Strengthening Capacity for ICT Usage and Policy Reforms for Relevant and Quality Masters Research Process Management in Uganda's Higher Education Institutions (HEIs) – ICT-4MRPQ

September 14, 2023 in the UCoBS Board room, Town campus

Table of Contents

1.1 Introduction

The ICT-4MRPQ project was launched at Mbarara University of Science and Technology (MUST) on May 18, 2023 where, the project implementation team led by the MUST Coordinator, Assoc. Prof. Charles Tushabomwe-Kazooba conducted an e-supervision training for both administrative and academic staff in the auditorium in the Faculty of Applied Science and Technology, Kihumuro campus. Given the fact that the implementation of the project requires full support from the university management, a breakfast meeting with Top Management Committee members was organised to demonstrate how the e-supervision system works and also get comments to help improve it.

1.2 Welcome Remarks by the MUST Coordinator

Assoc. Prof. Charles Tushabomwe-Kazooba, the MUST ICT Project Coordinator observed protocol and welcomed Top Management Committee members to the breakfast meeting. In a special way, he welcomed the team from Makerere University Business School, the Lead Partner institution for the ICT-4MRPQ project. He mentioned the participating institutions as Makerere University Business School, Mbarara University of Science and Technology, Stichting VU Amsterdam - Netherlands, Kyazze Kankaka & Co. Advocates, Makerere University, Uganda Chapter for Corporate Social Responsibility Initiatives, Universidade De Lisboa - Portugal and National Council for Higher Education. He also mentioned the MUST ICT-4MRPQ Project coordination team who included Assoc. Prof. Charles Tushabomwe-Kazooba as the MUST Project Coordinator, Assoc. Prof. Edgar Mugema Mulogo, Ms. Barbara Rita Naggayi, Mr. Moses Ntaro, Dr. Deborah Natumanya, Dr. Imelda Kemeza, Mr. Amos Baryashaba, Ms. Margaret Mbabazi, Ms. Winfred Aliguma and Ms. Viola Nabaasa as team members.

He explained that the main objective of the project was to strengthen higher education institutions capacity to use ICT in the Masters' research journey quality management processes and devise policy reforms for relevant high-quality research outputs at HEIs in Uganda. He further explained the working objectives which included to update the research process quality management policies and guidelines at national level – NCHE and at university level in the context of master's students research; to increase the capacity of Uganda NCHE and HEIs to participate in the definition, implementation and monitoring of masters research policy reforms necessary for setting up a national common master's student research agenda; to document critical aspects of the master's student research journey which should be monitored for relevancy to national development; to build capacity in using ICT as a digital skill inclusion mechanism which can reduce various forms of discrimination against women/girls (both students and facilitators/lecturers); to increase the number of master graduates capable of

conducting quality and impactful and relevant research along with increased skilled research supervisors and administrators; to promote local and international mobility and cooperation in exchanging good practices among and between NCHE, individual HEIs in Uganda and HEIs in Europe at institutional level fostering systemic improvements in master's degree research process quality and innovations management. He mentioned that the project fulfills three sustainable development goals i.e. SDG 4, 5 and 9.

The key outputs of the project were a revised national master research policy framework, NCHE approved e-supervision platform and a mobile App. connecting the participating universities. He explained the key results both short term and long term. The short term results include timely graduation of students, reduced supervision inconsistencies, relevant and high quality research outputs and reliable student research assessment processes. The long term results included enhanced research capacity in Uganda, increased stock of relevant research and employable graduates. He mentioned that Uganda HEIs counterparts would benefit from demonstrated increased knowledge, mobility & adoption of new technologies while the European partners would benefit from knowledge and internationalization. He noted that at least 700 staff and 1,500 students would be inter-connected on a NCHE approved Research E-Supervision Platform. 500 supervisors and 100 administrators will improve their work efficiency and interaction with students. NCHE will enhance capacity and accreditation. The employers will upgrade their sustainable development data tracking skills.

He mentioned the eight work packages that included project management, coordination and monitoring; system planning for e-supervision development; systems planning for mobile Application development; designing and development of e-supervision platform and mobile App; systems analysis for e-supervision platform and mobile App; capacity building of beneficiaries and HEIs; output dissemination, knowledge & change processes and learning mobility and cross-cultural exchange. He concluded by projecting some of the pictures taken at the project launch at Makerere University Business School.

1.3 Remarks by the Vice Chancellor

ICT-4MRPQ TEAM MEETING WITH MUST ADMINISTRATION 14t

Professor Celestino Obua, the Vice Chancellor, MUST thanked the MUST Project Coordinator, Assoc. Prof. Charles Tushabomwe-Kazooba for the presentation and for organising the breakfast meeting with Top Management members. He noted that it was a pleasure for him to attend. He welcomed participants from the prime recipient of the grant, Makerere University Business School. He noted that it was important to appreciate when one acquires a grant. He remarked that the funders nowadays believe that the more hands, the

more impact unlike in the earlier days when grants would be given to individuals or a single institution. He explained that in the implementation of the ICT-4MRPQ project there were eight (8) institutions, among them being a regulator participating in the grant. It meant that the grant was meant to facilitate the regulator to monitor the implementation and also to know the challenges that delay master students to complete their study programmes. Among the challenges could be that the lecturers/research supervisors do not want to review and help the students to progress.

He mentioned that at the last Senate meeting, the same issue was raised that postgraduate students were not well assisted to complete their research. That despite having ICT in place, lecturers still want to call the students under their supervision to guide them face to face. He termed it a form of torture to those students yet one could interact distantly other than calling students to meet them in hotels at awkward times. He hastened to add that ICT was a form of infrastructure to help institutions improve. He remarked that institutions had guidelines but when it comes to implementation, things were different which affirms the saying that Uganda was good at forming policies but implementing them was difficult.

He explained that multidisciplinary was at play in the grants being given out. That the scientists were working with humanities, engineers, medics among others which was good to have diversity so that the policies and system being developed are all round. That it was good to involve everyone from the different fields who have something to contribute. He mentioned that it was his prayer that the participating institutions work together and implement the grant as required. He noted that European Union grants normally go by work packages which necessitate partnering institutions to work as a team. Although sometimes some implementers tend to be slow; meaning that the quick ones have to wait for others to finish their part before they can continue.

He concluded by congratulating all the team members upon the grant. That management shall give the project all the support that is needed and all Faculties in the university will be at the project's disposal for the implementation of the project.

2.1 E-Supervision demonstration

Mr. Tom Tamale, team member of the software developers at MUBS informed participants that the e-supervision system was a proposed solution to the issues that were brought about by the COVID-19 which disorganized the whole world. He explained that last week a hackathon for the development of a mobile Application was held at Makerere University Business School where Dr. Deborah Natumanya, MUST was one of the judges. He mentioned that the e-supervision system had three main stakeholders; the student, research supervisor and administrator. The other stakeholders include the reviewer, examiners among others. The e-supervision demonstration was conducted by Mr. Tom Tamale, Mr. Juma Lubega, software developer, MUBS and Dr. Deborah Natumanya. Dr. Shakilah Nagujja was the key software developer at MUBS but was unable to come. Mr. Tom Tamale acted as the Student; Mr. Juma Lubega as the Administrator and Dr. Deborah Natumanya as the Research Supervisor.

Mr. Lubega mentioned that the Administrator was able to create accounts for the different users and was able to monitor what was being carried out on the platform. The Administrator can feed in the name of student, registration number, academic programme for which the student is registered, name of research supervisor allocated to the student with their areas of expertise and research interests, monitor the progress of the students, he/she can know how many have completed, those that have delayed. A Masters student is allocated one main research supervisor and a second research supervisor. It was practically demonstrated that once the administrator has assigned the student a research supervisor, that research supervisor receives an e-mail about the students allocated to him/her. The research supervisor has a choice of accepting or denying the student who can be allocated to another research supervisor. The student as well when allocated a research supervisor, he/she receives an e-mail informing him/her of the research supervisor he/she has been allocated. A student can be allocated two research supervisors. The Administrator can also receive complaints from students and research supervisors, which he/she handles accordingly. When a student submits a complaint to the Administrator, the Research Supervisor will not see it as it is confidential. The system works just like the manual system following the research guidelines in place and has iteration of the stages when need arises, meaning that the stage at which a student is, does not hinder him/her

to go back to an earlier stage. The system works in a way that the student must have completed all the course units without a retake and must have fully paid all the fees. The system is connected to the finance system so it will automatically tell if the student has fully paid.

The Administrator created a student account in the names of Mr. Tom Tamale, with a random registration number and a random student number. He assumed that the student was in second year. The student Mr. Tom Tamale logged onto the system. The first step was for the Mr. Tom Tamale to create a title of the research project. The title could be typed in or attached as an attachment and then click on the submit button. Then the Administrator assigned him a research supervisor, Dr. Deborah Natumanya who received an e-mail to that effect. It was noted that the concept submitted is time stamped which is helpful that if a supervisor denies receiving it, the truth can be verified. The Administrator stops at allocating a research supervisor, what follows is the interactions between the student and research supervisor unless there is a complaint to be handled. The system has sections that the student has to follow. For example introduction, background etc. the sections are followed in a chronological order. After receiving the title or any submission from the student, he/she can suggest edits or approve for the student to continue.

ICT-4MRPQ, TEAM MEETING WITH MUST ADMINISTRATION 14th. 09. 2023

It was explained that Turnitin software was to be embedded in the system to check plagiarism. Once the student is done with the proposal, the Administrator can assign a reviewer following the same procedure like allocating a research supervisor. That in case there is need for the research supervisor to meet the student physically, then the outcome can be input into the system for record purposes. The Administrator is able to see the research supervisors' load of students, levels at which the students are and those who have completed, viva voce can be arranged. It was noted that the system does not take away the traditional way but only tries to improve transparency and efficiency.

It was noted that students have a habit of choosing a particular research supervisor who has interacted well with them, so it is the work of the Administrator to ensure fair allocation of research supervisors and not overloading some supervisors. That before the reviewer gives marks; he/she has to look at the guidelines. He/she can submit the reviewer marks for students to get to know whether to go ahead or to edit some areas.

2.2 Question and answer session

Question: If I reject a student as a research supervisor, do I have to suggest someone else?
Answer: You can but, it is the work of the Administrator to allocate research supervisors because he/she has all the names of research supervisors and their areas of expertise.

Question: You have mentioned that a student can be allocated more than one research supervisor. If a student is given two supervisors and the student decides to work with only one, what happens then? Does it matter how the student progresses or the two supervisors have to first agree?
Answer: If one research supervisor rejects a student, the issue can be handled by management or the Administrator because the student cannot progress when both research supervisors have not approved.

Question: I am seeing a scenario where the system talks and the guidelines talk. Has the component of REC been captured on the system?
Answer: Right now, REC has not yet been captured but the software developers were working on it.

Question: The system looks good but in the case of examinations, if the student is to be assessed, are we going to use the manual or online assessment by the external examiner?
Answer: The Administrator has a list of external examiners as well, they can log onto the system just like the reviewers as we have seen.

Question: Mine is about the generation of reports. Can the reports be generated to the Directorate of Research and Graduate Training or the Dean of the Faculty?
Answer: The system can generate reports in pdf format and the Administrator can send them to whoever he/she wants to see the reports.

Question: Do we have to penalize a student who has not progressed because of a lazy research supervisor?
Answer: The Faculty Committee can sit and decide what next for such a student. For example another research supervisor can be gotten to take on the student or student progresses with one supervisor instead of two.

Supplement: Before the student starts interacting with the research supervisor, there should be an agreement between the student and the research supervisor on whether to meet weekly, sending work on e-mail etc.
Supplement: The logs can help to verify the contentions between the student and the research supervisor.

Supplement: The choice of supervisors is department based and when the names are chosen, there is no minimal choice by students. We tried it out in the Faculty

of Medicine and the students chose some particular people. It is hard for the Dean to choose the research supervisors but the Head of Department is able to.

Question: Are there plans for the system to be piloted by some students to see how it works before it is rolled out to all postgraduate students?
Answer: The system will be piloted but the traditional one will also be maintained.

Supplement: Administration and academics come up at different angles. We are likely to come up with multiple tasks. As Dean of the Postgraduate School, you have to look at how many students are allocated to you and also allocate students to supervisors. The system will give us more work. Our role is to harmonise how we run all these stages of research. In economics, we talk of piloting, in the behavioural field; they talk of testing the instruments. This means it all depends on the areas of study. The system developers will put all stages in the system for all the different fields. About the piloting, we intend to start small while maintaining the paper system as well. On the issue of research supervisor guidelines, we looked at all the manuals from MUST, MUBS and other universities and the system will cover all in the guidelines that is why there are many interactions to harmonise them. He explained that for the different disciplines, there are different frameworks especially for the specific ones. For example the procurement field has to follow procurement procedures like bidding; otherwise any one can supervise a student.

Comment: We need to bring the role of the Directorate of Research and Graduate Training (DRGT) here. DRGT, normally does appoint the external examiners. The Faculties only suggest but DRGT does the actual appointment.

Suggestion: We propose that we start with those under Masters in Public Health program. We are planning to have departmental meeting so that when the system is ready, they can start with those willing.

Question: I am looking at confidentiality and intellectual property. From what has been presented, who has access to the system? For MUST, DRGT should have more access. On the issue of conflict about supervisors, this needs to be given attention as some can intentionally malice the students. As management, we need to guide the system. On confidentially, we have a number of universities participating in this project. We have NCHE involved as well. From what I have seen in the presentation, if a MUBS person can log in from MUST, how do we protect the data and the clients (students)? Do you have a mechanism of how to track those who have access to the system given that the research information is

confidential? We need to know how to protect the students. What if one copies someone else's work or does something to malice them? Do you have trust that MUST, MUBS etc can protect the information and what if it delays, what happens? People cannot be trusted sometimes. Access control, we need to protect IPs of students. We need to be very careful. What if there is a breach by one of the students. If we pilot the system and one breaches what happens? How do you handle disciplinary procedure? It is better not to give too much information out there. We now have an academic management system in place, how does it work with the system that you are developing? Are the two systems talking to each other? I liked how one of the speakers said that they were advised to still keep the paper work alongside the system. The Turnitin software that you are intending to embed in the system may not work well especially on plagiarism. It is good to have a plagiarism tool but I hear that there was Artificial Intelligence (AI) that can change things. On allocation of research supervisors, it is not as simple as one may think. The departments need to be fully involved in the process. Now if a research supervisor rejects a student; we should aim at being time conscious so that the students can finish on time.

Comment: The system is timely having seen COVID-19 era. What I have noted is that the system is going to help a lot. It will address the challenges currently being faced. The allocation of research supervisors has been a challenge. In the Faculty of Science for example, what we do, we meet and the Heads of Departments have to present minutes of how the students have been allocated. On the supervision issue, there are always conflicts between students and research supervisors and when these students come, they come with a lot of information from the graduates out there. They know which research supervisors are good, the complicated etc. They come with a bias on some research supervisors. Having 1st and 2nd research supervisor is going to create more conflicts among research supervisors. We should call them co-supervisors for them to feel at the same level to enable them work as a team. No research supervisor should be main one but both equal. The research supervisors need to work together on the comments with the students on say zoom meeting so that the student is not delayed. I do buy the system as it will help us track information from the student files. Before the system is rolled out, there should be a manual, the research supervisors need to be sensitized and should comply. The issue of Artificial Intelligence is becoming problematic. I am told, there are some characters that some people can insert in the document to confuse and disrupt the system so that it fails to recognize any plagiarized material.

Comment: Linking the system to the existing system is important. What is coming up strong from participants, are some of the issues that need to be strengthened.

Comment: The system is good and overdue. We need to have separate guidelines that can guide what is being developed. Most of us, we are graduates from Makerere University and during our time, lecturers used to come out with the curriculum but now things are streamlined. In this system, we are talking about administrators. For supervision, we need to come up with guidelines just the way we did with online teaching during COVID-19.

Comment: Our interest is the process. As you have heard, some research supervisors may refuse to supervise some students. We are interested in having evidence of those that refuse to supervise students if there is documentation, then, we can do out role. I have not seen the financial element. For example, if a student has been allowed to complete, then we need to see whether the student has paid tuition or not.

Comment: When we had COVID-19, we had no way to have a write up to do online. If we do this and Senate has not allowed, how will someone be taken to disciplinary in case of anything if Senate has not approved the use of the system.

Comment: We need to have compliance and monitoring mechanism in place. You have mentioned that the project will run for 3 ½ years. During the project period, when will the system be audited? We need to provide a time line to have the system audited so that compliance can be assessed and guidance given.

3.1 Closing Remarks by Prof. Vincent Bagire

ICT-4MRPQ TEAM MEETING WITH MUST ADMINISTRATION

He remarked that it had been a good interaction and thanked all participants for their time. He re-echoed what the Vice Chancellor had earlier mentioned that it was easy to write a proposal and win a grant but implementation was not easy. He called upon all participants to join hands and ensure that the project is implemented as required.

He mentioned that the Deans suffer a lot to ensure that the Masters Students finish on time yet some students are the problem as they do not want to read and learn. He noted that the project was funded by the European Union and emphasized the need to implement it well. He remarked that academicians usually want to do things quickly but the auditors keep guiding them on how to go about accountability. He concluded by thanking Assoc. Prof. Charles Tushabomwe-Kazooba for the good cooperation between MUST and MUBS in the implementation of the project. He thanked all participants once again for their time and ideas.

A closing prayer was said by Mr. Moses Ntaro.

Some Photos

Appendix 1: List of participants

MBARARA UNIVERSITY OF SCIENCE AND TECHNOLOGY
ICT-4MRPQ Project Breakfast Meeting on September 14, 2023
Attendance List

No.	Name	Designation	Contact/E-mail	Signature
01	Prof Celestino Obua	VC.	vc@must.ac.ug	
02	C-Tushabomwe Kazooba	Dvc-F&A (Co-Pi)	tkazooba@must.ac.ug	
03	Nakato Angella Muyungo	PRO MUST	pro@must.ac.ug	
04	Aliguma Winfred	PPS Dvc F&A's office	waliguma@must.ac.ug	
05	Melchoi Byamhanga	US	us@must.ac.ug	
06	Ntaro Moses	Team member-ICT4mrpq	mntaro@must.ac.ug	
07	TAMALE Tom	Team member-mubs	ttamale@mubs.ac.ug	
08	Prof. Vincent Bagire	Dean - MUBS	vbagire@mubs.ac.ug	
09	Sheila Niinye	IRO - MUST	iro@must.ac.ug	
10	Robert S. Buwule	University Librarian	rbuwule@must.ac.ug	

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No.	Name	Designation	Contact/E-mail	Signature
11.	Sumaiya Nalukwago	MUST PR	0752825406	
12.	Juma Lubega	MUBS - Admin	705641018	
13	Msikoyo Vincent	Documentary	0285077210	
14	Jerome Kabanyenga	MUST	0772590409	
15	GEOFFREY MUTEBI	MUST	0701496298	
16	Edgar Mugema Mul.go	MUST	0772433508	
17	Emmanuel Kyagaba	MUST	0772 433697	
18	Mukundane John	MUST (PRO-office)	0784268186	
19.	Mugumya Timothy. Ndbra	MUST - Legal officer	0732874077	
20	Johnes obungoloch	MUST - FAST	0775646496	

MBARARA UNIVERSITY OF SCIENCE AND TECHNOLOGY
ICT-4MRPQ Project Breakfast Meeting on September 14, 2023
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23.	Julius Lejju	Dean, FoS	jlejju@must.ac.ug	
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30.	Magyezi Felix	UB	fmagyezi@must.ac.ug	

MBARARA UNIVERSITY OF SCIENCE AND TECHNOLOGY
ICT-4MRPQ Project Breakfast Meeting on September 14, 2023
Attendance List

No.	Name	Designation	Contact/E-mail	Signature
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Appendix 2: Programme for the breakfast meeting

ICT-4MRPQ PROJECT BREAKFAST MEETING

"Strengthening Capacity for ICT Usage and Policy Reforms for Relevant and Quality Masters Research Process Management in Uganda's Higher Education Institutions (HEIs) – ICT-4MRPQ"

Venue: UCoBS Board room, at Town Campus

Date: September 14, 2023

Time	Activity	Person Responsible
08:00 – 09:00 a.m.	Arrival, Registration of Participants & breakfast	Ms. Margaret Mbabazi & Ms. Viola Nabaasa
	Breakfast Meeting Manager	Ms. Angella Nakato
09:00 – 09:20 a.m.	Brief by the MUST Project Coordinator	Assoc. Prof. Charles Tushabomwe-Kazooba
	Remarks by the Vice-Chancellor	Prof. Celestino Obua
09:20 - 09:30 a.m.	Group photo	Ms. Angella Nakato
09.30 – 10:55 a.m.	E-Supervision Demonstration	Ms. Shakilah Nagujja, Dr. Deborah Natumanya, Assoc. Prof. Edgar Mulogo, Dr. Imelda Kemeza, Mr. Moses Ntaro ,
	Questions and answer session	
10:56 – 11:05 a.m.	Closing Remarks	Assoc. Prof. David Katamba
	Departure at leisure	
	Report writing	Ms. Winfred Aliguma

Appendix 3: Letter of invitation

Ref: MUST/ICT-4MRPQ

August 29, 2023

Prof. Celestino Obua
Vice Chancellor
MUST

Dear Prof. Obua

RE: INVITATION TO THE BREAKFAST MEETING FOR THE ICT-4MRPQ PROJECT

Mbarara University of Science and Technology together with other partners which include, Makerere University Business School, Stiching VU Amsterdam, Kyazze Kankaka & Co. Advocates, Makerere University, Uganda Chapter for Corporate Social Responsibility Initiatives, Universidade de Lisboa and the National Council for Higher Education won a European Union grant titled *"Strengthening Capacity for ICT Usage and Policy Reforms for Relevant and Quality Masters Research Process Management in Uganda's Higher Education Institutions (HEIs) – ICT-4MRPQ"*. The project will run for 42 months starting from 1st January 2023 to 31st July 2026. The overall Coordinating partner is Makerere University Business School (MUBS). A team of nine (09) scientists was established at Mbarara University of Science and Technology (MUST) to implement the eight (08) work packages.

This is to cordially invite you to the breakfast meeting scheduled for September 14, 2023 in the UCoBS Board room, at Town Campus. Attached please find the tentative program for the meeting.

Thank you.

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ASSOC. PROF. CHARLES TUSHABOMWE-KAZOOBA
Project Coordinator, MUST
ICT-4MRPQ Project

Encl.