a quest for increasing opportunities for doctoral enrollments and funding opportunities in low-resource countries.

Public funding to universities with strings attached to 0.35% of the GDP for the years between 2007 and 2018 annually was given to postgraduate activities.³ Postgraduate directorate of research and graduate training annual activities include but are not limited; to workshops for students and staff, research dissemination conferences, publication, research initial capital for projects, fellowship allowances for international researchers, scholarships and bursaries for staff development, and administrative staff. While governments and institutions struggle to increase public funding, per person expense cost to graduate one doctoral candidate range between US\$14,000 and \$25,000 in Uganda. Also, the minimum monthly salary for a PhD holder in private universities is \$526 per month making an annual gross income of \$6315. Given the opportunity to secure a doctoral student loan in four (4) years, a graduate can dearly pay back the loan as a revolving fund for education. As universities live with financial austerities, most of the policies have got contradictory information. In other words, doctoral cycle management has challenges ranging from personal, institutional and national. Doctoral cycle management will gain quality when government s will to invest in its management. As mentioned in chapters four and seven above credit recovery policy must be designed and track the record of the beneficiary with help of NIRA and the Bank of Uganda which issues financial cards. As doctoral students over delay in the university without completing on time a lot of human resources potential is wasted. The causes for delayed completion are several but financial, supervisors' competence and confidence, and the graduate committee work concerning meeting deadlines is very important in the management of the doctoral study cycle in universities.

However, doctoral candidates may apply for an extension which is granted by the Vice-Chancellor best on valid and genuine evidence supported by the hierarchal administration of Drgrt. This policy is flexible and accommodative for students who may be financially unable to complete in the stipulated time which maximal period of 6 years. These victims may apply for an extension with proof of progress as recommended by the relevant authority. For the case of Mbarara University of Science and Technology; MUST the extension is given for a single year and a consecutive extension may be granted based on need. If the PhD student continually fails to achieve the set target, he/she may be awarded a master of philosophy.¹ The problems met by doctoral students range from personal, financial and institutional that forcefully makes the learner delayed. Institutional problems also arrange from failure to allocate competent research supervisors. A doctoral student is allowed to propose one supervisor and when approved the potential supervisor continues with the duty to guide the student. If two or more supervisors are required due to different basic disciplines of studies then more supervisors may co-supervise the candidate. This too is responsible for the delayed PhD completion period as two supervisors may not frequently agree on standard requirements for a thesis. The expertise of a given field of study may be challenging to the proposed supervisors for instance, in "the case of Makerere University: Yusuf Serunkuma versus Prof Mahmood Mamdani miscellaneous cause number 164 of 2018", the PhD student accused Prof Mamdani of mismanagement of the candidates' doctoral process to frustration. The ruling was in favor of Yusuf Serunkuma. The point being addressed is that most students enrolled on doctoral courses delay graduating as a result of financial constraints and supervision-related challenges.

Doctoral supervision is globally changing to harness quality assurance that all institutions ought to respect. Doctoral supervision has become a collective effort shared by the academic supervisor, other qualified members of the supervisory team and various

structures put in place by the university.⁹ Support and guidance for early-stage researchers are now organized on multiple institutional levels.^{5,10} While the supervisor continues to play a central role and is even seeing her or his responsibilities expand dramatically, it is becoming increasingly rare for them to work without any form of institutional oversight. For external doctoral examiner (supervisor), he /she should be conversant with the postgraduate handbook of the university which enrolled a doctoral student, the quality assurance handbook and should have published articles with experience in supervising successful doctoral. It is important to have formal training in doctoral supervision.^{5,11,12}

Importance of doctoral cycle and benefits for PhD graduates

A doctorate represents a level of knowledge, skills, and attitudes that involve intellectualizing, conceptualizing and contributing to knowledge. Development of the power to think harnessed by critical thinking, extensive reading, and experimenting based on the existing body of knowledge to create new knowledge. A quality management system (QMS) emphasizes the documentation of procedures to improve and maintain the quality of products. The benefits of doctoral studies are personal, institutional and national with a wide range of collaboration globally to benefit the global community. The extensive research under the patronage of competent doctoral supervisor (s) qualified with a doctorate. With experience and one who has an interest in the student's research area. The doctoral students' admission process requires an applicant to submit a concept paper and defend or present the concept paper. It is during the concept presentation that the doctoral committee shall take minutes and identify supervisors that the package shall be presented to the admission committee of the university.

The benefits of doctoral studies accrue to both doctoral students and supervisors as identified below. Employees who show active participation in research and publication are rewarded by promotion to professional ranks such as; senior lecturer, associate professor, and professor.¹³ In all human resource manuals of the participating universities, research and publication are one of the criteria for the lecturers to be promoted to professional ranks which in the end attract salary scale changes. The student's opportunities after graduation are numerous^{1,4,14} where a few are outlined as

- a) Gaining the capacity to review manuscripts in peer-review journals that are done by doctoral holders
- b) Gaining requisite to apply as principal investigator (PI) and seek grants from international organizations. However, a person with a master's degree may qualify to apply for funding if already enrolled on a doctoral course.
- c) Doctoral holders stand a better opportunity to apply for employment/job
- d) Through rigorous and extensive reading and research doctoral students acquire wide and new knowledge capable of providing solutions to the countries' problems
- e) Doctoral holders are able of building support in knowledge production and research environment for the development of the requisite human capacities.

Challenges and problems faced by doctoral students in Ugandan Universities

The sour relationships between supervisors and supervisees due to a lack of understanding of the nature of doctoral supervisors such

as; supervisors are demanding like encouraging students to keep attending workshops, seminars, and conferences that require active involvement in research and publication.⁴ Doctoral supervisors stick to deadlines; they want students to work within timelines. These characteristics have been recorded as good characteristics of doctoral supervisors. Social support may be lost as a doctoral student may react to negative criticism which has the following repercussion like withdrawal of social support and delayed feedback to the student.^{4,14} The sour relationship may be resulting from a lack of competencies since the doctoral supervisor's training may not have been initiated in the country.¹¹ In the analysis of the three pathway models; on-job training and apprentices, the middle track of blended research and mentorship, and the third being premature neophyte supervisor, all exist in Ugandan universities. However, Sefotho¹⁰ presents four types of supervisors; pastoral higher support with low self-direction, contractual high support with high self-direction, laissez-faire with low self-direction and the fourth is directional low support with high self-direction.

Comparing the analysis presented by Rukundo,¹¹ and Sefotho,¹⁰ a problem does exist with doctoral supervision that requires further training and sharing experience. The three pathways as explained below show that as most universities are struggling to increase the output of doctoral professionals then a need to have more qualified supervisors is timely. Asimwe⁵ arguably states that "many reforms in higher education, including doctoral education, are based on market-driven!" She quotes Mamdani when talking about, the "Consumerist mentality". Increasing the number of doctorates parse may not contribute to national development unless the doctoral studies programmer's emancipate.⁵

Three doctoral supervision pathways are presented; on-job training and apprentices where competencies are built on the plethora of research-related and apprenticed expertise over time. The second pathway is the middle track (Formal training of PhD supervisors) has a blend of research which depends on the postgraduate handbook, and expertise gained from mentors in the upper pathway model (on-job). The second pathway can take a short period to make the best supervisor since s/he has a mentor, trainers and postgraduate handbook with the roles and responsibilities of the supervisor and supervisee. The third or lower pathway which Rukundo,¹¹ identifies as the "premature neophyte supervisor" serves as a supervisor after graduating with a doctorate without knowledge from experienced doctoral supervisors or reading extensively from postgraduate handbooks. The third pathway identified PhD supervisors who are appointed to be doctoral supervisors because they hold a doctoral degree. These are not supervisors better they act as co-supervisors to learn from main supervisors.¹² Handbooks sometimes offer contradictory information like; a PhD student is required to select one supervisor who shall be the main supervisor.¹ In the edition 2017, the doctoral committee after attending the concept presentation of the doctoral applicant, a potential supervisor (s) at least two shall be appointed and their names shall appear on the provisional admission letter of the doctoral student which shall be valid for 12 months. The roles played by the supervisor and students are well explained. The writing styles and citation is where there are some bit of contradictions which can easily be ironed out by the supervisor if a student so cooperates.

Makerere University which is taken as a gold leaf to test quality at the national level, recommends a supervisor to supervise 3 doctoral students, and 5 master's students.¹⁵ However, some supervisors who do not deeply look into students' work do accept supervising between 20 to 30 students in a year. This is particularly true for those supervisors who have shown that they are hard working on one hand

and others who do not pay much attention to the student’s work.¹⁵ For MUST Drgt does not have a specific number of doctoral students one supervise is supposed to have. Section 10.1.1 Qualification of supervisor, subsection (vi). The maximum number of students supervised by a single person shall be in line with that recommended by NCHE. This is a bit challenging since NCHE by 2022 it has no fixed number of PhD candidates and Masters Students to be supervised by one supervisor. The students or a team of supervisees is always between 20-30 for the three years. However, In India, University Grant Commission (UGC) limits the number of students that a faculty can supervise simultaneously. Professor who is a Supervisor shall guide only a maximum of 11 (PhD/M.S. (By Research) put together) scholars as Supervisor/Joint Supervisor at any time. The Associate Professor who is a Supervisor shall guide only a maximum of 8 scholars and an Assistant Professor shall guide only a maximum of 5 scholars as Supervisor/Joint Supervisor at any time. This would be fit for Ugandan universities to adopt since it all about quality assurance. In UK, professors supervise 6-10 engineering department, and other discipline 3-10 candidates, there are other universities where a lecturer can have more than 20 candidates from different cohorts. A research supervisor should have at least published 5 articles in the recent five years. A supervisor cannot present above 5 candidates for a single cohort at a graduation. If such a scenario occurs then such candidates should be from different cohorts that may have delayed due to financial constraints.

Supervisor-supervisee relationship during doctoral studies and after graduation

Alumnae association in most universities and tertiary institutions is inactive and graduates lose network links to continue learning, supporting the Alma mate (bounteous mother) who plenteously provides a learning environment that equips learners with an abundance of skills, knowledge and privileges to excel in service to the global community. As students delay due to hardships of supervision that they associate their prolonged stay at the university with a poorly governed system, individuals, and inadequate resources in the environment, they develop hatred towards their Alma mate and the nation at large. The argument is best on the practice in five universities out of the six universities that have started on with doctoral cycles of education. Kyambogo University,¹⁶ Nkumba University,¹³ Mbarara University of Science and Technology,¹ Kampala International University, and Uganda Martyr’s University have ongoing students in doctoral studies but little is mentioned on how universities have addressed the question of prolonged stay in doctoral study programs. The problem of delayed graduation may be related not only to financial constraints but also to the quality of doctoral supervision. Doctoral students enrolled in FY 2014/2015 none of them had graduated by 2020 as reported by Oyugi.¹⁶ The three pathway models identified by Rukondo¹¹ do exist as well as a sour relationship between supervisors and doctoral students. Several relationships have been identified between doctoral students and supervisors; these can be categorized into three (Table 1).

Table 1 The three pathway models

Mentor-Mentee relationship with facilitative supervision	Colleague-Reward supervision	Neophytes supervision
The Clone	Cheap labour Combatant	Creepy Crawlers The Ghost Supervisor
Counsellor Colleague in training	Captivate and Con Collateral damage	The Chum

Source: Chamberlain,¹⁷ Nulty Kiley & Meyer,³⁵ Oyugi,¹⁶ Sefotho,¹⁰ and Rukundo.¹¹

Doctoral supervision relations vary from supervisor-supervisee depending on the experience and training of the supervisor. In the presence of a postgraduate handbook, availability of experienced doctoral supervisors, and supervisors seminars and orientation workshops the middle track blended pathway¹¹ corresponds with contractual high support self-direction¹⁰ that Ssenyonga & Nakiganda,⁴ call to be demanding, oppressive, and stick to deadlines will require a protean relationship. The doctoral student must have a computer or laptop, modem, access to full-time internet, and be capable of accessing social media platforms. The clone relationship requires closeness between the supervisor and supervisee. The colleague in the training relationship makes the supervisor and supervisee work together with respect and guidance to the supervisee.^{16,17} In the counsellor relationship, almost all supervisors are mentors and counsellors to their supervisees. The five supervisor-supervisee models; functional, critical thinking, relationship, enculturation, and emancipation guide supervisors and co-supervisors to enlighten the process to instill doctoral students into the family of academia.¹² The critical thinking model of supervisors is most practiced in the Western culture of academia which is a secularist model that assumes that there are no perfect answers to an academic problem.

Different solutions can be used and lead to the perfect conclusion to solve a community problem. The enculturation model believes that becoming a doctoral graduate means one is becoming part of academia. The supervisors view themselves as a family to doctors that wish the family to prosper. The emancipation model its supervisors facilitate the process of achieving academic freedom to fly high in the space of academia, it does not matter if the supervisee is seen as being more relevant in the academia than the supervisor.^{5,12} The supervisee remains a student of the supervisor and he gives all he/she can to journey through with a learner. These are incredible people who give out everything they have for the learner. Sometimes lazy students misinterpret their doctoral supervisors as oppressive and reiterative as they assign different academic tasks to the supervisees. The truth mentioned here is; the tasks and activities that doctoral students should prepare; progressing candidature, mentoring, coaching the research project and sponsoring students participating in academic practices.¹² The functional model places supervisors as examiners in that postgraduate handbooks have rules and don’ts for doctoral students. Supervisors are attempting to see if students are meeting the required standards following the handbook. The relation model places supervisors less as a parent who; facilitates learning for successful results, are good writer, have a positive self-image, are highly organized, good writer, intelligent, resourceful, and commuted to the learner’s progress.^{12,18,19} Untrained supervisors will emulate their previous supervisors. This is a cause that learning to be a supervisor can take three pathway models; the upper model which is on-job and apprenticeship learning by experience. The middle track model is of formally trained PhD supervisors who train officials and these often perform better when supervising doctoral students.^{5,11,16}

The colleague-reward supervision model doctoral supervisor may attempt to think that doctoral students will assist them in overcoming their heavy classroom work like undergraduate teaching, supervision of research for masters’ level, or bachelor’s level, and the relationship between supervisor and supervisee is hypocritical from the brim relationship to look good but its depth is hell! For instance, in cheap labour, a supervisor will assign part of his/her tasks along with the doctoral student’s tasks that the submissive student will tend to neglect his own and accomplish the supervisor’s given tasks. In the combatant relationship, both supervisor and supervisee work together as competitors hence a learner will critically search for knowledge outside the realms of the supervisor. In the collateral

damage relationship the supervisor keeps moving and assigning the tasks in his/her classes when outside the country or university. As the doctoral student is overburdened then he/she may delay completing his doctorate in time.¹⁶

The third category of neophytes is known-nothing or premature neophytes. Neophytes mean new converts, beginners or proselytes. These have a relationship as in the table above. The creepy crawler relationship has both supervisor and supervisee trailing each other with a hidden motive. For instance, the supervisor may see mistakes in the students' work and hide his comments. Ssenyongo and Nakiganda,⁴ identify the causes of such situations to be students' negative reactions to criticisms made by the supervisor. Reactive doctoral students may have a repercussion and withdraw social support. The fact that such supervisors may be fresh doctoral graduates; may force them to hide their support. Ghost supervision this type of relationship exists when the supervisor does not readily get available to the exposure of the supervisee. The chum relationship is where the doctoral student and supervisor work as associates though the supervisor does not guide the supervisee.

In his research, Atibuni²⁰ presents other interesting findings on research supervision based on gender. The male supervisor to female supervisee was ranked effective, followed by a female supervisor to the male supervisee, a third male supervisor to the male supervisee, and finally, the worst-ranked is female to the female supervisor-supervisee relationship. The male-female supervisor-supervisee relationship was not dependent on sexual harassment but on understanding and duty acceptance to guide and supervise a learner with intention of emancipation to set free the learner from ignorance to knowledge. Generally, supervisors enjoy respect and any kind of resistance at the expense of being paid little as mentioned that most Ugandan university lecturers earn less than US\$10,000 as annual gross salary has an impact on the quality of university education.² A Dean from one of the Ugandan universities said there are a lot of unprofessional wars within universities which have for long inflicted innocent students. These conflicts emanate from disgruntled low-paid workers, the laziness of supervisors, and uncoordinated efforts between two or more supervisors of a particular candidate, students' laziness, failure to pay the tuition fee on time and gender supervisor-supervisee relationship.

In the absence of a competent supervisor for the doctoral student, the following may creep in and cause attrition. Supervisors have often taken a role of a counsellor as the supervisee becomes emotionally stressed during coursework or data collection. Some concepts are sometimes taken as slangs language best known at the university not universally known. For instance, a dissertation is for students doing a master's degree cycle while doctoral students present a thesis a MUST. The term "thesis" originated from Ancient Greek *θέσις* where Aristotle first defined the term as an intellectual proposition that explains something that affects society. In institutions, a dissertation is a research paper that is written on large scale with a broader perspective. It is a final assignment done by the doctoral candidate.²¹ Jerry Decker argues while responding to Carraig Refuga's question, "A dissertation is a lengthy document for a doctoral candidate, often hundreds of perfect pages, reporting the original research with statistical methods, demonstrating firm understanding on the field of knowledge, including previous work by others, and extending the field with new knowledge. If a candidate did not have a Master's degree or published a thesis then it would still be as such as how Richard Feynman²² submitted a PhD thesis" Decker.²³ A Dissertation is an opportunity in research during the Doctoral program to contribute new knowledge, theories or practices to your field.²⁴ "A dissertation is a long essay written for the

award of a Doctoral degree; a thesis for a Master's and Dissertation for a PhD...Campbell".²⁵ WEBSTER's Dictionary presents both definitions as, "Dissertation is a written essay, treatise, exposition or thesis esp. one written by a candidate for the degree of Doctor of Philosophy" Webster.²⁶ A thesis is defined as, "A proposition stated or put forward for consideration, esp. one to be discussed and proved or to be maintained against objection: He vigorously defended his thesis concerning the cause of war. A dissertation on a particular subject in which one has done original research as one presented by a candidate for a diploma, or degree ESP, a master's degree.²⁶ The two terms comes from different backgrounds; dissertation from Latin while thesis from Greek. The doctoral of philosophy takes a thesis as a final presentation of the research findings.

Having the above definitions into consideration, quality assurance policy implementation appears to have a lot of seemingly veiled issues (knowledge gap) that have been unveiled such as; policy cycle, policy analysis, policy evaluation, teaching in practice, governance, marketing strategies, educational concepts, theories, identification of causes of financial challenges in education institutions, and techniques of formulating psychological tools for a survey. This has been possible through data collection using both quantitative and qualitative. Research has shown that; the experience of employees, policy-makers, and politicians cannot completely divest from their old methods of doing things such as policy formulation and implementation. The experience and knowledge acquired during this study may edify some "minds" to create a transformative understanding at a global scale of how the policy cycle and human resource development can be improved. They (administrators) may either adapted collegiate, innovative and enterprise organization culture shifting from bureaucratic culture.

As mentioned, students who enroll before establishing the source of funding for their doctoral studies do fail to complete them when even supervisors are doing their best. The workload of doctoral research supervisors limits their active participation and feedback pace to students hence delayed completion. Some cases have ended unreported where master's students take 3-10 years before graduation and the same with doctoral students. There is a contractor experience that needs further investigation where graduate students enrolled in corporate universities graduate faster than their counterparts in faith best and public universities. Cooperate universities provide education as a commodity in the market while denomination or faith best and public universities provide education that fits national human resource quality. The few participants sampled to establish causes of delayed feedback to students identified in the staff semester evaluation by students where is on record that supervisors are reluctant in giving research feedback. Financial compensation was reported in private universities than in government universities. Also, it was reported that external examiners for doctoral and master's research theses and dissertations are not promptly paid by the directorate of research if not the university financial managers. The directorate of research and the administration of Drgt find themselves at a crossroads in determining who to give a student's thesis for examination.

In some universities, collegiality is being eroded such that supervisor X remains hatred by other members in the directorate of research graduate education and training (Drgt) a situation that students from such departments or faculties are not given equal attention they would deserve during studies.²⁷ It is not surprising that attention to collegiality and governance has been recently given attention in Europe.²⁸ University governance is a concept that explains the triointerrelationship between the employees and university proprietors, the state, and the market which has customers or clients to purchase

the services and products from the firm.¹⁸ Employees and employers are on the stage of collegiality without which no market strategy can be successful through the economic environment that may have been provided by the state. It is the role of the state to provide security that can stop bad happenings such as aggression among the different stakeholders that cut across ethnic groups. Heads of faculties, heads of departments, and senior lecturers sometimes retain some administrative disputes that emanate from unfair treatment when staff demands their compensation such as marking allowances, supervision allowances, and project coordinators allowances. These accumulated disputes bottled together pour out on supervised students inform of revenge. This was reported by some participants during ongoing research in the participating universities mentioned in chapters thirteen, and sixteen within this book.

Collegiality is a form of organizational governance that is practiced in a relationship with bureaucracy and management.¹⁹ The question of bureaucracy raised by several managers was explored. Bureaucracy in government institutions tends to cause ineffectiveness while the private institution has a clear goal-profit strategy which contributes to quality improvement as employees work with the hope to benefit from achievement in terms of incentives, rewards and promotion. It is believed that salary for some institutions has been tied to profit via profits sharing plans, bonuses, and stock options.² In government, institutions privately sponsored students used to contribute towards the university budget to meet the salaries of lecturers not on the government payroll, staff allowances as reports show that public universities offer extra 12 different sources of allowances given to employees on top of monthly salary.²⁹ Allowances like; examination setting allowances, examination invigilating allowances, evening teaching allowances, industry/attachment supervision allowances, course work marking allowances, project coordinator allowances, special assignment allowances, head of department/faculty allowances, investigating examination multi-practices allowances, education allowances, medical allowance, house allowance, staff/ faculty meeting sitting allowance and many others. Disputes sometimes arise when payment delays without prior communication from responsible paying officers.

It is on record that in institutions where teaching and non-teaching staff feel cheated, strikes and demonstrations became an option since there is no avenue for whistleblowers.³⁰ Causes of strikes or labour turnover are; lack of personal fit, lack of growth, ineffective leadership, internal pay equity and workload. Strikes like what is happening at Makerere University may be related to policy implementation and practice in management hence pulling the quality of service down in terms of service delivery to the clients.³¹ Unfortunately, there is little research on the extent to which “models” of governance represent the “beliefs and behaviours” of people in the higher education governance structure.¹⁸ Quality assurance policy implementation in successful universities has factors like awareness by employees 90.6%, staff participation 88%, and other evaluation process supported by 74.8% as established in Vietnam. In Ugandan universities quality awareness was 90.8%, the correlation between knowledge and quality assurance implementation was $r=.761$, and perceived service delivery by clients is $r=.887$.^{2,27} Results on staff participation in quality assurance implementation can be generalized. The qualitative data also show that governance is dearly needed for employees to mend broken relationships for the good of the learner. As governance fails to unite stakeholders, collegiality should be amended to increase participation in decisions making which harnesses the quality of the institution. However, amending collegiality professors in Sweden spent more time in meetings and conferences which directly affect time given to learners. The reform now is about transforming decision-making boards with more students represented as the first aspect

of collegiality.²⁷ The second aspect is the decision-making system concerns the role of academic leadership and how they are appointed. The collegiality organizing principles ideally include a management structure with leadership elected by colleagues and appointments for people who have the support of their colleagues and students. The third aspect of collegiality includes but not limited to peer-review evaluation, review of promotions in ranks and positions, research funding and publication are jointly reviewed, and project supervision is done using an interdisciplinary approach. Team spirit is always high where such governance is practiced to improve quality assurance.

Challenges faced by the directorate of research and postgraduate training; Drgt

While the universities intend to promote research and innovativeness on the African continent, the following are some of the aims for which the directorate of research and training is established;

- a) To increase the capacity of supervising research and monitoring research projects,
- b) Create professional links and network researchers and upcoming junior researchers to create an epistemic community.

These major objectives enhance resources mobilization and trigger high access to the doctoral study cycle.

However, Drgt suffers delayed release of funds to facilitate its operations such as conducting workshops, seminars, and payment of allowances to the supervisors and external examiners. The challenge may not easily be observed. Drgt consults the supervisor and external examiner and works with faculties to establish doctorate committees that handle the internal requirement for the success of the doctoral student. At the time of payment, Drgt recommends and forwards financial claims to the financial business office. The time lag between submission and payment is blamed on the Drgt administration which causes social distrust hence causing low morale among employees and external supervisors.³²

Conclusion

There is a growing need to increase research and innovation on the African continent through quality assurance implementation. Universities are significantly recognized to be capable of producing knowledgeable and skilled human resources. The doctoral study cycle is important in knowledge reviewing, manufacturing and enhancing productivity through creativity and innovation. However, doctoral cycle management may be affected by a consumerist mentality as exhibited by a few private universities that tend to commercialize the doctoral study cycle concerning the quality of the products. The success of doctoral study cycles can only be meaningful when students, doctoral supervisors, top university administration, and the head of the country jointly support research and innovation to increase inclusive economic growth and development. Each supervisor should be able to present less than 5 candidates for graduation, and a publication should be a qualification for supervisors of research at doctoral level.³³

Quality assurance policy implementation aims at increasing labour mobility and accountability of the system. Transparency and institutional governance are pertinent in the implementation and management of the doctoral study cycle which is a quest for research and innovation in academia and the manufacturing industry. The effort of the doctoral study cycle is sometimes frustrated by personal, financial, and institutional challenges that would even be rectified depending on a mature willingness to improve the quality

of higher education in the country. For instance, financial challenges and hardships faced by doctoral students can be solved by the students' loan scheme which is approximately US\$14,000 per person course cost/ expenditure in Uganda. In 4 years given that the basic annual salary gross salary is US\$6,315 for private universities and government institutions minimum annual gross salary is \$21,078.89, a loan scheme doctoral student would be able to pay back the loan. The student loan scheme would eliminate doctoral attrition and increase the output of graduate school as "throughput" time is maintained between six semesters and 12 semesters for doctoral graduates. As part of the incentives to the university government would fix an appreciation of \$10,000 per doctoral graduate who successful graduate within 3-5 years dated from date of enrollment in the doctoral programme. The job market for doctoral students is still high in Uganda and other parts of the continent. Loan scheme should be extended to doctoral students and recovery should be enhanced. The current loan recovery process would only be made a little more effective than the current practices in Uganda.³⁴

Doctoral candidates increase the volume of new knowledge production and review in the country which may have a positive economic impact on the country's economic development. The three core activities; teaching, research and community outreach for which higher education institutions are established can be enhanced by increasing the gross enrollment of doctoral students in the country. Research and teaching combined account for above 92.5% percentage score on ranking best performing university. In chapters four and seven above, it agreed that teaching accounts for 37.5%, research 37.5%, citation 15%, industrial income 2.5% and international outlook account for 7.5%. This is possible for doctoral students and doctoral supervisors to engage in research, innovation and publication increasing new products on the market. For instance, intellectual property and patents can increase industrial income, and reputable citation in academia; research and teaching are done by exemplary doctoral supervisors and candidates. For instance, in the absence of doctoral study cycles in universities, its alumni associations have not been actively involved in research and innovation. Universities are known for their three core activities; teaching, research and community outreach.

University teaching is not pedagogical! Concepts like andragogy, heutagogy and anthropoanagogy do apply since universities do not have children as their learners. A child is any person below 18 years for Uganda and in Arabian countries, a child is any person below 14 years of age. Reading readiness comes with motivation to the learners while in adults it is inspirational by the good acts of the educators. Educators in tertiary institutions inspire learners hence these learners are people (anthropoi) and inspiration (anagogy) when combined they form a concept known as anthropoanagogy. Academic freedom can potentially be achieved when universities engage in a doctoral study cycle for students and doctoral supervisors to excel in manufacturing knowledge, reviewing knowledge, storing knowledge and selling knowledge to the end-users of research. Most doctoral holders have concentrated on one core activity which is teaching without engaging in research and community outreach. This has kept universities and employees financially poor because they have not gone entrepreneurial and innovative.³⁵

The benefits for doctoral candidates and supervisors are enormous when mutual relationships are cultivated to benefit each other as mentioned within the chapter. Universities have developed directorates of research and graduate training manuals that clearly show the responsibilities of the parties involved like supervisors and supervisees. The sour relationships have not yielded much rather than

tarnishing the university's reputation as well as the candidate's time wastage. Cognitively doctoral candidates should extensively read and work closely with supervisors for easy voyaging on the path of education.

Training supervisors for doctoral students in African universities will improve the quality of higher education in the third study cycle. Benchmarking doctoral cycle management from South Africa which is proving to be advanced in doctoral supervision is a way to achieve harmonization of quality education on the African continent. This explains why several top universities among the 200 best performing universities are in South Africa.

Further Study questions for this chapter

- 1) Explain the doctoral process in Ugandan universities for achieving a successful doctoral candidature
- 2) How can a doctoral candidate contribute to the quality of a university?
- 3) Where should we recommend anthropoanagogy rather than pedagogy in universities?
- 4) Concerning Dr. Aloysius Rukundo Pathways model of doctoral supervisors' knowledge and training. Explain why supervisors should be trained.
- 5) How is the knowledge of Chamberlin's ten types of doctoral supervisors relevant to the doctoral study cycle management in a university?
- 6) Upon understanding doctoral study cycle management explain problems faced by the doctoral students in Uganda.
- 7) What are the possible causes of the sour relationship between supervisor and supervisee in the doctoral study cycle?
- 8) What problems are the directorate of research and graduate training facing in low resources economies?
- 9) Explain the basic roles and responsibilities of a doctoral supervisor.

Acknowledgments

None.

Conflicts of interest

None.

Funding

None.

References

1. Mbarara University of Science and Technology; MUST. Postgraduate Handbook. 2017.
2. Kibaliwandani MM. An Evaluation of Staff participation in quality assurance implementation in Ugandan universities. Doctoral thesis pending submission to DRGT. 2022.
3. Makerere University. Directorate of Research and Graduate Training. "Strategic Research, Innovation and Commercialization Plan 2021-2030". 2021.
4. Ssenyonyi J, Nakiganda PB. Postgraduate Students Research Realities in Uganda. In Danis Zami Atibuni, editor. *Postgraduate Research Engagement in Low Resource Settings*. 2020.

5. Asiimwe JA. Understanding Doctoral Supervision: Concepts and Experiences of Selected Supervisors and PhD graduates in Uganda. 2019.
6. Ekundayo TH, Emmanuel AO. "Sex for Marks Syndrome" in Nigerian Universities: Implication for Educational Administrators.
7. Okebukola P. Saving Nigeria from Itself: Towards a Redemption Plan for Education. 50th Anniversary Lecture of Faculty of Education. University of Ibadan, Ibadan Nigeria; 2018.
8. NCHE. "A Report of Higher Education Delivery and Institutions". The State of Higher Education and Training in Uganda 2018/19. Kampala, NCHE. 2019.
9. Helfer F, Drews S. Students Perspectives of Doctoral Supervision: A study in an Engineering programme in Australia. 2019;14:449–456.
10. Sefotho MM. Carving a career identity as PhD supervisor. A South African Auto ethnography case study. *Int J Doc stud.* 2018;13:538–553.
11. Rukondo A. Innovation in Education and Teaching International A Comparative Analysis of a Pathway Model and Manuals to assess the efficiency of Pedagogical Training in Doctoral Supervision in Uganda. *Rutledge Taylor and Francis Group.* 2019;57(1):29–37.
12. Lee AM. Developing Effective Supervisors: Concepts of Research Supervision. *SAJHE.* 2007;21(4):680–693.
13. Nkumba University. Human Resource Manual. 2013.
14. Jowi OJ. Doctoral Training in African Universities: Recent trends, development and issues. *Journal of the British Academy.* 2021;9(1):158–185
15. Makerere Drgt. Directorate of Research and Graduate Training. Doctoral Supervision Guidelines. Kampala. Makerere University; 2016.
16. Oyugi JL. Supervision of Doctoral Candidates at Kyambogo University: Supervisor-doctoral student perspectives on roles, approaches and types of relationships. 2020;8(2):29–42.
17. Chamberlain S. Ten Types of PhD supervision Relationships. Which is yours? 2016.
18. Kweik M. The Unfading Power of Collegiality? University Governance in Poland in a European Comparative and quantitative perspective. *Int J Edu Dev.* 2015;15(1).
19. Vickers SSSE. Collegiality and the Interplay between Modes of Governance. Master's thesis of Uppsala University; 2021.
20. Atibuni DZ. Institutional Support and Student-Faculty Interaction for Postgraduate Research Engagement. In Danis Zam Atibuni, editor. *Postgraduate Research Engagement in Low Resource Setting.* 2020
21. Alicia J. Dissertation Vs Thesis: You're a-Z Guide to Learn About the difference between Thesis and Dissertation. 2020.
22. Feynman R. Feynman's Thesis- A New Approach to Quantum Theory. World Scientific connecting Great Minds. 2005.
23. Decker J. What is the difference between a thesis and a Dissertation? 2018.
24. Best Master's Degree. What is the Difference between a Thesis and a Thesis statement? 2020.
25. Campbell, M. The Difference between a Thesis and a Thesis statement. 2015.
26. Webster. Webster's New Universal Unabridged Dictionary. Barnes & Noble Books. New York; 1994.
27. Pennock L, Jones GA, Leclerc JM. Challenges and Opportunities for Collegial Governance at Canadian Universities: Reflection on a survey of academic senates. 2016;46(3):73–89.
28. Sahlin K, Ulla Z. What is the role of Collegiality in modern universities- the composition of governance, ideas and practices? *Nord J Stud Edu poli.* 2016.
29. New Vision Report. Makerere Varsity Lecturers paid 12 Allowances. 2022.
30. Tibarimbasa AKM. Factors Affecting the Management of Private Universities in Uganda. PhD thesis submitted to Makerere University. 2010.
31. Musinguzi B. "Makerere University Managers Faces Probe on Strikes". Daily Monitor News Paper. 2016;307.
32. Affero I, Hassan R, Masek A. Generating Elements of supervisory inputs support via exploratory factors analysis for effective supervision in engineering education. 2014.
33. Kasozi ABK. Creation of the Next Generation of Thinkers and Innovators: Doctoral Training in Ugandan Universities. 2019;10(2).
34. Mugambe L. Court Orders Prof Mamdani off Observer columnist Doctoral thesis. 2020.
35. Nulty D, Kiley M, Meyer N. Promoting and Recognising Excellence in the Supervision of Research Students: An Evidence-based Framework. 2009;34(6):693–707.