



# THE INTERUNIVERSITY RESEARCH AND INNOVATION COMMUNITY FOR THE EARLY CAREER RESEARCHERS IN UGANDA

**IRIC-ECRU YEAR 1 END OF TERM EVALUATION REPORT 10/20-06/21**



**Network for Education &  
Multidisciplinary Research Africa  
(NEMRA)**



**UGANDA CHRISTIAN  
UNIVERSITY**

A Centre of Excellence in the Heart of Africa



**MAKERERE UNIVERSITY**



**Muteesa I  
ROYAL UNIVERSITY**



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## Executive Summary

In September 2020, Makerere Research and Innovation Fund (Mak-Rif) awarded a 1-year seed grant to a proposal to establish an interuniversity research and innovation community of the early career researchers in Uganda (IRIC-ECRU). The project was envisioned to provide solutions to four problems: (1) inadequate capacity and perspectives of early career researchers (2) Narrow inter-university research networks (3) Limited and uncoordinated research and innovation-based solutions (4) Limited advances in modern research and innovation dissemination.

A five-year proposal was designed to establish IRIC-ECRU with four inter-linked avenues of intervention: 1) Capacity building of early career researchers to develop research and innovation agenda: 2) Establishment and strengthening of soft infrastructure that facilitates an inter-University and interdisciplinary network in Uganda, 3) Coordination and management of research and innovation-based solutions through exchange activities to contribute to the National Development Agenda, and 4) Strengthening and advancement of research and innovation output dissemination for community engagement and policy uptake.

To start off the project, the investigators conducted a survey, interviews and a public dialogue to analyse the research agenda setting process in Uganda as well the state of data management and sharing in institutions. Three co-creation workshops and seven research seminars have been conducted in the first year towards the capacity building efforts. The project carried out an extensive mapping exercise and analysis on requirements for an inter-institutional repository for data management and sharing. Furthermore, five teams of PhD students were mobilised to conduct literature review on key research and innovation topics in Uganda. There has been a global participation in the project activities which has provided a foundation for an ideal international network for the community.

The outbreak of Covid 19 disrupted the plans of IRIC-ECRU with a lot of realignments done in the scheduling and delivery of the project activities. The administration of funds from Mak-Rif was delayed and some of the activities deferred to year 2 of the project. Despite these and other challenges, the first year of the project has yielded impact sufficient for propelling the project into the next four years and beyond as presented in this evaluation report. The investigators are in discussion with various partners for further support and collaboration in executing the project ideas beyond the first year.

The project team acknowledges the support of Mak-Rif, various institutions, individuals and support staff for the work well done in under eight months. We hereby extend a cordial invitation to those who are interested in this idea of an IRIC-ECRU to reach the investigators through the contact provided. Detailed narrative reports on various activities of the project can be availed on request.

## About IRIC-ECRU

In September 2020, with the leadership of prof. Asiimwe Godfrey, the Network for Education and Multidisciplinary Research Africa (NEMRA) received a one-year seed fund from the Government of Uganda (GoU) through the Makerere Research and Innovation Fund (Mak-Rif) to create an interuniversity research and innovation community for the early career researchers in Uganda (IRIC-ECRU). Run as a 5-year project 2020-2025, the project's aim is to enhance researcher capacity building, data & information sharing, research ideas generation & execution as well as technology enabled research outputs dissemination, engagement and impact. It is coordinated by investigators from Makerere University (Mak)<sup>1</sup>, Mbarara University of Science and Technology (MUST)<sup>2</sup>, Uganda Christian University (UCU)<sup>3</sup> and Muteesa I Royal University (MRU)<sup>4</sup>.

IRIC-ECRU is extended to break working in silos and boost capacities of early career researchers, increase digital visibility research and innovations of Ugandan researchers, promote joint publication through synergies across universities and increase dissemination of research. It focuses on 4 core areas that guide the project objectives as elaborated below:

### 1) Research capacity building and mentorship

The capacity of African, and particularly Ugandan, researcher to undertake cutting-age and innovative researcher partly limited by lack of a set appropriate skills to undertake and manage research. The research capacity building and mentorship at IRIC-ECRU specifically targets to build expertise of doctoral students and early career researchers to be independent researchers by gaining the transferable soft and hard skills in the following three researcher development domains:

1. Personal effectiveness—including developing personal qualities for an effective researcher like self-management, communication, integrity and time management
2. Research governance and organization—including the knowledge of the research standards, requirements and professionalism to undertake and manage individual and institutional research
3. Engagement, influence and impact—including building collaboration, partnership, as well as the knowledge and skills to work with others and ensure knowledge and innovation transfer for the wider impact of research to society

Ultimately, the research community will support the development of new methodologies, enhance professionalism and create awareness of as well as engagement in the national development research agendas.

### 2) Data infrastructure development, sharing and management

The growth of digitalization in libraries worldwide and the new movement of open science revolve on not only supportive infrastructure but also awareness among researchers of the principles of open science and the management of data and research in a modern research departments and universities. In the open science era work produced for lectures, working papers of units and individuals, dissertations and among other shouldn't hang on shelves or desktops of computers. One of the objectives of the IRIC-ECRU is to establish an inter-university large-scale soft research data infrastructure—including establishment of repositories and use of tools to promote data & knowledge

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sharing activities as well as cross-campus collaborations. The targeted outcome of this objective is a large soft infrastructure developed as an organised collection of scholarly output of participating scholars and institutions. As an inter-institutional repository, it is identified as scholarly; cumulative; open and interoperable aided by new technology. The project operates physically and virtually with a research agenda that supports institutional and national research and innovation agendas. It intends to build on the existing infrastructure and networks for libraries and data systems to create unique products—like profiling Ugandan researchers and tagging of scholarly output to the individual researchers, departments and universities.

### **3) Research ideas generation and execution**

The low visibility of Ugandan research and innovation is partly due to lack of active think tanks, joint research groups and a supportive environment for early career researchers to generate ideas, policy reviews and research papers for wider scientific community. The IRIC-ECRU intended to conduct joint short-term research projects of inter-university and interdisciplinary teams for publication. The design of the project is such that projects are preceded by identification of gaps in multidisciplinary research, building R&I ecosystem. The impact of the project is in both design and execution; the research get time to brainstorm and conceptualize research ideas, then they receive mentorship and guidance through the actualization stage. The project intended to start with developing literature review papers. At the core of this objective is knowledge, skill and technology transfer for development in the country. Consequently, think tanks are used to generate ideas, and joint interdisciplinary and multidisciplinary approaches are used to address society problems with expectation that early career research will yield cutting age research and innovation worth of a high investment in the country.

### **4) Research output dissemination**

Evidence shows that despite having 12.5 percent of the world's population, Africa accounts for not up to 1 percent of global research output. Africa and Uganda in particular have strong growing scientific production in the universities, but where does it go? This project is convinced the problem is that although the quality of data and analysis may be a factor, the practice and systems of research output dissemination at universities need to be improved. IRIC-ECRU intends to enhance research outcome dissemination by digital approaches, support policy and the national research and innovation agenda. The IRIC community of early career researcher would receive training and platform and collaborative support to disseminate research outputs within the period of 5 years.

The IRIC-ECRU committed the first-year resources to studying the policies of each partner University and seeking clearance from university leaders to establish linked repositories and formatting research community digital dissemination of research outcomes. Also, given that the Research Community will support open science, the first year was dedicated to working on protocols and increasing awareness of the trending idea of open science and its benefits to the university community

## Purpose of the end-term evaluation

The purpose of this end of year evaluation is to take stock of the experiences and progress of the first years, taking into consideration the lessons learnt. It is also intended to provide evidence to the funder of the milestone and challenge encounters—this could help not only the internal improvement of the grant but also to give accountability for the resources spent alongside the impact created by the project. As seed funds, we expect this report to help the decision makers in making an evaluation for continued support of the IRIC ECRU community.

On the other hand, this end-term evaluation will enable the IRIC -ECRU to: first, evaluate the effectiveness of the project's implementation in terms of the process of achieving the stated objectives. secondly, the evaluation uses practical evidence and project activities participant reflections to measure the impact of Year 1 activities. Thirdly, the evaluation intends to highlight particular processes and approaches taken as well as reflecting on the problems encountered such as those in design, implementation and management. Lastly, it presents and scores initiatives that demonstrate the potential for success in the subsequent years of the project. Much of these emerge from lessons learnt and partnerships built in the course of the first year.

## Evaluation Methodology

The evaluation is structured around two of the five UNEG standard evaluation criteria i.e. *effectiveness* and *impact* (Rogers,2014)<sup>5</sup> as operationalised in following table 1 below. The anticipated and unanticipated challenges are also considered.

*Table 1: Evaluation Criteria*

<b>Effectiveness</b>	The extent to which the planned activities were executed and milestones achieved within the first year project timeframe
<b>Impact</b>	The outputs registered, the extent to which the anticipated outcomes were realised and the long term effects on the issues within each of the four project objectives.

The analysis is guided by evaluation questions to explain “the extent to which”, “what”, and “how” specific outcomes were attained.

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<sup>5</sup> Rogers, P. J. (2014) Overview of impact evaluation. Impact Evaluation No. 1 Accessed on 29/01/21 on this [link](#)

## Evaluation of Year 1 activities.

Varied activities have been conducted under the 4 core areas of the project. This section presents the evaluation by highlighting the planned activities and milestones, the executed activities, and the impact of the project in terms of the output and outcome of each activity.

### 1. Research capacity building and mentorship

The first year of IRIC-ECRU has taken a record of building the capacity for a well-established inter-University and interdisciplinary research community for scholars, and especially ECRs and PhD students.

The planned major activities and milestones under research capacity building are:

- i. Conduct monthly inter-University 3-hour seminars targeting 40 participants at each seminar
- ii. Conduct three Co-Creation workshops by end of the project

#### Seminars

A total of 7 seminars were conducted in the first year. Facilitated by both local and international experts, the seminars covered unique topics aimed at enriching the personal effectiveness of the participants to carry out research and work within an interuniversity community.

The table below presents a summary of seminars which were conducted in year 1. Their impact is also indicated.

Seminar topic and facilitator		Impact	
		Output	Outcome
1	A 3-hour seminar on <i>The researcher as an entrepreneur and the basics of IPR</i> October with Dr. Kevin Byron	46 participants from 13 HEIs and others	This seminar generated a discussion around experiences of community members who have turned their research into enterprises.  An increased awareness of possibilities of research outputs beyond academic publications.
2	A 3-hour seminar on <i>The researcher as an entrepreneur and the basics of IPR</i> October with Dr. Kevin Byron	27 participants from 9 HEIs and others.	Not determined.
3	A 3-hour seminar on <i>Writing for publication</i> November with Dr. Peter Samuels	41 Participants from 17 HEIs and others	Participants' feedback indicate an increased knowledge on the process of publication, politics in publishing houses, identifying credible journals, team writing and managing the editors' expectations.
4	A 3-hour seminar on <i>How to write a review paper</i> December with Dr. Dermot Breslin	19 Participants from 7 HEIs and others.	The principles shared guided the IRIC-ECRU literature review manuscript writing activity.
5	A 3-hour seminar on <i>The Researcher's visibility through open access</i> - January with Dr. Fredrick Lugya	38 participants from 11 HEIs and others.	Increased awareness of the purpose and strategies for effective online profiling of researchers and visibility as well as improved knowledge of the trends in open science in research
6	A 3 hour seminar on <i>Open access and use of data for development in Africa</i> – February with Mr. Charles Bundu	15 participants from 6 HEIs and others.	General appreciation of the Open access movement and debunked myths commonly held about the practice.  Awareness of sources of open data available for researchers in various disciplines created.

7	A 3-hour seminar on <i>Research Funding</i> with Ms. Hadijah Yahyah April	11 participants from 5 HEIs and others	This was a preparation seminar for the week long workshop on the same.
<b>General impact</b>		Materials for continual learning provided by facilitators	Networks built from over 15 institutional representations in Uganda and abroad.

A total of 9 seminars was planned for the first year. The challenges that explain why the project achieved less than the target on this activity and the way forward are presented in general terms later in this report.

Although the facilitators came from various institutions, participation in seminars was mainly from the four IRIC-ECRU partner institutions. The facilitators have been invited to be part of the community so as to act as ambassadors of the project in their respective institutions.

The key objective of IRIC-ECRU seminars is to equip the community members with research skills that are rarely obtained through the regular research methodology lectures and training at HEIs. They (seminars) are also meant to facilitate networking in the process of building the community. The first year has gone a long way in establishing a foundation onto which this objective can be achieved in subsequent years.

## Co-Creation Workshops

The co-creation workshops are part of the process of empowering the IRICCommunity members to gain skills for productive involvement in advancing the community's agenda. The objectives of the workshops are therefore to:

1. Enhance the community members' intellectual and personal abilities to do research and make research products usable.
2. They ran for a week to provide sufficient time to the community members to network, bond and build ties for continual mutual support.
3. Nurture teams for engagement in the development of empirical research projects as proposed in the sustainability plans for subsequent years of the IRICCommunity.

### Co-creation workshop 1

The first co-creation workshop focused on *professional development in academic writing* and was conducted on 8<sup>th</sup>-12<sup>th</sup> February 2021. It was the first ever interuniversity 5-days Co-Creation workshop on Academic Writing in Uganda.

The aim of the workshop was to empower PhD students and ECRs to leap forward on their writing assignments and in the process accelerate the course of building the IRICCommunity. The workshop had the following specific objectives.

1. To review academic writing approach, acquire new skills or ideas to enhance aspects of academic writing
2. To reflect on habits and effectiveness in academic writing and identified an action plan to build effective writing habits.
3. To make substantial progress on a pending writing assignment.
4. To discuss with other researchers from across institutions and disciplines about academic writing through a facilitated process aiming to initiate interactions and continued collaborations.

The workshop was facilitated by Uganda and United Kingdom based scholars.

The table below summarises the impact of the workshop:

	Impact	
	Output	Outcome
The first ever interuniversity 5-days Co-Creation workshop on Academic Writing in Uganda was held on 8 <sup>th</sup> -12 <sup>th</sup> February	1-3 hours fifteen sessions on academic writing delivered by international and local facilitators.	Accelerated catchup on individual and group pending writing assignments for dissertations, manuscripts, etc.
	Workshop program successfully executed	Interuniversity networks enabled and writing communities/accountability groups established.
	43 participants from HEIs, government and NGOs in Uganda, Zambia, Nigeria (13 institutions in total) ( <i>Slightly over the target</i> )	Resilience for writing built from shared experiences of senior academics
	Several materials provided by facilitators for eventual development into a training manual (in year 2)	A senior academic mentioned “Thank you. Initiatives like these will make our PhD supervisory roles easier”
	The workshop was covered in the media. See the links <a href="#">Link1</a> <a href="#">Link2</a> <a href="#">Link3</a> <a href="#">Link4</a>	

## Co-creation workshop 2

The workshop on Open Science for Research introduced basic concepts on open science and its applicability in research. Branches of open science as well as open data principles for research collaboration and innovation were explored. The goal was to create an enabling environment for collaborative research by empowering early career researchers with knowledge and skills to access, use and share research data.

Participants were, at the end of the workshop, expected to:

1. Explain open science and open data principles,
2. Create open data license,
3. Clean data,
4. Describe challenges and benefits of open data,
5. Access and publish open data,
6. Apply innovation principles,

47 participants representing 13 local and international institutions and with interdisciplinary careers attended the workshop. The training was provided by Data Lab (dLab) in Tanzania.

The table below summarises the impact of the workshop:

	Impact	
	Output	Outcome
The second interuniversity 5-days Co-Creation workshop on Open access for research	1-3 hours' fifteen	A community that is conscious about the use of data at all level established
	Workshop program successfully executed	
	47 participants from HEIs, government and NGOs in Uganda, Zambia, Nigeria (14 institutions in total) <i>(Slightly over the target)</i>	Enhanced commitments to use the knowledge on open data in research work, publications and teaching
	Several materials provided by facilitators for eventual development into a training manual (in year 2)	Interuniversity networks from interdisciplinary participants were developed
	Talks initiated on possible partnership with RENU to host IRIC-ECRU's server for repository	
Inspirational sessions delivered by Dr. Hamis Mugendawala, Head of Research at the National Planning Authority, Uganda and Dr. Kitayimbwa, the Deputy Vice Chancellor of Uganda Christian University and Vice Chairperson of Research Education Network in Uganda (RENU) in the opening and closing ceremony respectively.		

Sharing data under open licensing, translating knowledge into community transformation and better use of open data during research are of interest in IRIC's continuous evaluation during the subsequent years of the project.

### Co-creation workshop 3

The third of the three co-creation workshops planned on the project was about writing and managing research grants. It was conducted on 24th-27th May 2021. The key objective of this workshop was to establish a community of early career researchers and academics committed to supporting each other in exploiting possible funding opportunities. The aim is to consequently accelerate a culture of continuous research to inform policy formulation and practice.

The specific objectives of the workshop were:

1. To enrich the understanding of the local and international research funding landscape
2. To provide the basic skills of searching for, applying, securing and managing research grants
3. To facilitate participants' progress on developing their concepts into proposals for submission.
4. To facilitate development of a network of potential collaborators to team up with to respond to calls for grant writing opportunities.

The table below summarises the impact of the workshop:

	Impact	
	Output	Outcome
The third interuniversity 5-days Co-Creation workshop on Research funding.	<p>1-3 hours' twelve Workshop program successfully executed</p> <p>45 participants from HEIs, government and NGOs in Uganda, Kenya, Zambia, Nigeria (14 institutions in total) (<i>Slightly over the target</i>)</p> <p>Several materials provided by facilitators for eventual development into a training manual (in year 2)</p> <p>An online platform for sharing calls created. Multidisciplinary teams formed among participants.</p> <p>Inspirational sessions delivered by Prof. Aaron Mushengyezi of UCU and Dr. Martin Ongol of UNCST the opening and closing ceremony respectively.</p>	<p>Enriched knowledge about possible funding sources at the local and international level.</p> <p>Acquired skills for proposal development, networking, monitoring and evaluating projects as well as managing project teams.</p> <p>Awareness of engagement and impact as a prerequisite for research funding generated.</p>

While objectives 1 and 2 were achieved during the workshop, the outcomes on objectives 3 and 4 will be carried out in year 2 of the project.

The outputs and outcomes of the research capacity building and mentorship activities are considered satisfactory for the first year. The challenges and way forward are presented in general terms later in this report.

## 2. Data infrastructure development, sharing and management

The second core area of IRIC-ECRU is Data infrastructure development and management. Establishment and strengthening of soft infrastructures are intended to meet the digital needs of community members and other researchers.

The activities under data infrastructure development, sharing and management also involved defining IRIC-ECRU's research agenda and creating a centre from where the projects operate. The planned major activities and milestones under this area were:

1. Establishment of the physical IRIC-ECRU coordination Center
2. Evaluate existent research agendas
3. Define IRIC Research agenda
4. Carryout resource mapping for the IRIC-ECRU repository and define technical and other requirements
5. Establish the IRIC-ECRU repository and interuniversity agreement (MOU)

The table below presents the activities that were conducted in the first year. Their impact is also indicated.

Activities		Impact	Outcome
1	A field visits to each of the partner institutions to map out institutional resources	4 meetings with institutional leaders, ICT and library officials	Participatory model of developing the interuniversity repository embraced and adopted by the stakeholders.
2	Follow-up discussions at MUST, Mak and MRU	3 meetings with ICT and library officials at Mak, MUST and MRU	
3	A special meeting for technical persons with representation from the 4 partner institutions	An interuniversity technical committee of 7 members established to steer the agenda of the IRIC-ECRU repository.  A draft framework of the repository	Accelerated awareness of opportunities and challenges around data/information management and sharing.
4	Data analysis from the field visits	A report about the existent resources and limitation at IRIC-ECRU partner institutions data management and sharing infrastructures.	
5	Collection and analysis of data about individual, institutional and national research agendas through a survey and interviews.	Interviews with research leaders at IRIC-ECRU partner institutions  Survey data from 39 respondents including PhD students, academics, government officials and private sector practitioners' concerning individual and institutional research agendas.  A report on the analysis of existent research agendas.	A refocused direction of IRIC research agenda.
6	Writing sessions to compile IRIC-ECRU Research Agenda	IRIC Research Agenda document  An amalgamated report about existent research agendas and existent repositories	
7	Public consultation about IRIC-ECRU Research agenda	A 3-hour public dialogue with 46 local and international participants, 3 discussants (Prof. William Bazeyo of Makerere, Dr. Jane Egau Okou of MoES, Dr. Maxwell Otim of MoSTI)  A wide array of views about IRIC Research agenda from participants and discussants of the public dialogue	
8	Negotiations with possible partners	An MoU has been signed with Uganda's National Planning Authority.	Input to be made into the National Research Framework for Development under discussion by the NPA and partners
9	Various admin activities towards establishment of the physical centre	Budget and requisition for procurable items submitted to Mak-Rif for release of funds.  Space provided for at MRU research centre. An operational secretariat with 2 staff recruited; Project Manager and Project Accountant with signed contracts.	The physical address of IRIC-ECRU provides a source of confidence to the community users and facilitates communication

Apart from the delayed furnishing of the centre with the necessary equipment, the outputs and outcomes of the data infrastructure development, sharing and management activities are considered satisfactory for year 1. Other challenges and way forward are presented in general terms later in this report.

The IRIC project undertook field visits to partner institutions—Makerere University, Mbarara University of Science and Technology (MUST), Uganda Christian University (UCU) and Muteesa I Royal University (MRU)— in November 2020. This led to creation of lasting collaboration between stakeholders. Out of the visits, a report was compiled on the status of research soft infrastructures and Research agendas of the partner institutions.

A consultative meeting was organized with key technical personnel from partner institutions on the 29th January, 2020. It was attended by over 30 people. The participants included a selected number of faculty Deans, Head of Departments, ICT and Library managers, and research supervisors (both PhDs and Masters) and PhDs.

Developed guidelines for the technical committee representing the four partner universities. The failure of the Ugandan Committee to meet and design a roadmap was due the COVID-19 restrictions and

delayed Mak-Rif funding. Nonetheless, further consultation with the GESIS Institute of Social Sciences, in Cologne Germany ensued and led to development of a roadmap for the inter-university repository as a platform for scientists' interaction and research promotion. The choice of a community platform rather than serving multiple facilities based on individual interests of the institution was preferred.

Two collaborations have emerged after series of meetings. IRIC project and NEMRA have signed an MoU with the National Planning Authority, yet another MoU with the Uganda National council of science and Technical is underway.

Capacity building in the area of open science has been started, at the same time, the first year has identified future actions for skilling training librarians, managers and users' groups in on Open Science. Two training in open science and benchmarking on use of open science in libraries, and individual researchers.

Several steps have been reached to defining the IRIC Soft Infrastructure. The strategy is to operation through collaborative means.

### 3. Research ideas generation and execution

IRIC-ECRU is intended to bring together and build a generation of researchers advancing new and relevant approaches in researcher development processes, research, dissemination, engagement and impact to accelerate the Uganda's R&I agenda. As such, PhD students and ECRs are mobilised from across universities, *empowered* through the capacity building activities, *engaged* in joint research endeavors and *facilitated* to disseminate their research outputs for impact.

The Literature Review activity is part of the engagement of the IRICommunity members in joint research projects. The objectives of this exercise are to:

1. Enhance the community members' writing and publication skills.
2. Identify gaps in the "R&I in Uganda" existent works consequently leading to ideas for developing further by the teams and submitted for funding. (This is key for sustainability of the project beyond the first year.)
3. Nurture teams for engagement in the empirical research projects as proposed in the plans for subsequent years of the IRIC.

The table below presets the activities that were realised in in the first year. Their impact is also indicated.

Activities so far realised		Impact	
1	Output	Outcome	
1	Designing and circulating a call for participation	7 concepts selected out of the 16 concepts submitted and reviewed. ( <i>2 teams did not pick the momentum</i> )	Improved awareness in the IRICommunity of the key issues around R&I in Uganda
2	Review of concepts, selection and formation of teams of investigators	Five interuniversity teams started off (average 3 members per team)	Improved awareness in the IRICommunity of the key issues around R&I in Uganda
3	Project familiarisation meetings and online engagement	3 project familiarisation meetings held in November, December and January.  6 online engagements conducted	Improved awareness in the IRICommunity of the key issues around R&I in Uganda
4	Investigators drop in research clinics for support	3 drop in sessions conducted in January and February; representatives of the teams drop in for inquiries and support.	Interuniversity networking created through teams

			comprising of investigators from various universities.  Investigators, who are dominantly PhD students, are having their team work and project management skills enhanced.
5	Teams writing sessions	3500 words draft from each team	Team skills developed among the participants.

The milestones for the literature reviews were as follows

Milestone	Status
3500 words draft – 28.02.21	Completed by all teams.
7000 words draft – 30.03.21	Completed by 2 teams
Empirical research concept idea –30.04.21	Pending for all teams.
Proposal for funding of the empirical idea – 30.05.21	Pending for all teams
Submission of the review manuscript to the peer reviewed journal – 30.06.21	Pending for all teams

Although all teams have not achieved the set milestones, the objectives of this activity have been partially achieved as summarised below:

Objective	Participants impressions.
Enhance the community members’ writing and publication skills.	The feedback reports of this exercise indicate that participants learnt technical ideas about publication that will be put to use in future writing projects and submissions. <i>“I have been making silly mistakes, not anymore. I am now wiser”</i> Team member.
Identify gaps in the “R&I in Uganda” existent works consequently leading to ideas for developing further by the teams and submitted for funding.	Gaps were identified in the following research areas: 1. IPR frameworks on innovation in Uganda 2. Integration of RRI into Uganda’s human capital development for R&I 3. Research and Innovation funding in Uganda 4. Knowledge Creation and the Diffusion of Research Outcomes 5. The Triple Helix Model of Higher Education and R&I in Uganda
Nurture teams for engagement in the empirical research projects as proposed in the plans for subsequent years of the IRIC-ECRU	Participants have expressed commitment to continue working together as teams beyond the initial project. This is key for building the community. Most are PhD students who are expected to keep the network through to their postdoc stages of their career.

Writing a review manuscript is considered as one scholarly activity that requires substantial experience. As such, the exercise is a challenge to PhD students and ECRs. The participants have so far done a commendable job. With availability of resources in the second year, the teams will be supported to complete the manuscripts for submission.

Quote from a participant

*“My experience of the involvement in an inter university research team to write a review manuscript has been one of my best learning experiences; I have learnt that people are gifted differently and our*

*differences as team members spice our writing process. For example, our team leader is one of the most patient researchers I have met. Even when I felt I knew nothing completely concerning writing a review paper she kindly encouraged me to keep trying and ensure to put to use the skills we learn during seminars. Indeed, I have learnt and in fact I am employing the same skills in my other research work such as writing annotated biography as I review literature. Being a team member has built my confidence because I have come to believe that each one of us always has something to learn. Having at least a very committed member on the team makes a whole difference, in terms of motivation and encouragement for "self-doubting members" It really takes a lot of patience on the side of the committed member to keep everyone on board. Despite all the above, my engagement in team writing has been the best way to reflect on what I learn during IRIC training otherwise there is no short cut to understanding these things."*

#### 4. Research output dissemination

Research output dissemination idea is intended to assist community members to engage and impact the public during the research process and with the research outputs. This has not been enabled during the project's first year. Instead, the project team has been disseminating information about IRIC-ECRU vision to create and enhance awareness and involvement in the community.

The table below presents the activities that have been realised so far to disseminate the IRIC-ECRU vision and activities.

Activities so far realised		Impact	
	Output		Outcome
1	Public dialogue	See evaluation of defining the IRIC Research agenda above	
2	IRIC-ECRU Website development	IRIC-ECRU hosted on NEMRA website	Online visibility of the project attained
3	Website content development and upload	Information about IRIC-ECRU activities and materials uploaded	Accelerated awareness of IRIC-ECR vision among the stakeholders
4	Designing and printing promotional materials	Promotional materials designed and printed are: IRIC Pull-up banner and brochures.	
		An information pack provided to institutional leaders and participants in the consultations. (The content is 1. Summary of the project, 2. IRIC theory of change, 3. Discussion questions 4. IRIC brochure summaries Q&A about IRIC)	
		IRIC logo ( <i>Pending application for IPR</i> ) IRIC headed paper	
5.	Media engagement	IRIC-ECRU social media pages developed (Facebook and LinkedIn. IRIC-ECRU is hosted on NEMRA twitter handle)	
		Interview held with the Daily Monitor Newspaper and information about IRIC-ECRU published in the Education Corner	
		For other media engagements see evaluation of Workshop under the capacity building and mentorship activities.	
6.	IRIC-ECRU dissemination via institutional websites	The project activities and impact featured on Makerere University and Uganda Christian University websites. <i>Please the following links <a href="#">Link 1</a> <a href="#">Link 2</a></i>	

The outputs and outcomes of the research output dissemination activities are considered satisfactory for the mid-term period. The challenges and way forward are presented in general terms later in this report.

## Challenges

The challenges experienced during the execution of activities in the first year are outlined here below:

1. The Covid-19 restrictions to physical meeting have been a challenge to efforts towards building a community as the Ugandan and generally the African culture values physical interactions. The project was able to conduct workshop one both physically and virtually. The subsequent workshops were conducted virtually. Physical meetings are being planned as, hopefully, restrictions get eased in the second year of the project.
2. Inadequate technological skills and limited availability of fast internet is a challenge. Some participants have not been able to engage in the project meaningfully as they would have loved to. The project team made a lot of unprecedented adjustments to use technology and the internet to deliver the activities. The budget has been readjusted to cater for expenses for involving technology experts in the project, subscribe to online meeting platform providers, purchase data for fast internet and conduct discussion on the use of the internet to work with others.
3. Differing Institutional context and structures. This project is meant to work on eco-systems, however the management, resources and functioning of public and private universities differ. Inherently there are competing interests among institutions. Harmonising these interests may take a long time. The project has encouraged institutions to define their commitment and responsibilities.
4. The participants in the literature review teams are working with the design for the first time. All of them are writing a literature review manuscript for the first time and working with an interuniversity team for such a project has been an uncharted territory for them. There were challenges in the process of building team cohesion and focus. Most are also PhD students and therefore already have many research and training commitments. They are being encouraged to plan well, develop discipline, communicate well within the group and keep focused on the goal. Regular meetings will continue for this purpose.
5. Limited budget and flow of finances. Most activities were carried out voluntarily. The grant amount was way below the cost of the activities done and was not dispatched in a timely manner. A lot more could be done with a steady flow of finances and a more robust financial support. The project has, for example, accumulated a lot valuable data through participants' feedback on activities. These data require expertise in M&E for analysis to infer ideas for an effective interuniversity R&I community, interuniversity networking and enhancement of research capacity building in Uganda. Such services are not affordable for the project. The team has also realised that technical expertise is key in the process developing IRIC-ECRU repository and capacity building for the same. This requires heavy investment. The last quarter of the project involved mobilisation of more actors in the project for a wider financial base. The progress on this initiative has been further disrupted by a second lockdown in June 2021 due to the increase of Covid 19 infections in Uganda.
6. The project lacks equipment. Although budgeted and requested for, the equipment was not procured and therefore the centre not yet equipped. As a result, the project incurred extra costs in hiring equipment.

## Conclusion of the evaluation and way forward

The project team made a significant effort that accelerated the achievement of most of the project's intents. A foundation for building IRIC-ECRU has been built with networks established among over a hundred participants, various facilitators, dignitaries and several institutions.

Seven of the nine planned monthly seminars were convened as scheduled and interuniversity participation of PhD students and early career researchers satisfactory. Various local facilitators were engaged. A pool of more local facilitators is being developed for subsequent years. The last Co-Creation workshop on securing and managing research grants was mainly facilitated by local experts. The development of a training manual from these sessions is one of the target outputs in the second year of this project. An M&E expert will be engaged to analyse the participants' feedback for a better understanding and development of strategies for effective research capacity development in Uganda.

The process of building a repository has also made significant strides. Technical support will continually be sought both locally and beyond. A sufficient budget will be included in the proposal for funding year 2 of the project to cover the unanticipated costs that were discovered in the mid-term period. A MoU has been signed with Uganda's National Planning Authority for collaboration in accelerating this objective further.

The project team has appreciated that the literature review teams are challenged by the task and are struggling. Senior academics will be invited and attached to the teams that are specifically having challenges that limited their ability to deliver on the last milestone.

The media coverage and stakeholder engagement done in the first year is considered sufficient. Regular update of the social media handles and coverage of the next period events will facilitate this purpose and dissemination of findings from the literature review exercise.

This end of term review was meant to guide the team on:

- Reviewing the effectiveness of the project's implementation in terms of achieving the stated objectives. This has been achieved by looking at the outputs of the project in the mid-term.
- Identifying the outcomes of the activities so far. Although it is not possible to fully analyse the realisation of the outcomes, there are indications that the activities are having a significant impact on individuals, institutions and society generally.
- Addressing particular issues or problems in design, implementation and management of the project. Reflection on the challenges identified above is ongoing to re-align strategies, plans and activities for Year 2 plans.
- Reinforcing initiatives that demonstrate the potential for success. In writing the proposal for funding for year 2, the team reflected on the possibility of refocusing the project on fewer core areas rather than all the four. A possibility of bringing more actors on board beyond the four partner institutions is also being considered.

## *Acknowledgement*

The first year of this project was run with funding support from the Government of Uganda through the Makerere Research and Innovation Fund.

Apart from the IRIC-ECRU investigators, researchers in Uganda and abroad were involved in the execution of the project activities as capacity building facilitators, investigators on the joint desk research projects and technical personnel for the development of the interuniversity repository. In no particular order, these are listed here below:

1. Ms. Mahadia Tunga- Tanzania Data Lab, The University of Dar el Salaam
2. Dr. Sabastian Rwengabo – Centre for Basic Research, Uganda
3. Dr. Edgar Nabutanyi – Makerere University, Kampala
4. Dr. Fredrick Lugya’s 7-member repository technical committee - IRIC partner institutions
5. Dr. Dermot Breslin – The University of Sheffield, UK
6. Dr. Sandrine Soubes – Tesselle Development, UK.
7. Dr. Peter Samuels – Birmingham City University, UK
8. Dr. Kevin Byron – The University of Leeds, UK
9. Professor. Julius Kiiza-Makerere University
10. Assoc. Professor Doris Kakuru-University of Victoria, Canada
11. Mr. Robert Ssentamu - Wilsken Agencies
12. Ms. Julianna Kayaga Sseremba and team members writing Literature Reviews– Various Institutions
13. Dr. Christine Mwebesa – Ndejje University
14. Ms. Anita Ashaba – The National Banana Research Programme, Kawanda

Various institutional leaders, academics, research students and practitioners in Uganda have been involved in this project as interviewees and survey respondents on individual, institutional and national research agendas as well as the nature and operation of existent institutional repositories.

Key leaders who have been involved as interviewees and/or special guests on IRIC-ECRU events include:

1. Professor. William Bazeyo- Makerere University
2. Dr. Jane Egua – Ministry of Education and Sports, Uganda
3. Dr. Otim Onapa- Ministry of Science Technology and Innovation, Uganda
4. Dr. Hamis Mugendawala- The National Planning Authority, Uganda.
5. Dr. John Kitayimbwa- Uganda Christian University
6. Professor Aaron Mushengyezi- Uganda Christian University.

7. Dr. Martin Ongol- The Ugananda National Council for Science and Technology

8. Professor Stella Neema- Makerere University

9. Professor Vincent Kakembo- Muteesa I Royal University

10. Professor.... – Mbarara University of Science and Technology

Muteesa I Royal University hosts IRIC-ECRU centre.

Last but not least, the regular work of the project is supported by Mr. Dickson Tumuramy and Mr. Vincent Ssekitoleko as Project Manager and Project Accountant respectively.