

# Importance of Sustainably Maximizing the Research Capacity of Academic Practitioners: Voices from the Global Academic Arena

Carlo Daniels

*Carlo Daniels, Dr., University of South Africa, South Africa*

## Abstract

In all its forms, topics, and functions, research holds the potential to be a powerful driving force that a country can employ to strengthen its economy, preserve the environment, and address societal inequalities. Thus, it is no surprise that countries globally have devoted increased attention and resources to nurturing the competencies of their research practitioners. Higher education institutions (HEIs) are responsible for nurturing researchers who can meet international research standards and contribute to the prosperity of their countries. This qualitative study, grounded in a postmodern research paradigm, employed the principles of grounded theory to achieve the purpose of the study. This research is based on a larger project that collected data from ten semi-structured interviews, a document analysis consisting of 40 documents, and a thorough review of global scholarly literature. To achieve the purpose of this study, the findings and recommendations stem from the literature review and document analysis. The purpose of this study was distinctive, as scholarly literature calls for more studies on sustainable research capacity building (SRCB). In addition, the limited available research focuses on capacity building (CB) in the health sector, whereas less attention is devoted to the development of academic professionals who conduct research in higher education. The findings revealed that research capacity plays a crucial role in achieving sustainable development goals (SDGs), improving the quality of research conducted by HEIs and their academic practitioners, and improving the education system. According to scholars located in different corners of the world, maximizing SRCB will require nurturing the ability of doctoral students, developing globally competent researchers, mentorship, applying a whole-institution approach, implementing effective institutional leadership, motivating research practitioners by offering research incentives, and establishing an enabling environment for research training.

Keywords: sustainable research capacity building, sustainable development goals, research in higher education

## Introduction

Odeyemi et al. (2019) noted that there is a growing recognition among world leaders that supporting HEIs and their core activities (teaching, research, and community engagement) play an essential role in sustainably developing nations and achieving

prosperity. Focusing specifically on research as a core activity, Rosowsky (2022) noted that the advancement of knowledge is critical to the sustainable development of all nations. Research contributes to solving societal challenges and capitalizing on opportunities by exploring a topic, discipline, and phenomenon from all angles. Research, of all types and purposes, has the potential to lead to the discovery and adoption of new, sustainable, innovative practices that can be transferred to educational, health, and environmental settings, which will ultimately benefit society (Odeyemi et al., 2019). Huenneke et al. (2017) stated that HEIs and their academic practitioners face pressure from the competitive nature of academia, which compels them to enhance research productivity. In response to the importance of research and the competitive nature of academia, countries globally have intensified their financial support towards advancing research and innovation. Research training and development play an essential role in developing any nation's economic and social capacity, as it is through research that new knowledge is produced, disseminated, and implemented to improve institutional and societal practices (Mafenya, 2019). Cordrey et al. (2022) recommended that academic professionals receive professional development in the form of sustainable research capacity building (SRCB). Research capacity building (RCB) is necessary, as the scope of knowledge, values, and competencies required in the current research environment is dynamic and constantly changing (Niemczyk & Rossouw, 2018). As stated by the same authors, the methods used to conduct research in the global research arena have changed drastically and are likely to continue to transform. Daniels et al. (2024) have already charted the main challenges associated with SRCB in BRICS nations and African countries. Building on the research conducted by Daniels and colleagues, this study will consider the voices of scholars located in the global north and the global south by exploring the importance of SRCB. Special attention is paid to identifying practices that have the potential to maximize the research capacity of academic practitioners.

## Research methodology

This qualitative study, grounded in a postmodern research paradigm, employed the principles of grounded theory to achieve the purpose of the study. In terms of data collection, this research is based on a larger project that collected data from ten semi-structured interviews, a document analysis consisting of 40 documents, and a thorough review of global scholarly literature. The findings and recommendations to follow stem from the literature review and document analysis. As per data analysis, the researcher initiated the coding process with open coding, followed by axial coding, and continued with selective coding. Through the systematic coding process, open codes were identified, which involved breaking up the data into relevant parts. Next, axial coding occurred by examining the relationship between concepts and categories created during open coding. Axial codes were created using the words core category, causal conditions, context, intervening strategy and actions, and consequences as headings. Then, through revisiting and refining the open and axial codes, selective codes emerged, which were then categorized into four main themes that informed this paper.

## The importance of SRCB

Research is one of the most powerful tools any country can use to transform the lives of citizens, understand complex problems, and develop solutions that are beneficial to

society. Research and innovation have the potential to steer nations on a sustainable path by mitigating the effects of natural disasters, improving access to health treatment, addressing food insecurity, and nurturing responsible citizens through strengthened educational systems. Although the rewards of nurturing the competencies of the individuals responsible for conducting research are many, this section is divided into three parts that chart the three main ones. The first part discusses the key role SRCB plays in the quest to achieve sustainable development goals (SDGs). The second part elaborates on the importance of building the capacity of HEIs to produce research and build the competencies of their academics. The last part explores the critical role SRCB plays in the progression of the education system at all levels.

### *Importance of SRCB for the attainment of the 17 UN SDGs*

Even before the adoption of the SDGs, research and innovation were identified as essential tools institutions and world leaders could employ to make accurate, well-informed decisions. Therefore, science, technology, and innovation are singled out as essential tools that should be employed to achieve the 17 SDGs. RCB is endorsed by the 17 United Nations SDGs, as they aim to increase technology and innovation in developing countries (United Nations, 2023b). HEIs have the ideal infrastructure, human resources, and capital to serve as catalysts for capacity building (CB). More specifically, target 17.9 aims to foster international support towards implementing effective and targeted CB in developing countries in the quest to achieve their national objectives (United Nations, 2023b). In short, research has the potential to advance environmental, economic, and social prosperity. Through their research expertise and resources (human capital, research infrastructure, and financial capital), HEIs provide a thriving environment to develop strategies that have the potential to minimize the negative impacts of current social, economic, and environmental challenges (United Nations, 2023a).

### *Importance of SRCB for the development of HEIs and academic practitioners*

Meenakumari (2022) suggested that emerging researchers, established researchers, and HEIs strategically evolve their competencies to respond to the challenges and capitalize on the opportunities of the 21<sup>st</sup> century. To that end, scholarly literature (Huenneke et al., 2017; Mafenya, 2019; Niemczyk, 2020; Niemczyk & Rossouw, 2018; Rosowsky, 2022) indicates that RCB is important for HEIs and their academics for four reasons. Firstly, the dynamic nature of society increases the demand for academics to develop improved, innovative research techniques (Niemczyk & Rossouw, 2018), which improves the confidence and competencies of individual academics and the skill set of research units. In turn, academics are proficient in numerous forms of data collection, possess the global competence and expertise to communicate in a variety of research communities, and engage in multidisciplinary and international collaboration (Niemczyk & Rossouw, 2018).

Secondly, universities are under pressure to increase research productivity as well as research-related revenues (Heunneke et al., 2017). The obvious solution to improve the quality and quantity of research, for Niemczyk (2020), is to develop the research competencies of research practitioners. Through improved research, increased government funding follows, which enables an improved national ranking (Huenneke et

al., 2017; Rosowsky, 2022). Therefore, if HEIs wish to remain globally competitive, Niemczyk (2020) recommends that RCB be a key strategy. Thirdly, and in line with remaining globally competitive, increasing a university's reputation plays a key role in attracting high-quality postgraduate students and employees. Mafenya (2019) observed that improving the reputation of a university is associated with increased funding. Lastly, through research, HEIs can improve their educational pedagogies and practices. More specifically, through research, HEIs can become self-reliant in their endeavor to fulfil their core activities (teaching and community engagement) as specified in their missions and vision statements.

### *Importance of SRCB for the progression of the education system*

According to Ngozi (2019), research plays a critical role in the quality of a nation's education system, as research informs pedagogical practices. The quality of educational research impacts the ability of the nation to deliver quality teaching and learning. Research informing best practices for developing the professional competencies of educators (at all levels) is essential, as the skill set teachers possess determines the quality levels of education in the country (Ngozi, 2019). Teacher training education is heavily informed by research. The pedagogies and strategies educators are taught during teacher training and professional development are research-informed and research-based. Similarly, the teaching-learning process is grounded in evidence-based practices sourced from groundbreaking research. Ngozi (2019) goes as far as to state that research informing educational policy and pedagogy is imperative, as no education system can rise above the quality of the individuals employed in their education system. Scholars globally agree that RCB in faculties of Education globally is essential to inform policy and improve practice (Ngozi, 2019; Niemczyk, 2020). Therefore, developing research competence, especially in the Faculty of Education, is essential for improving the social and economic contribution of citizens towards national development (Ngozi, 2019).

### Maximizing the implementation of SRCB

Higher education institutions and academic practitioners can consider capitalizing on opportunities for SRCB over and above identifying and addressing challenges (see Daniels et al., 2024). Numerous scholars, located in the global south and global north (mentioned below), recommend that academics, HEI leaders, and government officials consider the following recommendations to implement SRCB initiatives effectively. Seven recommendations have emerged from the reviewed international literature and document analysis (Brizuela et al., 2023; Huenneke et al., 2017; Mafenya, 2019; Matus et al., 2018; McGuire et al., 2020; Meenakumari, 2022; Niemczyk & Rossouw, 2018; Niemczyk, 2020):

- 1) Nurturing the ability of doctoral students;
- 2) Developing globally competent researchers;
- 3) Linking novice researchers with academic mentors;
- 4) Applying a whole-institution approach;
- 5) Implementing effective institutional leadership;
- 6) Motivating research practitioners by offering research incentives; and
- 7) Establishing an enabling environment for research training.

At the individual level of RCB, it is essential to nurture the ability of doctoral students, as they are future knowledge creators (Niemczyk, 2019). Adequate investment in doctoral students would equip them with the necessary knowledge, values, and competence to produce high-quality research. For improved effectiveness in research education, professional development programs should consider the fact that academics have different needs (depending on their experience) and distinctive methodological and theoretical backgrounds. It is crucial for doctoral students to attend both national and international conferences, which is likely to mature their research competencies (Mafenya, 2019; McGuire et al., 2020).

According to Niemczyk and Rossouw (2018), it is unacceptable to foster a substantial number of doctoral students who are mediocre researchers and, in a position, to sway public opinion. In their view, in a dynamic, ever-changing research environment, affected by globalization, internationalization, technological advances, and the utilization of innovative methodologies, the demand arises for not only competent but globally competent researchers (Niemczyk & Rossouw, 2018). Niemczyk (2020) observed that research capacity and global competence are not merely relevant – they are requirements of academic research. A globally competent researcher is capable of employing the appropriate knowledge, skills, values, and attitudes to engage in research in diverse contexts, in a manner that is rigorous and respectful. Therefore, the development of globally competent researchers demands the nurturing of skills such as critical thinking skills, problem-solving skills, communication skills, technological skills, cultural sensitivity, and conflict resolution (Niemczyk & Rossouw, 2018).

Mentorship plays a critical role in the process of SRCB (Huenneke et al., 2017; Mafenya, 2019; McGuire et al., 2020), therefore, the need arises to link novice researchers with academic mentors (Niemczyk & Rossouw, 2018). Effective mentoring plays a critical role in transforming emerging researchers into world-class, globally competent researchers (Niemczyk & Rossouw, 2018). Therefore, Brizuela et al. (2023) recommended that HEIs create opportunities for effective mentorship in the form of allocated time and resources (without increasing workload), which would provide a thriving environment for the development of the next generation of researchers. Brizuela and colleagues recommended that adequate support in the mentoring process would require academics to receive training for effective mentoring, with clear objectives and a format. However, Niemczyk and Rossouw (2018) pointed out that, in many cases, mentors lack sufficient time to develop their mentoring skills, as they are overwhelmed with the reality of academic pressure to publish, to attain research funds, and other academic duties, such as teaching and administrative tasks.

Although SRCB is imperative at an individual level of RCB, at the institutional level, it is as important to devote adequate attention in terms of applying a whole-institution approach. In a rapidly changing research environment, Matus et al. (2018) recognized that a single strategy approach is not sufficient; a whole-institution approach is required to build research capacity. Matus and colleagues noted that a whole-institution approach entails incorporating SRCB in research activities, the strategic plans, the missions and vision statement of the HEI and respective research units, targets, and key performance indicators for research, and must appear in the roles and responsibilities of faculty members. As part of a whole-institution approach, establishing a research culture that encourages academics to engage in research, collaborate in a multi-, inter-, and transdisciplinary manner, and engage in mentoring the next generation of academics has

a high potential to effectively build research capacity (Meenakumari, 2022). In line with a whole-institution approach, the capacity gap in an HEI must be identified and addressed.

As discussed in the previous section, there are many challenges to the effective implementation of SRCB initiatives. Effective institutional leadership in research units is required to overcome challenges such as inadequate funding, overwhelming workload and uncondusive research environments. Furthermore, effective institutional leadership is essential to establish a conducive and motivating research environment. In short, possessing expertise and being presented with opportunities are not enough – researchers must be motivated to act in the light of such expertise and opportunities.

An important component of motivation is offering incentives to active researchers. Mafenya (2019) suggests that providing researchers with incentives distinguishes academics with research publications from those without. It is common practice for research-intensive HEIs to reward the research performance of academics through financial and non-financial incentives, which include management praise, salaries, and faster promotion (Mafenya, 2019), cash incentives for rated researchers (in addition to funding provided by the NRF), and research awards. The provision of financial incentives is necessary because funding has been identified as one of the essential aspects of research support in developing SRCB (Matus et al., 2018).

At the systemic level of RCB, governments and HEIs must ground policy in providing an enabling environment for research training and development (Mafenya, 2019; Niemczyk, 2020). Research policies at the governmental and institutional levels must incentivize research practitioners and students who want to pursue research as a career of choice (Mafenya, 2019). Without a doubt, research policy must encourage local and international collaboration during the research process. According to Matus et al. (2018), the onus is on management and lecturers to invite established researchers from research-intensive universities across the world to provide research education and training. The same authors added that strategic collaborations between HEIs and industry are an effective method to encourage research collaboration with different stakeholders and to increase funding.

## Conclusion

As explained by Mafenya (2019), in all its forms, topics, and functions, research holds the potential to be a powerful driving force that a country can employ to strengthen its economy, preserve the environment, and address societal inequalities. Twenty-first-century researchers operate in diverse environments that are influenced by technological trends, such as artificial intelligence (AI). Therefore, supporting (through funding and training) exceptional research and the development of those responsible for conducting it must be a national and institutional priority. The findings revealed that research capacity plays a crucial role in achieving the SDGs, improving the quality of research conducted by HEIs and their academic practitioners, and improving the education system. Furthermore, maximizing SRCB will require nurturing the ability of doctoral students, developing globally competent researchers, linking novice researchers with academic mentors, applying a whole-institution approach, implementing effective institutional leadership, motivating research practitioners by offering research incentives, and establishing an enabling environment for research training.

## References

- Brizuela, V., Chebet, J. & Thorson, A. (2023). Supporting early-career women researchers: lessons from a global mentorship programme. *Global Health Action*, 16(1), Art. No 2162228.
- Cordrey, T., King, E., Pilkington, E., Gore, K. & Gustafson, O. (2022). Exploring research capacity and culture of allied health professionals: A mixed methods evaluation. *BMC Health Services Research*, 22, Art. No 85.
- Daniels, C., Niemczyk, E. K. & de Beer, Z. L. (2024). Challenges Associated with Sustainable Research Capacity Building: A Comparative Study between BRICS Nations and African Countries. In *Education in Developing, Emerging, and Developed Countries: Different Worlds, Common Challenges* (pp. 82-88). BCES Conference Books, Vol. 22. Sofia: BCES.
- Huenneke, L. F., Stearns, D. M., Martinez, J. D. & Laurila, K. (2017). Key Strategies for Building Research Capacity of University Faculty Members. *Innovative Higher Education*, 42, 421-435.
- Mafenya, N. (2019). "One tree does not make a forest": Academics' narratives on research capacity building and development in higher education institutions. *Journal of Educational Studies*, 18(1), 82-99.
- Matus, J., Walker, A. & Mickan, S. (2018). Research capacity building framework for allied health professionals – a systematic review. *BMC Health Services Research*, 18, Art. No 716.
- McGuire, C. M., Riffenburg, K., Malope, S., Jack, B. & Borba, C. P. (2020). Mixed-methods evaluation of family medicine research training and peer mentorship in Lesotho. *African Journal of Primary Health Care & Family Medicine*, 12(1), Art. No 2387.
- Meenakumari, J. (2022). Research capacity building in Indian higher education institutions – The need and way forward. <https://www.edtechreview.in/research/research-capacity-building-in-indian-higher-education-institutions-the-need-and-way-forward/> (Accessed 9 June 2023).
- Ngozi, O. (2019). Influence of teachers' capacity building on students' academic performance in Rivers State, Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 10(6), 350-358.
- Niemczyk, E. K. & Rossouw, J. P. (2018). 'n Suid-Afrikaanse perspektief op die voorbereiding van wêreldbekwame navorsers. *LitNet Akademies*, 15(2), 297-320.
- Niemczyk, E. K. (2019). Mentorship within doctoral research assistantships: A Canadian case study. *Alberta Journal of Educational Research*, 65(3), 221-237.
- Niemczyk, E. K. (2020). Building research capacity in BRICS nations and beyond: lessons from the international community. *Space and Culture, India*, 7(5), 23-37.
- Odeyemi, O. A., Bamidele, F. A. & Adebisi, O. A. (2019). Increased research productivity in Nigeria: More to be done. *Future Science OA*, 5(2), Art. No FSO360.
- Rosowsky, D. (2022). The role of research at universities: Why it matters. <https://www.forbes.com/sites/davidrosowsky/2022/03/02/the-role-of-research-at-universities-why-it-matters/?sh=129ef38f6bd5> (Accessed 1 June 2023).
- United Nations (2023a). Capacity Development. <https://sdgs.un.org/topics/capacity-development#> (Accessed 31 June 2023).
- United Nations (2023b). Capacity Building. <https://www.un.org/en/academic-impact/capacity-building#> (Accessed 25 July 2023).