East African Journal of Education Studies
eajes.eanso.org
Volume 7, Issue 4, 2024
Print ISSN: 2707-3939 | Online ISSN: 2707-3947
Title DOI: https://doi.org/10.37284/2707-3947

EAST AFRICAN NATURE & SCIENCE ORGANIZATION

Original Article

Institutional Mechanisms for Enhancing the Evaluation of Doctoral Research Outputs at Makerere University for Uptake and Use

Florence Deboru[1*] *& Irene Etomaru, PhD*[1]

[1] Makerere University, P. O. Box 7062, Kampala, Uganda.
[*] Author for Correspondence ORCID ID: https://orcid.org/0009-0007-1761-8340; Email: fdeboru@gmail.com

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

Date Published:

16 October 2024

Keywords:

Research Production, Doctoral Education, Institutional Mechanisms, Research Uptake and Use, Beyond Academia.

ABSTRACT

Increasing emphasis is currently put on doctoral education as a source of capacity for innovation and socio-economic development worldwide. The purpose of doctoral research has been re-expressed and expanded in terms of not just its academic value, but its wider societal value. As such universities have an obligation to enhance the uptake and use of doctoral research outputs in other sectors. We examined the institutional mechanisms for enhancing the evaluation of doctoral research at Makerere University using the research knowledge infrastructure (RKI) framework as the analytical lens. We sought to answer the broad question: Do the institutional mechanisms for evaluating doctoral research at Makerere University facilitate the uptake and use of doctoral research outputs in other sectors? Subscribing to constructivist philosophy and interpretivist worldview, we used the qualitative single case study research design. We collected data through interviewing and review of documents. We interviewed 10 doctoral program coordinators, three research and graduate training managers and 13 PhD students we selected purposively. We reviewed seven institutional documents pertaining to graduate training at Makerere University: two plans, three policies, one framework and one guideline. We used thematic data analysis to make sense of the data. The findings revealed that institutional mechanisms to enhance the evaluation of doctoral research in terms of its potential for uptake and use were not well developed and integrated as part of doctoral research evaluation. We conclude that doctoral research evaluation at Makerere University was narrow and purely academic, limited to measures of scholarly rigour only. This limits the possibility for uptake and use of doctoral research outputs in other sectors. We recommend that the Directorate of Research and Graduate Training (DRGT) should develop expanded and comprehensive measures and indicators for evaluating doctoral research to enhance the uptake and use of doctoral research outputs beyond academia.

APA CITATION

Deboru, F. & Etomaru, I. (2024). Institutional Mechanisms for Enhancing the Evaluation of Doctoral Research Outputs at Makerere University for Uptake and Use. *East African Journal of Education Studies*, *7*(4), 329-340. https://doi.org/10.37284/eajes.7.4.2312

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

CHICAGO CITATION

Deboru, Florence and Irene Etomaru. 2024. "Institutional Mechanisms for Enhancing the Evaluation of Doctoral Research Outputs at Makerere University for Uptake and Use". *East African Journal of Education Studies* 7 (4), 329-340. https://doi.org/10.37284/eajes.7.4.2312

HARVARD CITATION

Deboru, F. & Etomaru, I. (2024) "Institutional Mechanisms for Enhancing the Evaluation of Doctoral Research Outputs at Makerere University for Uptake and Use", *East African Journal of Education Studies*, 7(4), pp. 329-340. doi: 10.37284/eajes.7.4.2312.

IEEE CITATION

F. Deboru & I. Etomaru "Institutional Mechanisms for Enhancing the Evaluation of Doctoral Research Outputs at Makerere University for Uptake and Use" *EAJES*, vol. 7, no. 4, pp. 329-340, Oct. 2024. doi: 10.37284/eajes.7.4.2312.

MLA CITATION

Deboru, Florence & Irene Etomaru. "Institutional Mechanisms for Enhancing the Evaluation of Doctoral Research Outputs at Makerere University for Uptake and Use". *East African Journal of Education Studies*, Vol. 7, no. 4, Oct. 2024, pp. 329-340, doi:10.37284/eajes.7.4.2312

INTRODUCTION

The traditional purpose of doctoral education and training over the course of about six centuries was independent, original, forward-looking knowledge production (Frick et al., 2017). Uptake and use of doctoral research outputs beyond the academia was not of immediate concern. The doctoral degree was narrowly seen as an academic degree that expresses ability to conduct research conforming to academic standards, it served the purpose of "perpetuation of professional academic bodies" (Ruano-Borbalan, 2022, p. 368), and it was used as a license to teach in a university (Baptista et al., 2015; Hasgall et al., 2019). However, the purpose of the doctoral degree has evolved and expanded in the era of the knowledge-based 21st century. With the current global pressures for universities to contribute more directly in the knowledge society, doctoral education is regarded as a key to delivering knowledge capabilities for development. We examined the institutional mechanisms for enhancing the evaluation of doctoral research to facilitate the uptake and use of doctoral research outputs in Makerere University using the research knowledge infrastructure (RKI) framework developed by Ellen et al. (2011) as the analytical lens. We argue that in order to enhance evaluation of doctoral research outputs, measures for evaluating doctoral research in terms of its potential for uptake and use should be developed and integrated as part of doctoral research evaluation. This will augment active dissemination of doctoral research outputs to potential users through non-academic knowledge outputs which are more suitable for the non-academic audience. We sought to answer the broad questions: What are the institutional mechanisms for enhancing the evaluation of doctoral research outputs at Makerere University? Do the institutional mechanisms for evaluating doctoral research at Makerere University facilitate the uptake and use of doctoral research outputs in other sectors?

Statement of the Problem

Uptake of research leads to the justification and contextualization of research for use (Phipps et al., 2016). Doctoral research is a source of knowledge capabilities for boosting domestic research and innovation capacity of countries (Nerad, 2020). According to UNESCO Institute for Statistics (UNESCO-UIS), research carried out at universities by students at the PhD level "should be counted, whenever possible, as a part of R&D" (UNESCO-UIS, 2014, p.12). Thus, doctoral research outputs ought to be readily accessible both within and outside academia (Tella et al., 2016). The current strategic direction of Makerere University of becoming research-led (Makerere University, 2020), entails increasing enrolments at the doctoral level and increased production of doctoral research. However, there is generally low uptake of research produced at Makerere University by students and staff (Makerere University, 2021). Makerere University has come up with policies and guidelines to support and streamline graduate education and training, and to enhance innovations and knowledge transfer partnerships (Makerere University, 2020), in spite of these efforts, doctoral research outputs rarely go beyond the PhD public defenses and the University repository. This scenario may deter Makerere University's progress towards becoming

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

research led to contribute to global and national development more directly through research and innovations. It is against this back ground that we examined the institutional mechanisms for enhancing evaluation of doctoral research outputs at Makerere University.

LITERATURE REVIEW

Theoretical Review

Higher education research being an interdisciplinary field draws on theories and methodologies from a variety of disciplines like sociology, health sciences, history, law, economics, psychology, political science, public administration among others (Kehm, 2015). Studies that are concerned with the uptake and use of research are categorised under the discipline of implementation science which is not only an emerging discipline, but very multidisciplinary in nature since it requires proficiency in epidemiology, statistics, anthropology, sociology, health economics, political science, policy analysis, ethics, among other disciplines (Mindu et al., 2018).

Quite a number of scholars have proposed various frameworks for research uptake and use, most of which are in the health sciences. For instance, Jacobson et al. (2003) proposed a framework that seeks to increase researcher`s familiarity with the intended user groups and context. The framework emphasises the importance of creating a link of sustained interactivity between producers and users of knowledge. According to Jacobson et al., the key to research uptake and use is interpersonal links spread through the life of the knowledge process, allowing for contact between all stakeholders of the knowledge to interface during and after research. However, the framework does not address issues of the institutional environment which is core for uptake and use of doctoral research outputs. Wilson et al. (2010) proposed a framework for research uptake and use that underscores the intrinsic characteristics of research that determine the rate of uptake and use. According to them, research uptake occurs through phases from knowledge production through adoption to confirmation. They further note that there are theoretical foundations on which to establish frameworks for dissemination of knowledge. These are persuasive communication, diffusion, innovation and social marketing. The framework puts emphasis largely on research dissemination which is not comprehensive enough for underpinning a study on uptake and use of doctoral research outputs.

Other models include the Canadian Academy of Health Sciences (CAHS) payback framework designed to capture specific impacts in multiple domains, at various levels, and for a wide range of audiences to determine how research activity influences decision making; the Ottawa model of research use which was developed by Logan and Graham in the late nineties for use by policymakers with an interest in evidence-based healthcare practice; the knowledge-to-action framework first developed in 2006, a cyclical process in which research features, knowledge transfer intervention, and the evaluation process lead to the identification of novel problems; the promoting action on research implementation in health services (PARIHS) framework founded in 1998 by Kitson and colleagues to provide an alternative to existing one-dimensional models of transferring research to practice. The PARIHS framework views successful research uptake as a function of the relationships between evidence, context, and facilitation; the STAR model of knowledge transformation founded by Stevens in the early 2000s, aimed at providing an understanding of the cycles, nature, and characteristics of knowledge used in several aspects of evidence-based practice. Most of these frameworks were developed in the health sciences disciplines, they tend to be one-dimensional in focus and tailor-made to the context of the developed world (Sigudla & Maritz, 2021).

We used the research knowledge infrastructure (RKI) framework developed by Ellen et al. (2011) as the analytical lens to examine institutional mechanisms for enhancing evaluation of doctoral research at Makerere University. Ellen et al. proposed four possible organizational-level support components for enhancing research knowledge infrastructure: (1) enhancing the climate for research use through clear organizational vision, mission and values placed on the use of research evidence in decision making, structures or positions to aid in accountability for using research evidence in decision making, points of contacts within

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

organizations regarding where to turn to obtain research evidence, formal and informal relationships with people outside the organization who can assist in obtaining the appropriate research evidence, the recruitment and retention strategies that reflect the value of the use of research evidence in decision making as well as the recognition of employees who use research evidence within the organization. (2) Enhancing research production through regular priority-setting processes for the research evidence needed to meet managerial and policy-making needs and ensuring that the appropriate research commissioning capacity is in place to commission or execute research if it is deemed as high priority. (3) Activities to link research to action divided into three parts; push efforts by university researchers such as packaging to disseminate research findings both within and outside the scholarly community; pull efforts by the industry to access and use research evidence in decision making, training and continuing education; exchange efforts through regular stakeholder meetings that highlight relevant research. (4) Research evaluation through interactive workshops that focus on the use of research in decision-making and development of indicators to evaluate research. Much as the framework was specific to healthcare systems, it was quite relevant and useful in studying the support mechanisms for enhancing uptake of doctoral research outputs because it is broad and highly applicable in higher education context. This article is based on the fourth component, which is research evaluation.

Review of Related Literature

Universities as the major producers of research and centers for research training now face unprecedented pressure from society to demonstrate the relevance of research in addressing pressing societal problems (Nerad, 2020). At the same time students and academics are keen to use their research to contribute to addressing pressing societal challenges. As such, "new approaches to research evaluation are needed to learn whether and how research contributes to social innovation, and those lessons need to be applied by universities to train and support students to do impactful research and foster an impact culture" (Belcher et al., 2022, p. 51). Effective participation in the global knowledge economy requires a workforce that creates and utilises knowledge for the betterment of society (Molla & Cuthbert, 2016). It is therefore evident that imparting research skills like evaluation and uptake and use of research is a key aspect of post-graduate training, not only to inculcate scientific inquiry, but also to equip students with the knowledge and skills to critically appraise research, and thus evaluating research outputs would be a proxy for knowledge productivity (Obuku et al., 2017). Grobbelaar and Harber (2016) note that in some universities there are proposals for the introduction of research uptake activity reports as a standing item in faculty or department meetings for monitoring the progress of doctoral research uptake policies at regular intervals. Grobbelaar & Harber reveal that a review of organizational level frameworks confirm that some progress has been made in terms of how to evaluate the effectiveness of research uptake activities and mechanisms, although to date, there have been few rigorous evaluations of such initiatives. It is also important to note that such evaluation initiatives are mainly institution wide, but not particular to evaluation of doctoral research.

Currently, global movements for responsible research assessment and evaluation have generated debates about how best to evaluate academic research. For example, the San Francisco Declaration on Research Assessment (DORA) which offers 18 recommendations for improving research assessment practices is best known for its criticism of journal-based metrics as a surrogate measure of the quality of individual research articles to assess an individual scientist's contribution, or in hiring, promotion, or funding decisions. Other global initiatives for responsible research evaluation are: The Leiden Manifesto for Research Metrics, Hong Kong Principles for Assessing Researchers, The Latin American Forum for Research Assessment (FOLEC), the International Network of Research Management Societies (INORMS), Coalition on Advancing Research Assessment (COARA) and The Metric Tide (Himanen et al., 2023; Gadd, 2021). The International Network of Research Management Societies (INORMS) has developed the SCOPE framework which offers a five-step process for research evaluation: start with what is valued, consider context, explore options for

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

measuring, probe deeply, and evaluate the evaluation (Gadd, 2021). The International Development Research Centre (IRDC) developed a practical tool called the Research Quality Plus (RQ+) for context relevant evaluation of the quality of research for development, going beyond conventional metrics and research outputs (IDRC, 2022). The RQ+ recognizes that scientific merit is necessary, but not sufficient, acknowledges the crucial role of stakeholders and users in determining whether research is salient and legitimate, and focuses attention on how well scientists position their research for use (McLean et al., 2022).

The RQ+ lays emphasis on articulation of contextual factors, notably, evaluation of scientific integrity in terms of methodological rigour; evaluation of the legitimacy or fidelity of the research to context and objectives; evaluation of importance or relevance and originality of research, and evaluation of positioning of research for use in terms of the extent to which research is timely, actionable and well communicated. The RQ+ lays emphasis on context relevance, multidimensional view of quality in research evaluation and systematic empirical evidence collection and appraisal in research evaluation. The Agreement on Reforming Research Assessment (CoARA) published in July 2022 consists of four core commitments: recognizing diverse contributions during research assessment, using qualitative peer-review-based metrics over quantitative indicators, abandon inappropriate use of journal and publication-based metrics, and avoiding the use of university rankings during research assessment. These are accompanied by commitments to building and sharing new knowledge tools and resources, and raising awareness within the research community (CoARA, 2022, p.2; Peruginelli & Pölönen, 2023). However, these research evaluation reform initiatives originate from the global north, they are alien to the African context, and they are not particular to evaluation of doctoral research. The indicators for evaluation of doctoral research outputs in the era of the expanded purpose of doctoral research are not yet fully understood.

METHODOLOGY

Subscribing to constructivist philosophy and interpretivist world view, the study used the qualitative single case study research design. We collected data through interviewing and review of documents. We interviewed 10 doctoral program coordinators, 3 research and graduate training managers and 13 PhD students. We selected purposively; a total of 26 participants. We reviewed seven institutional documents pertaining to graduate training at Makerere University: two plans, three policies, one framework and one guideline. We used thematic data analysis to make sense of the data. We drew the participants from ten constituent Colleges of Makerere University: College of Agricultural and Environmental Sciences (CAES), College of Engineering, Design, Art and Technology (CEDAT), College of Education and External Studies (CEES), College of Health Sciences (CHS), College of Humanities and Social Sciences (CHUSS), College of Business and Management Sciences (CoBAMS), College of Computing & Information Sciences (CoCIS), College of Natural Sciences (CoNAS), College of Veterinary Medicine, Animal resources and BioSecurity (CoVAB) and the School of Law. We stratified the University into the colleges and selected participants from each college purposively to gain detailed insights from participants who had rich lived experiences on issues of doctoral research training at Makerere University.

We stratified Makerere University according to Biglan's classification of academic disciplines. Biglan characterizes the subject matter of academic disciplines along three dimensions: pure/applied, hard/soft, and life/nonlife (Biglan, 1973). We stratified the University into colleges and combined them into categories as pure applied, pure hard, soft applied and soft pure to ensure all-inclusive coverage of the University. We used purposive sampling strategy to select participants with specific characteristics or experiences relevant to the research focus guided by the ideas of Hiram (2023). Therefore, we selected coordinators of doctoral programs because strategies are implemented through colleges, coordinators are thus best placed to provide evidence on support mechanisms for uptake of doctoral research outputs. We selected managers in the DRGT because of the positions of

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

authority they hold and unique knowledge they possess in relation to management of research and graduate training in the University. We selected PhD students based on the inclusion criteria of being at the level of data collection and analysis as they have a rich experience of doctoral research training at the University.

In analysing the data, we transformed the audio recorded interviews into textual data by transcribing manually. This enabled us to get immersed into the data. We followed steps in qualitative data analysis suggested by Bryman (2016). In the first stage, we read through the transcribed data as a whole, making analytical notes. In stage two, we reread the text, and identified codes and marked the codes by highlighting with different colors and gave labels to the codes. We used in vivo codes, that is using participants' own words directly, and descriptive codes, that is, assigning labels to codes according to the pre-determined themes we derived from the RKI framework that provided the analytical lens for the study. Guided by the ideas of Braun and Clarke (2006), we coded the data using both deductively and inductively. We deductively searched for codes that align with the pre-determined constructs under the theme of research evaluation in the RKI framework. Inductively, we looked for emerging codes arising from participant's voices or points of view and made marginal notes to highlight any emerging analytic ideas. At stage three, we coded the text descriptively and reviewed the codes to eliminate repetition. At stage four, we related theoretical ideas to the text, deriving from the RKI framework and literature to make interpretations.

FINDINGS

We asked participants about their experiences and views about doctoral research evaluation at Makerere University. The dominant view the participants expressed was that evaluation of doctoral research outputs at the University was purely academic, aimed at PhD completion. That, the evaluation system is not linked to uptake and use of doctoral research outputs. For example, a doctoral program coordinator from pure hard discipline said;

> *here we have what we call evaluation, a PhD stock taking exercise once every six months, we run out a google form and say, what stage are you? what challenges have you faced and how can you mitigate the challenges, so they tell us all sorts of challenges including work load at work place. (PHC219)*

The measures and indicators in place to evaluate doctoral research outputs were purely academic as expressed by a PhD student from applied soft discipline who said:

> *There are minutes of proposal defense, attendance lists of reviewers, review reports, showing that maybe one has passed thesis level, there is public defense, which comprises of indicators like names of the public who have attended and panellists as well as the thesis report that the student has been assessed on. (SAS208)*

Similarly, a PhD student from applied hard discipline said; "the mechanisms are an approved proposal, minutes from the doctoral meeting, an approved thesis and appropriate acceptable defense''(AHS230). Thus, the existing mechanisms are purely academic and focused on completion of the PhD research, but not evaluation of the research to facilitate the uptake of the doctoral research outputs.

Systems and mechanisms for comprehensive evaluation of doctoral research outputs were not well established. Evaluation of doctoral research outputs did not go beyond academic measures. A PhD student from pure hard discipline had this to say:

> *Doctoral research evaluation process starts at the concept level as you know all the way until you defend your PhD. . . I still find the process of research a little bit cumbersome and some point not relevant. . .. I hear we want to make Makerere research led university, I am on record here these things do not match the system in place, the systems cannot match with the aspirations, the aspirations you want to make it research led but the systems do not match . . . if 100 years you are still at this level . . . the issue is to do with systems in place. (PHS225)*

The inadequacy in monitoring the doctoral research process was seen as limiting factor in doctoral research evaluation and subsequent uptake of doctoral research at Makerere University. This can

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

be seen in this expression made by a research manager that:

> *The extent to which the research informs policy is not monitored, it is in away lacking . . .. Makerere is rich in policy documents, we are supposed to be having coordinators, we are supposed to be having lunch time seminars, do people attend, it is mostly people who are in that discipline that attend . . .. The point is this, we have good policies, but they are not monitored to ensure that they achieve the intended purposes. (RM233)*

From review of documents, we found that Makerere University aspires to enhance the uptake of research. The Research and Innovations Communication Strategy and Implementation framework provides for both the quality assurance department and DRGT ‘‘to regularly benchmark on how other reputable universities manage and execute the dissemination of their research and innovation outputs’’ (Makerere University, 2015, p.15). But the extent to which such provisions have been implemented in doctoral research training is not clear. However, the views expressed by research mangers at the DRGT show that despite the PhD being regarded as purely academic, there is need for mechanisms to enhance the evaluation to incorporate the usefulness of the research as seen in this illustrative extract:

> *This is an academic journey which we evaluate through the usability or the usefulness . . . the academic rigor must be connected to improve the usefulness of the research in terms of academics but also to policy. . . we evaluate the work you do, work in progress presentations, then we have a viva voce examination. (RM232)*

In a similar way, another research manager in the DRGT said:

> *We want students to write policy briefs because they will summarize your study to a modified version which can be interpreted by any person who is not into your area, if you send a summary of your thesis to parliament in terms of policy briefs they can easily pick some information . . . the format I saw which we discussed the other day starts with key finding. . . for details of how you arrived at it you may go and read the paper . . . the policy maker will want to know where the problem is, what is it and what are you recommending? (RM229)*

The explanations given by the research managers illustrate that doctoral research ought to be evaluated in terms of the usability of the research in both the academia and in policy and practice. However, mechanisms to enhance doctoral research evaluation to facilitate the uptake of doctoral research outputs have not been integrated in doctoral research training. This is evident in the expressions made by PhD students. For example, a PhD student from pure soft discipline said; ‘‘for sure I do not see that happening, to be honest if I ask how many meetings were held to have doctoral researches discussed the answer may not readily be available” (PSS239). Similarly, another PhD student from applied soft discipline expressed that ‘‘workshops and seminars are not organised to facilitate the uptake of doctoral research’’(SAS208). A PhD student from the pure hard discipline expressed a contrasting view that they use exhibitions as a support mechanism to enhance research evaluation to facilitate the uptake of doctoral research at Makerere University:

> *we also have those exhibitions which they run, the college runs exhibitions, where they invite the industry people out there to come and see what the students have come up with and the different products. It is both doctoral and undergraduates. The outsiders or stakeholders come and then see what they can pick, they evaluate and say this one is good for us, they pick out some products. (PHS 209)*

However, such exhibitions were not structured in doctoral programs as part of the evaluation mechanisms, and not routinely practiced in PhD research evaluation and assessment. There were no research evaluation systems that focus on the use of doctoral research. Mechanisms in place to evaluate research were for purposes of completion of PhD studies but not uptake of doctoral research outputs. One emerging theme was noticeable in the views expressed by the participants, that is, academic orientation in doctoral research evaluation.

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

Academic Orientation

The views of the PhD students, doctoral program coordinators and managers of research and graduate training showed that doctoral research evaluation at the University is purely academic. This is in spite of the aspirations to enhance research uptake expressed in the University strategy and policy frameworks. The purely academic orientation in doctoral research evaluation limited active dissemination of doctoral research outputs to potential users. Participants expressed the need to enhance and broaden doctoral research evaluation as illustrated in this expression by a doctoral program coordinator that; ‘‘we need an evaluation system that engages the student and the supervisor and lead to increased productivity but at the moment most of it still passive’’(AHC237). Equally, a PhD student said:

> *Makerere system is not revised . . . they do not want to revise the evaluation system; they want to stick to the very old systems . . . I am not saying that throw them away 100%, no, just borrow a leaf see how to modify with the current demands, as a fact the system we are using was perfect then but is not perfect now, it is a fact a lot has changed. (PHS225)*

Thus, mechanisms to enhance the evaluation of doctoral research were still narrow and purely academic, limited to measures of scholarly rigour. Measures for evaluating doctoral research in terms of its potential for uptake and use were not developed, and not integrated as part of doctoral research evaluation. The purely academic orientation in doctoral research evaluation limited active dissemination of doctoral research outputs to potential users.

DISCUSSION OF FINDINGS

Effective participation in the global knowledge economy requires a workforce that creates and utilises knowledge for the betterment of society (Molla & Cuthbert, 2016). As such, new approaches to research evaluation need to be applied by universities to train and support students to do impactful research (Belcher et al., 2022). According to the RKI framework, research evaluation should focus mainly on the use of research evidence (Ellen et al., 2011), hence evaluation of research outputs is seen as a proxy measure for knowledge productivity (Obuku et al., 2017).

Current global movements to reform and enhance research evaluation and assessment recognize that scientific merit is a necessary but not a sufficient measure for evaluating research. Emphasis is now focused on the crucial role of stakeholders and users in determining whether research is relevant and legitimate, and how well research is positioned for use (McLean et al., 2022). We found out that measures used in the assessment and evaluation of doctoral research in Makerere University were narrow and purely academic, limited to measures of scientific rigour, and aimed at PhD completion only. Measures for evaluating doctoral research outputs in terms of its potential for uptake and use were not developed, and not integrated as part of doctoral research evaluation, as such, evaluation of doctoral research outputs did not go beyond academic measures. The extent to which doctoral research outputs are positioned for use beyond the academia was not monitored and evaluated. This limited the uptake of doctoral research outputs at Makerere University as the evaluation system did not support active research dissemination to potential users beyond the academia. Despite the PhD being regarded as purely academic, there is need for mechanisms to enhance the evaluation of PhD research to incorporate the usability of the research outputs to meet the current demands of the expanded purpose of the PhD. Doctoral research outputs ought to be evaluated in terms of the usability of the research in both the academia and in policy and practice, and the extent of stakeholder engagement in addition to the traditional academic measures.

These findings align with Grobbelaar and Harber (2016) who found that there are few rigorous evaluation initiatives of doctoral research. Evaluation of academic research has for a long time been narrowly tilted to scholarly metrics of research productivity such as counts of articles published in peer-reviewed journals, referred books, book chapters, h-index, awarded research grants, conference proceedings, and patents of academics (Igiri et al., 2021). However, we found that evaluation and assessment of PhD research in Makerere University only considers counts of articles published in peer-reviewed journals in

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

addition to assessment of the quality of the PhD thesis/dissertations in terms of scholarly/scientific methodological rigour and oral communication and presentation skills during the PhD public defense. Evaluation of research ought to be comprehensive, the researcher's performance should be evaluated based on both scientific measures and in terms of outcomes beyond the academia, for instance how well the research is positioned for uptake and use (Appah et al., 2020).

Global movements for responsible research assessment and evaluation have generated debates about how best to evaluate academic research given the changing contexts of knowledge production. For example, the San Francisco Declaration on Research Assessment (DORA) disapproves use of journal-based metrics in research evaluation and assessment. Equally, global initiatives for responsible research evaluation such as The Leiden Manifesto for Research Metrics, Hong Kong Principles for Assessing Researchers, The Latin American Forum for Research Assessment (FOLEC), the International Network of Research Management Societies (INORMS), Coalition on Advancing Research Assessment (COARA) and The Metric Tide, all call for reforms to enhance research evaluation and assessment (Gadd, 2021). For example, the INORMS developed the SCOPE framework which puts emphasis on the context and value of research, and calls for evaluation of the research evaluation process. This is in line with Morton (2015) who asserts that evaluation of the research evaluation process is crucial for enhancing research uptake.

To enhance research evaluation, the International Development Research Centre (IRDC) developed a practical tool called the Research Quality Plus (RQ+) for context relevant evaluation of the quality of research for development, going beyond conventional metrics and research outputs (IDRC, 2022). The RQ+ lays emphasis on articulation of contextual factors, notably, evaluation of scientific integrity in terms of methodological rigour; evaluation of the legitimacy or fidelity of the research to context and objectives; evaluation of importance or relevance and originality of research, and evaluation of positioning of research for use in terms of the extent to which research is timely, actionable and well communicated. In the same line, the Agreement on Reforming Research Assessment (CoARA) published in July 2022 lays emphasis on comprehensive research evaluation, which should include both scientific rigour, and the relevance and potential for uptake and use beyond the academia. In particular, the CoARA lays emphasis on avoiding use of journal and publication-based metrics only in research evaluation (CoARA, 2022, p.2). The International Development Research Centre (IRDC) developed a practical tool called the Research Quality Plus (RQ+) for context relevant evaluation of the quality of research for development, going beyond conventional metrics and research outputs the RQ+ recognizes that scientific merit is necessary, but not sufficient, acknowledges the crucial role of stakeholders and users in determining whether research is salient and legitimate, and focuses attention on how well scientists position their research for use (McLean et al., 2022).

Although these research evaluation reform initiatives are not particular to evaluation of doctoral research, they are pointers to changes in the research environment globally. As doctoral education centres on training researchers, mechanisms to enhance doctoral research evaluation to meet the needs of the expanded purpose of doctoral research and the changing research environment need to be established. We found doctoral research evaluation in Makerere University was narrowly focused on academic measures, limiting the potential for uptake and use of doctoral research outputs beyond the academia. This points to the need for Makerere University to evaluate and revise the doctoral research assessment and evaluation system to meet the current demands in the changing research environment.

CONCLUSION

Makerere University aspires to enhance and promote the uptake and use of research outputs and innovations generated by staff and students as one of the key drivers of becoming a research-led university (Makerere University, 2020). But, uptake and use of research outputs produced by doctoral students in Makerere University continues to be dismal due to inadequacy in institutional mechanisms. This can be attributed to failure by the University to fully

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

operationalize and implement the strategic plan and the subsequent policies, frameworks and guidelines in doctoral education and training. Doctoral programs offered were still the traditional PhD, mechanisms to enhance the uptake and use of doctoral research outputs beyond the academia are not integrated in doctoral research training, as such doctoral research outputs largely remain in the shelves, archives and repositories in the University.

Doctoral research evaluation at Makerere University was narrow and purely academic, limited to measures of scholarly rigour. Measures for evaluating doctoral research in terms of its potential for uptake and use were not developed, and not integrated as part of doctoral research evaluation. The purely academic orientation in doctoral research evaluation was a disincentive to active dissemination of doctoral research outputs to potential users through non-academic knowledge outputs which are more suitable for the non-academic audience. This decreased the opportunity for enhancing access to doctoral research outputs by potential users. Consequently, uptake and use of doctoral research outputs at Makerere University remained dismal.

RECOMMENDATIONS

Makerere University places value on research uptake in the vision, mission, goals and objectives as shown in the strategic plan (Makerere University, 2020). Therefore, to enhance the evaluation of doctoral research to facilitate the uptake and use of doctoral research outputs beyond the academia, the DRGT should develop expanded and comprehensive measures and indicators to evaluate doctoral research outputs. Measures for evaluating doctoral research in terms of its potential for uptake and use should be developed and integrated as part of doctoral research evaluation. This will enhance active dissemination of doctoral research outputs to potential users through non-academic knowledge outputs which are more suitable for the non-academic audience. In addition, further research needs to be undertaken to understand knowledge mobilization needs in other sectors. This will enable Makerere University and other universities in similar contexts to tailor doctoral research evaluation appropriately.

REFERENCES

Appah, O. R., Tokede, A. M., Ahmad, O. A., and Tunde-Francis, A. A. (2020). Predictor of research productivity among married female research scientists in Oyo State, Nigeria. *Journal of Finance and Economics*, 8 (5), 232–236. https://doi.org/10.12691/jfe-8-5-4

Baptista, A., Frick, L., Holley, K., Remmik, M., Tesch, J., & Âkerlind, G. (2015). The doctorate as an original contribution to knowledge: Considering relationships between originality, creativity, and Innovation. Frontline Learning Research, 3(3), 55-67. http://dx.doi.org/10.14786/flr.v3i3.147

Belcher, B. M., Claus, R., Davel, R., & Jones, S. M. (2022). Evaluating and improving the contributions of university research to social innovation. Social Enterprise Journal, 18(1), 51-120. https://doi.org/10.1108/SEJ-10-2020-0099

Biglan, A. (1973). Relationships between subject matter characteristics and the structure and output of university departments. *Journal of Applied Psychology, 57*(3), 204–213. https://doi.org/10.1037/h0034699

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology: Qualitative Research in Psychology, 3(2), 77- 101. https://doi.org/10.1191/1478088706qp063oa

Bryman, A. (2016). *Social research methods*. Oxford university press. https://lib.mdpu.org.ua/wp-content/uploads/2024/03/Alan-Bryman-Social-Research-Methods2016.pdf

Coalition for Advancing Research Assessment [CoARA] (2022). Agreement on Reforming Research Assessment. https://coara.eu/app/uploads/2022/09/2022_07_19_rra_agreement_final.pdf

Ellen, M., Lavis, J.N., Ouime, M., Grimshaw, J., & Bedard, P. (2011). Determining research knowledge infrastructure for healthcare systems: A qualitative study: Implementation Science, 6, 60. https://doi:10.1186/1748-5908-6-60

Frick, L, Mckenna., S & Muthana, E. (2017). The death of the PhD: When industry partners

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

determine doctoral outcomes. *Higher Education Research and Development 36*(2): 444-447. http://dx.doi.org/10.1080/07294360.2017.1263467

Gadd, E., Holmes, R., & Shearer, J. (2021). Developing a method for evaluating global university rankings. *Scholarly Assessment Reports, 3*(1), 2. https://doi.org/10.31235/osf.io/thx4j

Grobbelaar, S., & Harber, T. (2016). Towards the Institutionalization of Research Uptake Management in Sub-Saharan African Universities. *Journal of Higher Education in Africa*, 14(1), 155–181. https://www.jstor.org/stable/10.2307/90016104

Hasgall, A., Saenen, B., Borrell-Damia, L., Van Deynze, F., Seeber, M. & Huiman, J. (2019), Doctoral Education in Europe Today: Approaches and Institutional Structures. European University Association. https://eua.eu/downloads/publications/online%20eua%20cde%20survey%2016.01.201 .pdf

Himanen, L., Conte, E., Gauffriau, M., Strøm, T., Wolf, B., & Gadd, E. (2023). The SCOPE https://doi.org/10.12688/f1000research.140810.2

Hiram, T., Turner, D., Tan, K. L., Tan, S. R., Wong, M., & Gong, J. (2023). Less is more? Review and recommendations for qualitative sampling strategy using the SCADE approach. *Asian Journal of Business Research*, *13*. https://doi.org/10.12688/f1000research.140810.2

Igiri, B. E., Okoduwa, S. I., Akabuogu, E. P., Okoduwa, U. J., Enang, I. A., Idowu, O. O & Onyemachi, D. I. (2021). Focused research on the challenges and productivity of researchers in Nigerian academic institutions without funding. *Frontiers in research metrics and analytics*, *6*, 727228. https://doi.org/10.3389/frma.2021.727228

International Development Research Centre [IRDC] (2022). Research quality plus (RQ+) assessment instrument. https://idrccrdi.ca/sites/default/files/sp/Documents%20EN/idrc_rq_assessment_instrument septeber_2017.pdf

Jacobson, N., Butterill, D., & Goering, P. (2003). Developing of a framework for knowledge transalation: Understanding user context. *Journal of Health Services Research & Policy* 8(2), 94- 99. https://www.jstor.org/stable/26750169

Kehm, B. M. (2015). Higher education as a field of study and research in Europe: *European Journal of Education*, 50(1), 60-74. https://doi.org/10.1111/ejed.12100

Makerere University (2015). *Makerere University Research and Innovations Communication Strategy and Implementation Framework*. Department of Journalism & Communication.

Makerere University (2020). *Makerere University Strategic Plan 2020/2021-2030/31*. Makerere University.

Makerere University (2021). *Strategic Research, Innovation and Commercialization Plan 2021 - 2030*. Directorate of Research and Graduate Training.

McLean, R., Ofir, Z., Etherington, A., Acevedo, M. & Feinstein, O. (2022). Research Quality Plus: Evaluating Research Differently. IDRC. https://idrc-crdi.ca/en/rqplus

Mindu, T., Chimbari, M. J., & Gunda, R. (2018). A review of methodologies for research uptake in eco-health projects conducted in rural communities in Sub-Saharan Africa. *Journal for Communication Sciences in Southern Africa*, *37*(2), 66-91. https://pdfs.semanticscholar.org/e4ff/d00b79dd3cb3e969da7b9542e3c998977c04.pdf

Molla, T., & Cuthbert, D. (2016). In pursuit of the African PhD: A critical survey of emergent policy issues in select sub-Saharan African nations, Ethiopia, Ghana and South Africa. Policy Futures in Education, 14(6), 635-654. https://doi.org/10.1177/1478210316641567

Morton, S. (2015). Progressing research impact assessment: A 'contributions' approach. *Research Evaluation, 24*, 405–419. https://doi:10.1093/reseval/rvv016.

Article DOI: https://doi.org/10.37284/eajes.7.4.2312

Nerad, M. (2020). Doctoral education worldwide: Three decades of change. In M. M. Yudkevich, P. G. Altbach & H. de Wit (Eds.), *Trends and issues in doctoral education: A global perspective*. 33– 50. Sage. https://doi.org /10.4135/9789353885991

Obuku, E., Lavis, J., Kinengyere, A., Mafigiri, D., Sengooba, F., Karamagi, C., & Sewankambo, N. (2017). Academic research productivity of post-graduate students at Makerere University College of Health Sciences, Uganda, from 1996 to 2010: A retrospective review. *Health research policy and systems*, *15*(1), 30. https://doi.org/10.1186/s12961-017-0194-8

Peruginelli, G., & Pölönen, J. (2023). The legal foundation of responsible research assessment: An overview on European Union and Italy. *Research Evaluation*, *32*(4), 670-682. https://doi.org/10.1093/reseval/rvad035

Phipps, D., Cummings, J., Pepler, D., Craig, W. & Cardinal, S. (2016). The co-produced pathway to impact describes knowledge mobilization processes. *Journal of Community Engagement and Scholarship*, *9*(1), 31-40. https://doi.org/10.1007/s13398-014-0173-7.2

Ruano-Borbalan, J-C. (2022). Doctoral education from its medieval foundations to today's globalisation and standardisation. European Journal of Education, 57, 367–380. https://doi.org/10.1111/ejed.12522

Sigudla, J., & Maritz, J. (2021). Research uptake in a low resource setting: How can a low resource country improve. *Health Systems and Policy Research*, *8*(5), 95. https://doi.org/10.21203/rs.3.rs-757580/v1

Tella, A., Raji, B. W., Akanbi-Ademolake, H. B., & Memudu, S. A. (2016). Perception and use of open access electronic thesis and dissertations by the undergraduate students of University of Ilorin, Nigeria. *Samaru Journal of Information Studies*, *16*(2), 88-119.

UNESCO Institute for Statistics (2014). Guide to conducting an R&D Survey: For countries starting to measure research and experimental development. http://dx.doi.org/10.15220/978-929189-151-1-en

Wilson, M. P., Petticrew, M., Calnan, W., Nazareth, I. (2010). Disseminating research findings: What should researchers do? A systematic scoping review of conceptual framework. http:/ /www.ImplementationScience.com/content/5/1/ 91

