

Knowledge Production in a South African University: Interventions through Research Capacity Development Initiatives

Vaneshree Govender^{1*} 

Kunle M. Oparinde² 

AFFILIATIONS

¹Directorate for Research and Postgraduate Support, Durban University of Technology, Durban, South Africa.

²Faculty of Arts and Design, Durban University of Technology, Durban, South Africa.

CORRESPONDENCE

Email: vanesh@dut.ac.za*

EDITORIAL DATES

Received: 03 March 2026

Revised: 14 June 2026

Accepted: 21 June 2026

Published: 15 July 2026

Copyright:

© The Author(s) 2026.

Published by [ERRCDF Forum](#).

This is an open access article distributed under Creative Commons Attribution ([CC BY 4.0](#)) licence.



DOI: 10.38140/ijer-2026.vol8.2.05

Abstract: Several studies have attributed the limited number of research outputs on the African continent to the lack of research capacity-building initiatives. Recognising this shortfall, the need for research-enabling environments has become a significant concern for several African universities. While traditional institutions in many African countries have long focused on teaching and learning, there has been increasing attention paid to research, particularly in South Africa. Adopting a qualitative research approach, data were collected through semi-structured interviews with academic staff at a South African university and were analysed thematically. The findings revealed that participants perceived Research Capacity Development (RCD) initiatives as critical in enhancing research skills, improving publication output, strengthening postgraduate supervision practices, and promoting grant-writing competencies. An ARCD framework was developed to explain RCD challenges and the necessary interventions for higher education institutions. The model highlights the global benefits of knowledge production when academics are fully equipped to produce problem-solving research publications.

Keywords: Research capacity building, higher education, knowledge production, practice framework.

1. Introduction

Research conducted by Niemczyk (2018) suggests that the existing literature concerning the development of researchers predominantly originates from contexts within the Northern Hemisphere and is seldom inclusive of perspectives from the developing world. Consequently, this study endeavours to bridge this gap and contribute to the literature on research capacity development (RCD), specifically from the African continent. Previous authors have employed the term RCD in various ways, as it is often used interchangeably with Research Capacity Building (RCB) and Research Capacity Strengthening (RCS). Ngongalah et al. (2018) define RCS as any efforts aimed at enhancing the ability of individuals and institutions to undertake high-quality research, both individually and collectively, in an efficient and sustainable manner. An alternative definition by Ishengoma (2016) posits that RCB involves efforts to augment the capacity of individuals and institutions to conduct high-quality research and engage with a broader community of stakeholders. Fataar's (2018) definition of RCD pertains to the learning and developmental activities that facilitate the academic immersion of staff members within university environments. A consistent theme across these definitions is that RCD, RCB, and RCS share a common objective of enhancing an individual's capacity to facilitate knowledge production, which is fundamentally the focus of this study.

Broadly speaking, the term research education refers to the spaces, practices, and policies designed to equip prospective researchers with the knowledge, skills, attitudes, and behaviours necessary to conduct quality ethical research and engage in scholarly communities both locally and globally (Niemczyk, 2018). In this context, Frantz et al. (2014) indicate that a significant limiting factor

How to cite this article:

Govender, V., & Oparinde, K. M. (2026). Knowledge production in a South African University: Interventions through research capacity development initiatives. *Interdisciplinary Journal of Education Research*, 8(2), a05. <https://doi.org/10.38140/ijer-2026.vol8.2.05>

preventing higher education institutions (HEIs) in developing countries from engaging in effective and essential research is the lack of research capacity building. Abdalla, Bortolussi, and MacDonald (2018) concur that despite efforts by the international community to enhance research capacity in sub-Saharan Africa, considerable challenges persist, as traditional approaches often overlook the fundamental deficits in Africa's research capacity, including funding, leadership, and the skills necessary to identify and address local community health issues. Consequently, Gomo et al. (2011) reveal that academic institutions in Africa frequently rely on international collaborators for their research agenda, scientific support, and funding. Indeed, traditional approaches to strengthening research capacity in developing countries have primarily focused on refining individual skills through doctoral-level training in institutions located in developed countries, without adequately preparing the home institution for the reintegration of these skilled individuals (Sawyerr, 2004). These research capacity-building efforts have failed to mitigate the brain drain from African academic institutions. It is within this context that effective solutions must emerge to address the issues concerning the low research profiles of academic staff in African HEIs.

Mtshali and Sooryamoorthy (2019) assert that in the contemporary environment, universities are increasingly tasked with the responsibility of contributing to economic growth and social progress. Nonetheless, the lack of research capacity represents a significant constraint that hampers higher education institutions (HEIs) in developing countries from engaging in meaningful and impactful research. Despite these challenges, Vicente-Crespo et al. (2021) observe that there has been a rise in investment aimed at enhancing research capacity within institutions located in low- and middle-income countries (LMICs). However, the long-term success and sustainability of augmented research capacity hinge on the extent to which effective interventions are integrated into the routine operations of institutions and the broader research ecosystem. For example, while increasing the number of PhD-level graduates in Africa is crucial, this alone is insufficient for sustainability; these researchers must remain active within the African research landscape and play a pivotal role in cultivating the next generation of researchers. To facilitate this, they require supportive research environments, which necessitates institutional or systemic change within higher education institutions. Comprehensive training in research skills should be central to higher education activities, not solely for academics and researchers, but also for a broad range of professionals who require contemporary data and perspectives in their work.

As established by Huas et al. (2019), research capacity development programmes are integral to both individual and institutional advancement, resulting in enhanced skill levels and greater capability for conducting impactful research. This study investigates how institutions of higher learning can implement quality-driven research capacity development (RCD) initiatives. The focus of this study is on how universities can engage in strategic, proactive, catalytic, and capacity-building activities that support both staff and students in developing their research skills across various domains. These domains may encompass training in research methodologies, grant writing, and article writing for publication, among others. The primary aim of this study is to explore how RCD initiatives can facilitate knowledge production within higher education institutions. Specifically, the study seeks to:

- Examine academics' perceptions of research capacity development initiatives at DUT.
- Identify the research skills and competencies acquired through participation in RCD programmes.
- Explore the contribution of RCD initiatives to knowledge production and research productivity.
- Develop a framework to guide higher education institutions in strengthening their research capacity development practices.

2. Methodology

This paper adopts a qualitative approach for the collection, presentation, analysis, and interpretation of data. Data were gathered through interviews with academic staff, utilising both face-to-face and

online interviews conducted on a virtual platform, specifically Microsoft Teams. Textual data from interview transcripts were analysed and condensed to reflect the predominant views of the participants. The researcher occupied a practitioner-researcher position within the realm of research capacity development, remaining cognisant of the potential influence of prior professional experiences on data interpretation. To minimise researcher bias, a reflexive approach was adopted throughout the research process. Reflective notes were maintained during data collection and analysis to facilitate critical self-awareness and to distinguish participants' perspectives from the researcher's assumptions. Interview transcripts were imported into NVivo software for data management and analysis, employing thematic analysis. Initially, transcripts were read repeatedly to achieve familiarity with the data. Subsequently, open coding was conducted to identify meaningful units of text relevant to participants' experiences of research capacity development initiatives. Similar codes were grouped into broader categories and themes, which were continuously reviewed and refined to ensure alignment with the research objectives and the participants' accounts. The final themes constituted the basis for the presentation and interpretation of the findings.

The researcher elucidated the purpose of the study to the participants, emphasising that their participation was voluntary and that they were free to withdraw at any stage during the study without prejudice to their relationship with the researcher. Participants were asked to sign a consent form and were assured of the confidentiality of the data collected. Those participating in the online interviews were also informed of their participatory rights, and their consent was confirmed verbally. The dates and times of the interviews were arranged and confirmed with these participants prior to the data collection process. The interviews were conducted during working hours, specifically from 08:00 to 16:30, with each session lasting between 30 minutes and one hour. The interviews took place between October 2022 and June 2023. Ethical clearance for the study was obtained from the University of South Africa – HSHDC/914/2019. Data were collected via audio recordings, treated with confidentiality, and transcribed verbatim by a transcriber. Participants were informed that the interviews would be recorded, to which they consented, and were assured that the recordings would only be accessed by the researcher. Notes were taken by the researcher during the interviews, and these were compared and aligned with the transcriptions. Furthermore, this section reports the results of the observations derived from multiple analysis techniques via the NVivo software tool. The aim of this section is to indicate the overall responses to the various interview questions.

Given the researcher's practitioner involvement in research capacity development, reflexive measures were adopted throughout the study to minimise the influence of personal assumptions on data interpretation. Nevertheless, as with most qualitative research, the findings remain subject to interpretive considerations associated with the research context. To enhance the trustworthiness of the study, several measures were implemented. Credibility was strengthened through prolonged engagement with the research context and through member verification, whereby participants were afforded the opportunity to clarify aspects of their responses during and after interviews when necessary. Dependability was enhanced by maintaining an audit trail of interview recordings, transcripts, coding decisions, and analytical notes. Confirmability was promoted through reflexive journaling and documentation of the analytical process. In addition, methodological triangulation was achieved by drawing on both empirical interview data and relevant scholarly literature during the interpretation of findings. Transferability was supported by providing detailed descriptions of the research context, participants, and study procedures.

This study utilised purposive sampling to recruit participants with relevant knowledge and experience related to research capacity development initiatives (Babbie & Mouton, 2012). A total of 11 academic staff members took part in the study, representing various academic disciplines within the university and encompassing a range of career stages, including emerging researchers and doctoral candidates. Most participants had over ten years of experience in higher education, enabling them to provide informed insights on research capacity development practices. Data collection

continued until saturation was reached, meaning that no substantially new themes, perspectives, or insights emerged from subsequent interviews. By the final interviews, participants' responses mainly reiterated issues previously identified, indicating that the data provided sufficient depth and breadth for the study's purposes. Given the limited research on research capacity development within African higher education contexts, the findings should be regarded as exploratory and context-specific. Future studies may build on these findings by conducting comparative case studies across multiple institutions in different national contexts.

3. Presentation of Results

This section presents the findings from participants regarding their perspectives on Research Capacity Development (RCD) initiatives, particularly based on their experiences at the Durban University of Technology. The findings outlined below should be interpreted within the context of a qualitative case study conducted at a single South African university of technology. The results reflect the experiences and perceptions of the participants involved in the study and are intended to provide context-specific insights into research capacity development rather than statistically generalisable conclusions. Consequently, participants were posed open-ended questions regarding their beliefs about the significance of RCD as a core objective in cultivating the next generation of researchers. This question was designed to allow participants the opportunity to express themselves freely and share their opinions on the subject. The results indicated that a majority of participants concurred that RCD is indeed a central objective in the development of the next generation of researchers. Participants acknowledged that, to foster the emergence of new researchers, the university must invest in a programme dedicated to enhancing individual research capacity. The prevailing sentiment among participants was that a university requires an RCD office tasked with overseeing and managing various RCD workshops to support staff in building their research capacity.

3.1 Theme 1: Perceived importance of research capacity development

Participants consistently regarded research capacity development initiatives as essential mechanisms for cultivating the next generation of researchers. They emphasised that research capacity development programmes provide structured opportunities for skills enhancement and contribute to long-term academic advancement and research preparedness.

Participant A stated that – *'I do believe that the university, if I have to say university in terms of DUT, does strive towards creating Research Capacity Development for staff and even for postgraduate students, so that they are prepared in a certain way for postgrad studies and also in a certain way for industry, because it helps with capacity development. They provide different type of skills development, different type(s) of workshops, different type(s) of ambient of workshops, different type(s) of little things that provides us with the skills and the tools that we need and which aid in you getting ready.'*

Participant C indicated that – *'The RCD programme prepares us for future life in terms of research and even when we go to other places either in the research world or in the other fields we might find ourselves.'*

Participant E revealed that – *'Each time I participate in any of the RCD programmes, I learn something new, and this contributes to my growth as an emerging researcher. For example, I have just finished drafting my second paper. And for me, I am happier that having these research skills mean that my problem-solving skills will develop once I have strong research methodology backgrounds.'*

Participant D's view – *'These RCD programmes teach me a lot of things that I couldn't learn under my postgraduate supervisor. Then, we focused mainly on thesis development and there was no attention to matters of article writing or grant (proposal) writing for instance. But now, I am*

in a good space to pick a problem in the society and develop a research paper on such a problem and publish in quality journals. Also, I recently won a research grant of almost a Million Rand which was only made possible through the knowledge I gained from the RCD workshops.'

Participant H says that – *'An aspect of the RCD programme I sincerely appreciate is the encouragement given to us to ensure that our research projects address societal problems. For me, there are several social issues in Africa and many more. So, with more research and if they truly make it their businesses to publish research works that address each of these problems, there will be gradual solutions to African problems that we can have recourse to which will also contribute to the progress and development of the continent. I am sure that even the far more developed countries have to rely on their researchers to make groundbreaking findings for them. So, for we academics in Africa, if we develop ourselves properly, we will be able to produce findings that may put an end to African problems.'*

These responses indicate that participants viewed RCD initiatives as more than merely isolated training activities. Instead, they were perceived as strategic institutional interventions that enhance research preparedness, foster academic development, and contribute to the generation of socially relevant knowledge.

3.2 Theme 2: Development of research competencies and scholarly skills

A second theme emerging from the data concerned the acquisition of practical research skills through participation in RCD activities. Participants were asked whether they acquired research skills while participating in postgraduate RCD programmes. All participants responded positively, indicating that they did acquire much-needed research skills during the RCD workshops. The majority of participants were doctoral candidates, thus categorised as emerging researchers, making them ideally suited to participate in the RCD workshops. Furthermore, participants reported that the research skills acquired through the RCD workshops had assisted them in their practice, including supervisory skills, article writing for publications, grant proposal writing, and aspects of their doctoral studies, which encompassed stages from research design to data analysis and interpretation.

Participant B intimated that – *'I acquired a lot of research skills, I remember, after attending all these activities, I am able to stand alone in terms of writing a research paper on my own. My first paper was co-authored by my two supervisors and this year (2023), I have published a paper that was written entirely by myself.'*

Participant G indicated that – *'I have even noticed that the skills are so beneficial that I have had a change in supervision style. Also and even in my writing style, like I know my supervisor has even said it is so much more different, when you attend a workshop and you know what you need to do in certain things, you end up being more concise and getting things done. It is beneficial because it helps you to know a lot more things about research that you don't know, when you do a Masters, you (are) nervous, and you go about doing it than you are supervised, but when you are on the other side and you have to supervise somebody, this workshops help you a lot seeing things from the supervisor's point and from a student point.'*

Participant F indicated – *'I am using the skills currently because at the moment I am busy trying to put together an article. So, I am busy with two journal articles that I am writing and also, I am busy with wanting to identify my total focus area for the PhD. What I have learnt is I am constantly going back, and I am old school, I have got my notebook, so, I am considering going back to my book and I am looking to see what the Professor said. I have kept a stack of notes from that workshop and I can go back and work with that, and you know it also helps me for when I am teaching because I can go into class and I can say, I now want you to go and critically read an article on for example the COVID-19 issue affecting small businesses and now I can say to the student, when you are reading the article, this is what you need to do, which is the skill that I learnt from the workshop.'*

Participants reported improvements in article writing, research design, supervision practices, critical reading, and independent scholarly work. These findings suggest that RCD initiatives directly contribute to the enhancement of competencies necessary for successful research careers.

2.3 Theme 3: Enhanced research productivity and academic confidence

Participants further emphasised how involvement in RCD programmes resulted in tangible research outcomes and enhanced academic confidence. The interviewees clearly articulated the advantageous nature of the capacity development workshops. The participants shared their experiences and were able to ascertain that the workshops contributed to their capacity building as researchers in several significant ways.

According to Participant J, *'before I became involved in the research capacity development programmes, my research skills were close to zero. I would even find it challenging to properly align my research objectives to (a) literature review and so on. I only began to learn the alignment after the workshop on how to align my research objectives with my entire thesis. I found a lot of these things challenging even during my master's degree, but really didn't (have a) solution to it until that workshop. Now I know that when I write a thesis, every part has to be carefully aligned to the research objectives and research questions which are guiding (the) thesis. That knowledge from the workshop is very valuable for me.'*

In a similar vein, Participant K says that *'one part of this workshop that I took seriously was methodology. Those paradigms and approaches 'what-what' were always confusing I won't lie. They only became clearer after the session on methodology because I like how the facilitator used practical examples to explain them. I immediately went back to my thesis to apply the knowledge because I was stuck at that stage initially. So, this is a good initiative really and I really appreciate the opportunity to be a part of this.'*

For Participant I, what was very important was the skill gained on article writing. According to Participant I,

'I always had my paper from my master's thesis rejected until the facilitator show(ed) the clear disparities between a thesis and a journal article and how the processes are different. These are things that we just take for granted that okay, we can just (take) information from the thesis to write papers, but the issues always come up because papers don't read like (a) thesis. So, to extract papers from (a) thesis, one needs to understand the process separately and can't assume that since everything is in the thesis, they can all fit into a paper. This RCD workshop made it easy for me to understand the difference in the writing of the two, and this year that paper already got accepted by an accredited journal, so I am really thankful for the opportunity given. Universities need to do more of these things especially for younger researchers like us to gain more knowledge.'

Beyond skill acquisition, participants reported specific outcomes, including improved thesis development, successful publication efforts, enhanced methodological understanding, and increased confidence in conducting research independently.

4. Discussion of Findings

Three interrelated themes emerged from the findings: the perceived significance of research capacity development for researcher advancement, the acquisition of practical research competencies through research capacity development initiatives, and the contribution of these initiatives to research productivity and academic confidence. These themes suggest that research capacity development functions not merely as a training intervention but as a broader institutional mechanism for strengthening research cultures and promoting knowledge production. The ensuing discussion examines these findings in relation to existing literature and considers their implications for higher education institutions.

Mtshali and Sooryamoorthy (2019) argue that a research culture is part of the organisational life of a university, whereas according to Herman and Sehoole (2017), knowledge production capacities are not evenly distributed in African universities. The findings of the current study extend the arguments posited by Herman and Sehoole (2017) by demonstrating that participants not only recognised institutional research constraints but also identified specific interventions that enhanced their research productivity. While Herman and Sehoole primarily focus on structural capacity limitations, the present findings underscore the significance of targeted developmental interventions at the individual level. Such universities struggle to produce research and develop niche areas in alignment with national priorities, as well as to access grants and funding. This perspective emphasises the importance of universities in conducting research, providing a conducive research environment, and enabling their academics to engage in research with a future-oriented function and dimension. Mtshali and Sooryamoorthy (2019) further argue that in addition to providing an enabling environment, universities must cultivate the competencies and skills essential for their future survival. Consequently, research projects at universities are critical for preserving their future, necessitating that institutions invest in research and in the development of future researchers.

A prominent finding of this study was the participants' recognition of the importance of structured support mechanisms in developing research competencies. Several participants indicated that research capacity development initiatives offered opportunities to acquire skills that were not adequately developed during their postgraduate studies, particularly in areas such as article writing, grant proposal development, and independent research practice. These findings corroborate the work of Mtshali and Sooryamoorthy (2019), who assert that universities require deliberate institutional strategies to cultivate sustainable research cultures. Similarly, Herman and Sehoole (2017) observe that institutions with limited research capacity often struggle to develop robust postgraduate pipelines and supervisory expertise. Viewed within this context, structured mentorship programmes may provide a mechanism through which institutions can address these challenges. Such programmes could support doctoral candidates and emerging researchers by providing guidance, research training, and opportunities for scholarly engagement. The findings of the present study suggest that mentorship interventions are particularly valuable in contexts where researchers have limited exposure to research-intensive environments.

Such a programme provides a combination of face-to-face engagements and online support for prospective doctoral candidates and their supervisors. Candidates will engage in an intensive development of their research skills training in preparation for their academic journey. The engagement and learning must be facilitated by leading research methodologists with a diverse range of disciplinary expertise and substantial experience in postgraduate supervision. Given that many universities in Africa currently have a low research profile (Mtshali & Sooryamoorthy, 2019), the implementation of a mentorship programme for doctoral candidates will enhance research quality among emerging researchers. Such mentorship programmes will contribute to the creation and development of the necessary awareness and research skills that doctoral scholars require. Furthermore, these programmes necessitate a dedicated RCD coordinator, whose responsibilities include consulting with faculties to establish the needs of students enrolled in doctoral studies. The RCD coordinator will be tasked with planning and designing suitable activities that will assist in honing the research skills of their cohorts. A structured plan could be established to offer a modular course that addresses comprehensive aspects of research from inception to completion.

Institutions must also collaborate with established universities to provide an RCD mentorship programme focused on postgraduate supervision, which could take the form of inter-university collaborations aimed at enhancing research supervision skills among supervisors. A mentorship programme in postgraduate supervision should consider factors such as social justice in supervision, the significance of scholarship, supervisory practices, supervision processes, and other pertinent issues that will benefit research supervisors and their supervisees. Importantly, academics who have

recently graduated with their master's and doctoral degrees, and who are thus new supervisors, stand to gain significantly from such a mentorship programme. When research supervisors are adequately equipped, they can better manage the experiences of their postgraduate students throughout the supervision process (Daramola, 2021). The findings indicate that some supervisors lack supervisory capacity, negatively impacting their supervision and, subsequently, the preparedness of master's and doctoral graduates at African universities. It is therefore recommended that the RCD coordinator consults with faculties to enhance the supervisory capacity of recently graduated academics through structured programmes designed to build supervisory skills. African institutions should also consider enlisting the services of senior and established professors to mentor emerging researchers, drawing upon the expertise of these academics at the professorial level. Anekstein and Vereen (2018) assert that the personal qualities of research mentors are demonstrated through their abilities, ethical integrity, knowledge, and skills as researchers, and are illustrated by the dissemination of their scholarly agenda. The recruitment of senior and established professors to mentor emerging researchers should be perceived as an enhancement to current mentoring activities readily available to supervisors and postgraduate students.

There is also a need to formulate RCD programmes to develop researchers' capacity. The conceptualisation and development of an RCD programme to enhance research capacity-building skills must take into consideration that researchers and postgraduate students may come from institutions with low research profiles and, therefore, have a limited research background. According to Mtshali and Sooryamoorthy (2019), the challenges for many African universities revolve around research outputs (acquiring research qualifications, publications, and the production of postgraduates), transferable research skills, cooperation with business and industry, the relevance of research, access to state-of-the-art equipment, retention of researchers, and the development of a new generation of researchers, despite the lack of sufficiently qualified staff with higher-level qualifications. Recognising these shortfalls, it is suggested that the RCD coordinator formulates RCD programmes that specifically address the challenges faced by their institutions. The RCD coordinator is advised to constantly review these programmes to understand which ones offer a distinct advantage for capacity building and which ones are ineffective. To achieve effective results, the RCD coordinator must develop the RCD programmes in consultation with expert facilitators and faculties to meet the capacity-building needs of researchers and postgraduate students. Another important factor to consider is feedback from these RCD activities. Feedback should be collected in a formal manner, such as through an online questionnaire, rather than as random feedback via email or verbal comments. Through such feedback, the strengths and weaknesses of the activities can be easily determined.

The provision of RCD programmes specifically targeting research methodology is particularly important. The main aim will be to provide courses in research methodology to equip researchers and postgraduate students, thereby promoting a strong research culture and ethos. A structured research methodology course could be offered to master's and doctoral students through the RCD programmes on a semester or annual basis, depending on the demand for such a course. To further promote research productivity, RCD programmes also need to include journal article writing workshops (often referred to as writing retreats), where academics, and indeed postgraduate students, are provided with guided dedicated writing time to progress their writing projects in a supportive, non-surveillance environment. Writing retreats have proven to be extremely beneficial; despite the marathon-like atmosphere, they have been found to be collegial and supportive environments for academics and researchers in their writing endeavours (Vincent et al., 2021). A supportive, non-surveillance environment offers a distraction-free setting for participants to write, as well as the opportunity to speak to and seek feedback from other writers.

The objectives of the writing retreats are to identify areas and topics of research trends up to the point of publication. The role of the Research Capacity Development (RCD) coordinator in this regard is to

consult with faculties to establish the specific requirements for a writing retreat within each faculty. A structured programme will assist in identifying areas and topics of current research trends as they pertain to each faculty. Dedicated resources, facilitators, and facilities will contribute to increasing the research output at African universities and developing the requisite skills for academic and scientific writing. Furthermore, the provision of an academic mobility grant for researchers to gain exposure to international facilities and learning environments is critical. The aim of this opportunity is to offer dynamic and flexible prospects for researchers. Academic exchange and mobility grant programmes are founded on partnerships with nations, public entities, and individuals that respond to evolving priorities and needs within a global context. Therefore, it is imperative to continue preparing scholars to contribute both personally and collaboratively to their fields in ways that enhance internationalisation. This perspective aligns with the views of Arsenault et al. (2019), who suggest that long-distance travel to attend workshops, conferences, and engage in fieldwork is a central component of academic careers and, indeed, the internationalisation strategies and orientations of universities, which are often considered beneficial to their reputation. To achieve this, the RCD coordinator could assist in initiating grant calls for academic exchange and mobility grants within the university community, with clearly defined criteria for eligibility and expected outcomes of such a research capacity-building initiative.

It is also noteworthy that the provision of funding for postgraduate students to undertake academic exchange programmes can significantly assist them in broadening their knowledge and experience by enabling them to engage with their desired profession in an international setting. This exposure allows them to train or learn at facilities that may differ from, and are often unavailable at, their home university. In this regard, the RCD coordinator could actively recruit postgraduate master's and doctoral students through the faculties. An important aspect of ensuring that the research produced at African universities is relevant to the continent is the need to encourage researchers to centre their social realities in their research. This can be achieved by collaborating with academics on the continent to address the challenges facing Africa. The overarching aim of fostering global citizenship is to encourage researchers and postgraduate students to engage with the concept of the world around them. According to Herman and Sehoole (2018), universities promote internationalisation by exposing staff and students to global developments and trends, facilitating mobility exchanges, and encouraging collaborative ventures such as co-supervision of students, co-authorship of papers, and joint applications for research grants.

5. Proposing a Research Capacity Development Framework

There appears to be a paucity of academic literature both globally and within South Africa concerning the impact of research capacity development programmes on knowledge production and innovation. Consequently, it is of considerable significance that this study contributes to the existing body of data and literature, which will be advantageous for researchers, students, academics, and scholars in related disciplines in their future endeavours. One limitation identified by this study is the lack of a systematic framework addressing research capacity development, particularly on the African continent. Therefore, the information derived from the data collected and the literature reviewed was utilised to propose a framework for this study.

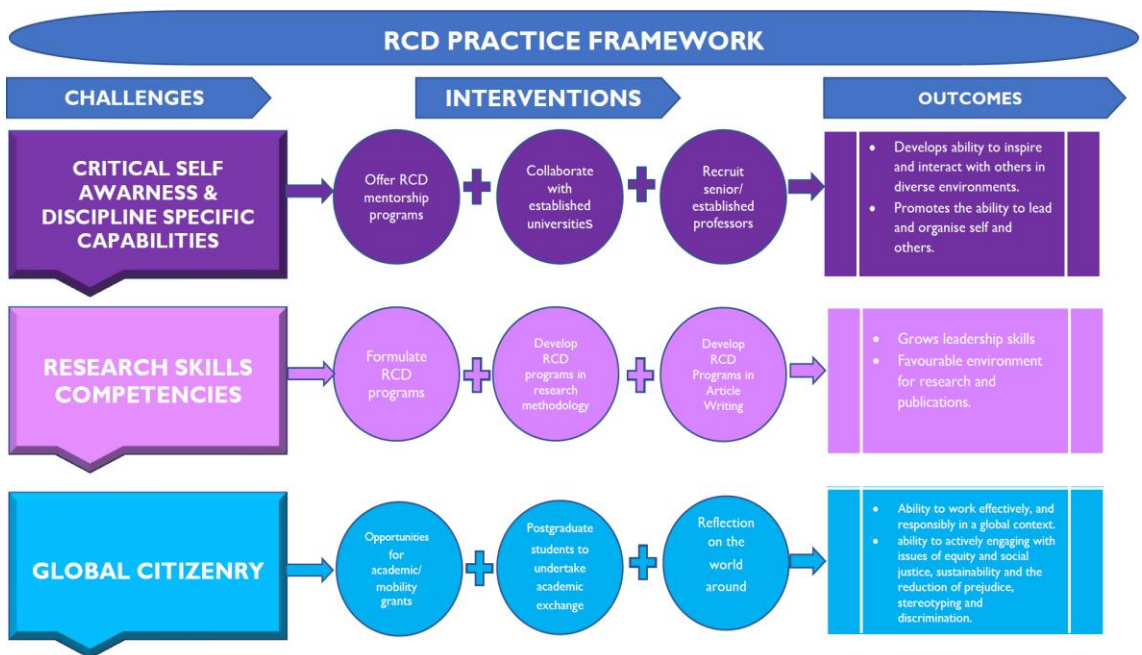


Figure 1: Proposed research capacity framework

The proposed Research Capacity Development (RCD) Framework was developed based on the empirical findings of the study and is underpinned by insights from the literature on research capacity development. The framework illustrates how institutional challenges can be addressed through targeted interventions aimed at enhancing research capacity, thereby ultimately strengthening knowledge production. This contextually informed framework, derived from the experiences of participants at a South African university, may provide guidance for research capacity development initiatives in comparable higher education contexts.

The first component of the framework comprises the challenges affecting research capacity development within higher education institutions. Drawing from participant experiences and existing literature, these challenges include limited research skills, inadequate supervisory capacity, weak research cultures, insufficient mentorship opportunities, and restricted access to developmental resources. Such challenges may impede the ability of academics and postgraduate students to engage effectively in research activities and contribute to knowledge production.

The second component consists of institutional interventions designed to address these challenges. The findings highlighted the importance of structured mentorship programmes, research methodology training, article-writing workshops and retreats, supervisory development initiatives, mobility and exchange opportunities, and coordinated research capacity development activities. These interventions are intended to strengthen individual competencies while simultaneously fostering supportive institutional research environments.

The third component comprises three key indicators of successful research capacity development that emerged from the study: (i) enhanced research skills and competencies, (ii) increased research productivity, and (iii) strengthened knowledge production and innovation. Participants consistently associated RCD initiatives with improved confidence in conducting research, greater readiness for publication, stronger supervisory practices, and an enhanced ability to address societal challenges through research.

The framework posits a dynamic interplay between these components. Institutional interventions serve as mechanisms through which identified challenges can be addressed, leading to enhanced research competencies and productivity. Consequently, an augmented research capacity contributes to sustainable knowledge production, innovation, and the cultivation of future generations of researchers. This framework may thus function as a pragmatic guide for higher education institutions aiming to fortify their research ecosystems through targeted capacity development initiatives.

Universities are increasingly compelled to act as productive agents within the knowledge society, necessitating connections to the external world to facilitate socio-economic and cultural transformations (Gornitzka et al., 2007). This underscores the accountability of universities as producers of knowledge through research, innovation, and societal development. In this context, this study proposes a model framework that delineates programme characteristics likely to exert a positive influence on the impact of postgraduate research development programmes on knowledge production across the African continent. The framework can be implemented and adapted by universities in Africa to foster innovation and significant research outcomes within knowledge production cohorts. There is a growing consensus that the continent's future hinges on the advancement of its intellectual and human capital, achievable through robust research capacity building programmes and effective, efficient systems within higher education. For example, South Africa has established a clear national agenda for research and PhD training that informs development strategies at both national and institutional levels, from which universities may draw in conjunction with the proposed framework.

6. Conclusion

The best practices for building a researcher's capacity cannot be restricted to so-called Eurocentric models associated with the Global North. Best practice models need to be inclusive and embrace practices that originate from both the Global South and the Global North. The tradition of research in many African institutions was limited, as most staff members did not have higher qualifications, there were inadequacies in research infrastructure, and minimal postgraduate supervision, all of which contributed to low research outputs in Africa. However, with the partial shift in attention from solely teaching to research, institutions of higher learning in Africa must design supportive structures and provide conducive environments for academics to conduct and publish groundbreaking research that addresses African problems. Such support structures will significantly benefit from the RCD practice framework above, which explains feasible ways of building capacities among members of academic staff. It is worth noting that for research to thrive at any higher education institution, there must be a continuous commitment to capacity development. From the discussion provided above, it is evident that support structures are crucial to sustaining any capacity development initiatives. Without such structures, initiatives meant to improve capacity cannot be effectively implemented. This study extends beyond a mere identification of challenges or problems in the spheres of RCD. It has contributed to knowledge by providing approaches and interventions that will assist HEIs in imparting necessary research skills to their staff and postgraduate students, especially those needed to succeed in their professional careers. In conclusion, the various challenges pertaining to skills and knowledge development at the postgraduate level have been actualised, and the accompanying strategies emerging from the findings of this study have been used to offer solutions to the identified challenges.

7. Declarations

Author contributions: Conceptualisation (V.G.); Literature review (K.M.O.); methodology (V.G.); software (N/A.); validation (V.G. & K.M.O.); formal analysis (V.G. & K.M.O.); investigation (V.G.); data curation (N/A); drafting and preparation (V.G. & K.M.O.); review and editing (V.G. & K.M.O.);

supervision (N/A); project administration (N/A); funding acquisition (N/A). All authors have read and approved the published version of the article.

Funding: This research did not receive any external funding.

Acknowledgement: The authors wish to express their sincere gratitude to all individuals who dedicated their time to respond to the research instruments.

Conflict of Interest: The authors declared no conflict of interest.

Data Availability: The data supporting the findings of this study are available from the corresponding author upon reasonable request. Access will be granted to researchers who meet the data-sharing criteria established by the institutional review board or ethics committee.

References

- Abdalla, S. M., Bortolussi, R., & MacDonald, N. E. (2018). MicroResearch: An effective approach to local research capacity development. *The Lancet Global Health*, 6(4), e377–e378. [https://doi.org/10.1016/S2214-109X\(18\)30069-X](https://doi.org/10.1016/S2214-109X(18)30069-X)
- Anekstein, A. M., & Vereen, L. G. (2018). Research mentorship: Implications for the preparation of doctoral students. *The Journal of Counsellor Preparation and Supervision*, 11(2), 6.
- Arsenault, J., Talbot, J., Boustani, L., Gonzalès, R., & Manaugh, K. (2019). The environmental footprint of academic and student mobility in a large research-oriented university. *Environmental Research Letters*, 14(9), 095001. <https://doi.org/10.1088/1748-9326/ab33e6>
- Babbie, E., & Mouton, J. (2012). *The practice of social research*. Oxford: Oxford University Press.
- Daramola, O. (2021). Lessons from postgraduate supervision in two African universities: An autoethnographic account. *Education Sciences*, 11(7), 345. <https://doi.org/10.3390/educsci11070345>
- Fataar, A. (2018). Performative injunctions in the higher education body: The discursive career of research capacity development in a South African university faculty of education. *Journal of Higher Education in Africa*, 15(2), 41–62.
- Frantz, J. M., Leach, L., Pharaoh, H., Bassett, S., Roman, N., Smith, M., & Travill, A. (2014). Research capacity development in a South African higher education institution through a North–South collaboration. *South African Journal of Higher Education*, 28(4), 1216–1229.
- Gomo, E., Kalilani, L., Mwapasa, V., Trigu, C., Phiri, K., Schmidt, J., & van Hensbroek, M. B. (2011). Towards sustainable research capacity development and research ownership for academic institutes in developing countries: The Malawian Research Support Centre model. *Journal of Research Administration*, 42(1), 38–45.
- Gornitzka, Å., Maassen, P., Olsen, J. P., & Stensaker, B. (2007). "Europe of knowledge": Search for a new pact. In P. Maassen & J. P. Olsen (Eds.), *University dynamics and European integration* (pp. 181–214). Springer.
- Herman, C., & Schoole, C. (2017). *Research and PhD capacities in sub-Saharan Africa: South Africa report*. British Council.
- Huas, C., Petek, D., Diaz, E., Muñoz-Perez, M. A., Torzsa, P., & Collins, C. (2019). Strategies to improve research capacity across European general practice. *European Journal of General Practice*, 25(1), 25–31. <https://doi.org/10.1080/13814788.2018.1546282>
- Ishengoma, J. M. (2016). North–South research collaborations and their impact on capacity building: A Southern perspective. In T. Halvorsen & J. Nossun (Eds.), *North–South knowledge networks* (pp. 149–167). African Minds.
- Mtshali, M. N. G., & Sooryamoorthy, R. (2019). A research-inducing environment at a university of technology in South Africa. *Futures*, 111, 194–204. <https://doi.org/10.1016/j.futures.2018.06.017>

- Ngongalah, L., Emerson, W., Rawlings, N. N., & Musisi, J. M. (2018). Research challenges in Africa: An exploratory study on the experiences and opinions of African researchers. *bioRxiv*. <https://doi.org/10.1101/446328>
- Niemczyk, E. K. (2018). Developing globally competent researchers: An international perspective. *South African Journal of Higher Education*, 32(4), 171–185. <https://doi.org/10.20853/32-4-2802>
- Sawyer, A. (2004). Challenges facing African universities: Selected issues. *African Studies Review*, 1–59.
- Vicente-Crespo, M., Agunbiade, O., Eysers, J., Thorogood, M., & Fonn, S. (2021). Institutionalising research capacity strengthening in LMICs: A systematic review and meta-synthesis. *AAS Open Research*, 3. <https://doi.org/10.12688/aasopenres.13116.3>
- Vincent, C., Tremblay-Wragg, É., Déri, C., Plante, I., & Mathieu Chartier, S. (2021). How writing retreats enhance PhD candidates' writing self-efficacy. *Teaching in Higher Education*, 28(7), 1600–1619. <https://doi.org/10.1080/13562517.2021.1918661>

Disclaimer: The views, perspectives, information, and data contained within all publications are exclusively those of the respective author(s) and contributor(s) and do not represent or reflect the positions of ERRCD Forum and/or its editor(s). ERRCD Forum and its editor(s) expressly disclaim responsibility for any damages to persons or property arising from any ideas, methods, instructions, or products referenced in the content.