

Sustainable Research Capacity Building of the Next Generation of Academics: A Grounded Theory Approach

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Abstract

Sustainable research capacity building (SRCB) in doctoral education is crucial for cultivating a long-term culture of research excellence and innovation. It equips future scholars with the necessary skills and resources to undertake high-quality research, ensuring a continuous influx of new knowledge and solutions to societal challenges. Sustainable research capacity building has been widely acknowledged as essential for strengthening higher education systems. However, there is limited scholarly literature exploring the expertise, motivation, and opportunities that doctoral programmes employ to cultivate research capacity in sustainable ways. The purpose of this qualitative study was to explore how South African higher education institutions (HEIs) foster SRCB in their doctoral programmes. To achieve the objectives of this study, systematic document analysis and semi-structured interviews grounded in a postmodern research paradigm, guided by the principles of grounded theory, were conducted. The findings revealed that South African HEIs foster SRCB by encouraging participation in conferences and writing retreats, providing mentorship, availing research assistant jobs, offering training for supervisors, providing access to writing coaches and a writing centre, and promoting workshops and colloquia. With the element of sustainability in mind, it is essential to ensure that supervisors, workshops, and writing centres are well-equipped to cater to a diverse range of students. In addition, providing equal access to participate in conferences and ensuring writing coaches receive ongoing training has the potential to enhance the sustainability of research capacity building practices in doctoral education.

Keywords: sustainable research capacity building; postgraduate students; research; next generation of academics

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Introduction and Background

The South African Department of Higher Education and Training (DHET) has earmarked research as an essential tool that will be used to provide evidence that informs planning, decision-making, policy development, and system improvements in all sectors of society (Republic of South Africa 2023). Similarly, the country's National Development Plan (NDP) acknowledged the importance of research capacity building and the benefits of embracing innovative approaches to knowledge production (South African Government 2011). In this regard, doctoral education serves as a fundamental catalyst for sustainable development in knowledge economies in which emerging and established scholars have a critical role to play (Tsephe and Potgieter 2022). For Furtak (2022), it is hardly surprising that governments and higher education institutions (HEIs) worldwide allocate significant portions of their budgets to nurture the production and dissemination of new knowledge and nurture the next generation of academics.

A doctor of philosophy degree is primarily a research degree, and holders of this degree are expected to be specialists in their respective disciplines and committed to advancing research in their field (Zheng et al. 2024). Addae and Kwapong (2023) noted that doctoral education is undoubtedly a complex journey that entails years of intensive reading, extensive research, and meticulous writing. Addae and Kwapong's concern are that supervisors mistakenly assume that doctoral students enter postgraduate education as proficient writers and critical thinkers. However, many doctoral students do not yet read, write, or think like scholars (Addae and Kwapong 2023). Therefore, Nwosu et al. (2024) and Vital and Yao (2023) recommended that doctoral students be transitioned into the research arena through sustainable research capacity building (SRCB). HEIs globally focus on building the research capacity of their doctoral students by providing an in-depth understanding of key research concepts and developing their reading and writing skills to produce original research. However, the element of sustainability in their research training is often lacking.

Sustainable research capacity building is understood as the continuous development of the ability of researchers and HEIs to produce rigorous, relevant, and socially responsive knowledge that generates enduring benefits for local and global communities (Cordrey et al. 2022; Niemczyk and Rossouw 2018; Van Wyk, Wolvaardt, and Nyoni 2020; Wittayapun and Nawarat 2021; Wong Shee et al. 2022). Sustainable research capacity building emphasises cultivating scholarly environments capable of sustaining high-quality research over time. Sustainable research capacity building recognises that durable research productivity is not limited to infrastructure and funding. It also requires the development of researchers' competencies, identities, and professional networks of experienced researchers and researchers in the making. At the individual level, which is the focus of this study, SRCB is a transformative process through which academics develop the attitudes, behaviours, knowledge, and skills necessary to engage meaningfully in scholarly inquiry (Di Pierro, n.d.). Fredua-Kwarteng (2021) argues that, at the individual level, priority should be given to strengthening core research

competencies, including academic writing for peer-reviewed journals, mastery of diverse research methodologies, and adherence to ethical principles. These competencies are foundational for ensuring that doctoral candidates and early-career scholars can contribute credibly to knowledge production and navigate the demands of academic publishing and grant acquisition.

The most recent and comprehensive conceptualisation is provided by Zuzovsky and Guberman (2024), who define SRCB as the outcome of three interrelated dimensions: expertise, motivation, and opportunities. Expertise refers to the methodological knowledge, analytical skills, and scholarly capabilities required to conduct effective and impactful research. Motivation reflects the extent to which research is valued within the institution, encompassing intrinsic commitment as well as extrinsic incentives such as recognition, promotion criteria, and financial rewards. Opportunities denote the structural conditions that enable research engagement, including access to funding, protected research time, mentoring, collaborative networks, and institutional support systems. For research capacity building to be sustainable, these three dimensions should interact synergistically and reinforce one another over time.

Doctoral education represents a foundational stage in which expertise is consolidated, research identity is constructed, and professional networks are established. Doctoral programmes should intentionally cultivate expertise through methodological rigour, scholarly writing skills, ethical competence, and research autonomy. Doctoral programmes should be grounded in motivation through supportive supervision and recognition. These programmes should also provide opportunities through funding and research exposure. In turn, providing doctoral students with the required expertise, motivation, and opportunities lays the groundwork for long-term academic productivity and the development of world-class scholars. To this end, SRCB at the doctoral level serves as an essential strategy that shapes future academic contributions, research leadership potential, and institutional research performance.

Focusing on the specific context in question, the Council on Higher Education noted that South Africa has 26 public universities, of which 23 currently offer doctoral qualifications (Council on Higher Education 2022). According to the council, five private HEIs in South Africa also offer doctoral qualifications. Herman and Frick (2018) reported that the first doctorate was awarded in South Africa in 1899 in the Faculty of Law by the University of the Cape of Good Hope (now known as the University of Cape Town [UCT]). According to McKenna and Van Schalkwyk (2024), the state has strategically leveraged funding and established national targets to improve doctoral enrolment rates. The NDP ambitiously aimed to graduate 5 000 doctoral students annually by 2030 (South African Government 2011), which is a considerable increase from the mere 1 420 doctoral graduates produced at the time the plan was initiated. At face value, the various initiatives implemented have yielded positive results. By 2019, the number of doctoral graduates had surged to nearly 3 500 (McKenna and Van Schalkwyk 2024). However, despite the impressive growth, a 2018 national review of

the doctoral education landscape in South Africa raised critical concerns about the prevailing models of doctoral training and their research capacity. The reliance on individualised and co-supervision models and the noticeable absence of structured support, such as coursework, have been linked to high dropout rates among doctoral students (Herman and Frick 2018).

Herman and Frick (2018) pointed out that the discriminatory policies of apartheid limited access to education for non-white populations, which resulted in dismally low participation and success rates of black individuals in doctoral programmes. However, since the dawn of democracy in 1994, South Africa has made substantial strides in reforming the policies, funding mechanisms and structural elements of higher education to redress these historical injustices. The same authors observed that over the years, the demographic profile of PhD graduates has diversified dramatically, with the share of white graduates plummeting from 93% in 1990 to just 32% by 2017. Regarding sex, the enrolment statistics as of 2017 revealed 22 572 PhD candidates, of whom 45% were female. Additionally, 43% of the 3 057 PhD graduates were women. These data signal a transformative shift in doctoral training, closely tied to a national agenda focused on equity and inclusion (Herman and Frick 2018; South African Government 2011).

The strategic implementation of research output grants serves as a catalyst for institutions to significantly enhance their research output and doctoral graduation rates (Herman and Frick 2018). There is no doubt that research output is rigorously measured and centrally managed by the DHET. This robust subsidy framework for postgraduate research is instrumental in augmenting PhD production, with many universities incentivising supervisors to drive their research productivity. The South African government has proactively implemented strategic policies and made financial investments directed at increasing the number of doctoral graduates (Tsephe and Potgieter 2022). By enhancing academic supervision capabilities and providing attractive incentives, such as student bursaries, the government is empowering students to pursue and attain doctoral qualifications (Republic of South Africa 2024). A crucial funding agency for doctoral students is the National Research Foundation (NRF), which plays a key role in PhD training (through the Thuthuka Research Grant) and enhancing their research capacity. Sustainable research capacity building of the next generation of academics has been a priority for the NRF, according to senior manager for next-generation and emerging researchers, Dr Mbulelo Ncango. The NRF has successfully funded 5 931 students, which includes 2 109 honours students, 2 032 master's candidates, and 1 790 doctoral scholars (Universities South Africa 2024).

The South African policy environment has made concerted efforts to address historical inequities in the academic profession and to build sustainable research capacity among scholars at the doctoral and early-career stages. One of the most significant initiatives is the New Generation of Academics Programme (nGAP), which recruits and supports emerging scholars, especially black South African academics, as permanent academic staff. In alignment with the motivation and opportunity dimensions of SRCB, nGAP

offers funded academic positions with reduced teaching loads and support (Republic of South Africa 2015). In turn, and in alignment with the expertise dimension of SRCB, lecturers are enabled to complete their doctoral studies and develop their research portfolios. Similarly, the Black Academics Advancement Programme, supported by the NRF and the FirstRand Empowerment Foundation, advances the three dimensions of SRCB by financially supporting black South African doctoral and post-doctoral candidates (Republic of South Africa 2022).

Sustainable research capacity building has been acknowledged as essential for strengthening higher education systems. However, there is limited scholarly literature exploring the expertise, motivation, and opportunities that doctoral programmes employ to cultivate research capacity in sustainable ways. Without such insight, it remains unclear which practices effectively contribute to the long-term development of research competence and to the sustainability of academic careers. Therefore, this study aimed to explore how South African HEIs foster SRCB in their doctoral programmes.

Against the backdrop of the limited scholarly literature and the pressing challenges (previously mentioned) in doctoral education, this study aimed to critically examine the SRCB of the next generation of academics, focusing specifically on individual-level practices. South African national policies (see Council on Higher Education 2022; South African Government 2011) call for the SRCB of doctoral students, as it is vital for enhancing the country's international competitiveness. Sustainable research capacity building has the potential to empower researchers to produce impactful work and effectively address the challenges of globalisation and change within our dynamic knowledge economy (Council on Higher Education 2022). This research directly addresses the imperative outlined in national policies (Council on Higher Education 2022; South African Government 2011), which call for enhanced quality in doctoral education through SRCB. Nurturing the sustainable research capacity of doctoral students is essential, as they are future creators of knowledge and "researchers in the making," which makes doctoral students by far the most important "vehicles" for the transfer of university research to society (Niemczyk 2019). Therefore, this topic necessitates immediate and continuous scholarly attention, especially in developing nations such as South Africa.

Research Methods

This study adopted a qualitative approach grounded in a postmodern research paradigm, which allowed the researcher to answer questions providing insight into the nature and reality of a process-oriented phenomenon, such as SRCB in doctoral education.

Theoretical Framework

Grounded theory serves as an interpretive research methodology, fundamentally grounded in the principles of symbolic interactionism (Blumer 1969) and drawing its methodological inspiration from the Chicago School of Sociology (Glaser and Strauss

1967). It is advisable in qualitative research for scholars to refrain from entering their studies with a predetermined theoretical framework aimed at confirming existing findings (Nieuwenhuis 2020, 87). Instead, adhering to the inductive reasoning approach allows for a theory to emerge organically throughout the data collection and analysis stages. In this study, the researchers strictly followed the principles of grounded theory during the systematic gathering and examination of data to identify an emerging theory. The primary aim of grounded theory analysis is to identify concepts, develop conceptual categories, and analyse the relationships among these categories based on the data. This method results in a theoretical framework that is profoundly rooted in the actual experiences of the research participants, rather than being shaped by pre-existing theoretical models. A hybrid approach combining Glaserian and Straussian grounded theory was employed through a structured coding procedure (explained later) and the development of an emerging theory (presented later). The postmodern research paradigm shaped how the researchers understand knowledge and meaning. Meanwhile, grounded theory provided the researchers with the tools to explore and develop an emerging theory from the data.

Data Collection

In this qualitative study, document analysis and semi-structured interviews were employed to triangulate findings and deepen, strengthen, and enhance the credibility and theoretical robustness of the grounded theory analysis.

The emergence of document analysis as a research method within the social sciences can be traced back to the pioneering work of Goode and Hatt (1952), who advocated for the systematic screening, counting, and coding of document content as a means of providing research findings. In subsequent research, Glaser and Strauss (1967) explained that documents should be regarded in social investigations, similar to the role of informants in anthropology or interviewees in sociology.

The documents comprised strategic frameworks, research reports, journal articles, institutional development plans, vision and mission statements, and governmental reports (Research Agenda and White Paper on Science and Technology) from the previous five years (2018–2023) in the context under investigation. A total of 40 documents were purposefully sampled (see Table 1). Semi-structured interviews were used to corroborate data that emerged from the document analysis. The semi-structured interview was deemed the most suitable data collection method for this study because it offered a flexible structure that could be adapted depending on the research questions. The researcher paid special attention to the responses provided by the research participants to formulate new lines of inquiry about the SRCB of doctoral students. An electronic invitation letter, which contained information about the study and a consent form, was sent to individuals with rich knowledge and understanding of the SRCB of doctoral students in their respective institutions. A total of 10 semi-structured interviews were conducted at the two research-intensive HEIs, referred to as SA1 and SA2 to preserve anonymity. Both institutions are research-intensive and were included because

they were most likely to have well-established strategies that foster sustainable research capacity building. They have strong postgraduate completion and enrolment rates, which further justified their selection over other institutions. The research participants (five males, five females) included novice researchers, supervisors, and seasoned professors who held research leadership positions.

Table 1 below presents an overview of the documents that were purposively selected for analysis in this study. The documents are drawn from four main sources: two research-intensive HEIs (SA1 and SA2), scholarly journal articles (JA), and government policy documents (GOV). The institutional documents from SA1 and SA2 include mission and vision statements, strategic and operational plans, annual and integrated reports, and research and innovation reports. The journal articles (JA-DOCs) were selected to provide a scholarly perspective on SRCB. In addition, the government documents (GOV-DOCs), such as research agendas, strategic plans, and national policy frameworks, offer a policy-level understanding of SRCB priorities and expectations.

Table 1: Details of documents purposefully selected for this research study

Document	Title of the document	Date of document
SA1-DOC-1	Mission and vision statement	2024
SA1-DOC-2	Institutional operating plan	2021
SA1-DOC-3	Research and innovation: annual report	2022-2023
SA1-DOC-4	Institutional annual report	2022
SA1-DOC-5	Institutional annual report	2021
SA1-DOC-6	Institutional annual report	2020
SA1-DOC-7	Research and innovation: annual report	2020–2021
SA1-DOC-8	Annual research report	2018–2020
SA1-DOC-9	News on emerging researchers	2023
SA1-DOC-10	Research and innovation: annual report	2021–2022
SA1-DOC-11	Research development	2023
SA1-DOC-12	Research office: mission statement	2023
SA1-DOC-13	Research chairs	2023
SA1-DOC-14	Research development: postgraduate support	2023
SA1-DOC-15	eResearch office: mission statement	2023
SA2-DOC-1	Strategic plan	2024

SA2-DOC-2	Annual performance plan	2021
SA2-DOC-3	Integrated annual report	2022
SA2-DOC-4	Integrated annual report	2021
SA2-DOC-5	Integrated annual report	2020
SA2-DOC-6	Declaration on the Decolonization of University Education: The Imperative to Transform Teaching and Learning, the Research Agenda and Community Engagement	2018
SA2-DOC-7	Research and innovation statement	2023
SA2-DOC-8	Draft Revised Strategy for Research and Innovation: 2015–2025	2015
SA2-DOC-9	Research and innovation strategy	2015
SA2-DOC-10	Research support	2023
SA2-DOC-11	University capacity development programme: Advancing higher degree qualifications of emerging researchers	2023
SA2-DOC-12	University Capacity Development Program: Enhancement of research profiles	2023
SA2-DOC-13	Education and Human Rights in Diversity: Mission and vision statement	2023
SA2-DOC-14	Self-Directed learning: mission statement	2023
SA2-DOC-15	Vision and mission statement	2012
JA-DOC-1	Developing the Future – Advancing Research and Innovation through Research Capacity Development in South Africa	2022
JA-DOC-2	Exploring the Hurdles faced by Emerging Female Researchers: Experiences and Reflections from Four Selected African Universities	2022
JA-DOC-3	‘n Suid-Afrikaanse perspektief op die voorbereiding van wêreldbekwame navorsers (A South African perspective on the preparation of globally competent researchers)	2018
JA-DOC-4	“One tree does not make a forest”: Academics’ narratives on research capacity building and development in higher education institutions	2019

JA-DOC-5	Supporting early-career women researchers: lessons from a global mentorship programme	2023
GOV-DOC-1	Department of higher education and training: Research agenda	2023–2028
GOV-DOC-2	Department of higher education and training: Research agenda	2017–2020
GOV-DOC-3	Department of higher education and training: revised strategic plan	2020–2025
GOV-DOC-4	National development plan	2022–2030
GOV-DOC-5	White paper on science, technology and innovation	2019

Data Analysis

Initially, open coding was used to analyse the interview transcripts, guided by a framework inspired by Schatzman’s dimensional analysis. This approach facilitated a continual comparison of the open codes and an examination of their interrelationships, ultimately leading to the formation of higher-order categories, also referred to as axial codes (Schatzman 1991). As the analysis advanced, select codes emerged through the linkage of concepts and conditions, paired with thorough memo writing to document and investigate an emerging theory (Strauss 1987). Throughout the analytical journey, the insights gained from the data analysis played a critical role in collecting new documents and shaping the development of subsequent interview questions and influencing participant recruitment decisions.

More specifically, open coding involved examining the documents and interview transcripts line by line to identify initial concepts. Open codes were formulated based on mentions of student support, guidance, skill development, access to resources, and professional networking. During axial coding, these concepts were grouped based on relationships and patterns, connecting, for example, skill-building activities, mentorship interactions, and opportunities for research exposure. Finally, through selective coding, the core categories were refined and integrated into the study’s themes. The systematic coding process ensured that the emerging theory was firmly grounded in the data collected from documents and the participants’ experiences.

The analytical process reached its conclusion when no new insights or codes—whether open, axial, or selective—were identified. Data collection and analysis were deemed complete upon reaching a state of theoretical and data saturation. Theoretical saturation in this study was determined when additional data collection no longer produced new concepts, categories, or insights relevant to SRCB in doctoral education.

Ethical Considerations

A trustworthy qualitative research design is not limited to effective research strategies; it also strictly adheres to ethical considerations. This study received ethical clearance from the North-West University Institutional Research Ethics Committee of the Faculty of Education (NWU-00313-23-A2). As per the ethical clearance received, the names of the institutions under investigation were kept confidential. The actual document titles and names of participants were not disclosed.

Findings

This section is divided into two main sections. The first section discusses the findings of the document analysis. The second section reveals the findings of the semi-structured interviews. In both sections, the study explores the practices employed (at the individual level) to foster SRCB in doctoral education.

Document Analysis

The following findings derive from the purposefully sampled documents listed in Table 1. Sustainable research capacity building in doctoral education is essential for fostering a long-term culture of research excellence and innovation. By equipping future researchers with the skills and resources needed to conduct high-quality research, HEIs ensure the continuous generation of new knowledge and solutions to pressing societal issues.

Conferences and Writing Retreats

Participating in conferences is essential for the expertise and opportunity dimensions of SRCB for doctoral students, as it facilitates knowledge sharing, networking opportunities, and staying up to date with the latest research trends in the academic community. For this reason, it is promising that the Special Projects office of SA1 drove research capacity development initiatives by providing conference support to its doctoral students. In addition to providing opportunities for doctoral students to attend conferences, SA1 provided a platform dedicated to providing time and space for students to work on their research projects was provided through writing retreats. These retreats were structured to cater to students at similar developmental stages. Two retreats focused on proposal completion, two on thesis completion, and one on manuscript development from one's thesis. Academic coordinators, facilitators, mentors and statistical coaches supported attendees during these retreats. A total of 80 students (35 master's and 45 PhD students) benefited from this support programme.

Mentors and Supervisors

The onus is on research mentors and supervisors to encourage doctoral students to participate in opportunities that develop research expertise, such as writing retreats and local and international conferences. It is without a doubt that mentors, supervisors and

research coaches play a crucial role in the development of doctoral students by providing guidance, support and expertise throughout their academic journey. In this regard, South African HEIs have a reputable track record of developing emerging doctoral researchers into worldclass researchers. Therefore, it is essential for mentors, supervisors, and research coaches to share their experiences when navigating the challenges and opportunities presented by doctoral education. In addition, mentors and coaches can assist students in setting goals, overcoming challenges and making informed decisions about their academic and career paths. To this end, it is promising that the South African government has called for increased support for postgraduate students in the form of increasing mentorship and supervisory capacity.

In the case of SA1, a total of 400 postgraduate students were supported (by 650 mentors) with three forms of research coaching to assist with aspects of the thesis process. First, mentors supported students with developing cogent arguments and structuring their written submissions. Second, statistical coaches supported students with their quantitative analyses. Third, specialist consultations were made available to students to provide a higher level of input. To make the process of mentorship sustainable, SA1 equipped their talented doctoral students with mentoring skills through professional development courses. Another element of sustainability was that doctoral mentors were retained by offering them salaries.

Research Assistantships

The analysed documents for SA2 did not specifically mention mentoring and coaching doctoral students; rather, they highlighted the importance of research assistantships. Research assistant jobs are a crucial practice for doctoral students to develop research competencies, as they provide practical experience, similar to having a research mentor (expertise and opportunities). Engaging in research assistant roles allows students to apply theoretical knowledge in real-world research settings, enhance their research skills, and gain practical experience. The two HEIs could learn from one another's approach by encouraging research assistantships and assigning postgraduate students to mentors.

Training to Improve Supervision Capacity

Training in transferable skills as a practice is essential for doctoral research education, as it (training) serves as an essential tool in the fostering of twenty-first century researchers. SA2 offered its doctoral students a diverse range of training opportunities to develop their research expertise, including, but not limited to, writing a literature review, conducting qualitative thematic analyses, and performing quantitative statistical validation. In alignment with training, the supervisory capacity of academics employed at SA1 was strengthened by conducting transferable skills training for 370 supervisors. The training aimed to familiarise supervisors with various aspects of thesis submissions, supervision techniques and preparing students' work for examination.

Although transferable training is important in building research capacity, having enough quality supervisors is equally essential. Despite stagnant university research staff numbers, South African researchers successfully increased their research output threefold between 1996 and 2014. This achievement, while commendable, indicates that there is a strain on supervisory capacity in the country. In fact, while the number of PhD-qualified staff has increased by 65%, the number of enrolled students has increased by 350%, leading to a supervisory bottleneck. As indicated in one analysed document, the South African government implements four strategies to improve supervisory capacity and ensure the SRCB (through the development of expertise, motivation and opportunities) of the country's doctoral students. The first strategy is to retain a large portion of yearly PhD graduates and integrate them into postdoctoral programmes to address the escalating number of graduates. The second strategy is to transfer research and supervision skills from senior researchers to benefit emerging researchers and ensure a healthy academic ecosystem. The third strategy involves providing direct support for university staff to attain PhDs, especially at institutions where the proportion of PhD-qualified staff is below the norm. The last strategy is grounded in recognising the essential role of postdoctoral fellows in mentoring postgraduate students and providing support to optimise their contributions to the research system.

To improve and further enhance the potential of sustainability in the process of SRCB, the two South African HEIs could foster interdisciplinary collaborations with industry, provide opportunities for international research collaborations, promote digital literacy, and launch research-funding and grant-writing workshops.

Semi-Structured Interviews

If identified earlier in their career and appropriately trained, talented scholars would be nurtured to lead research programmes at their institutions, develop into globally competent researchers, and increase research productivity (Van Wyk, Wolvaardt, and C. Nyoni 2020). This section explores the findings that emerged from the semi-structured interviews. It reveals four specific practices that the two South African HEIs employed to foster SRCB in doctoral education at the individual level.

Writing Coaches and Writing Centre

The first practice, sourced from the context of SA1, was the establishment and availability of writing coaches to improve the writing skills (expertise) of doctoral students. The introduction of writing coaches at SA1 was grounded in the fact that not all students read and write in their home language. With adequate support in the form of writing coaches, there was little doubt that writing competencies could be fostered. As revealed by Participant D:

My writing was a challenge because I am Afrikaans first language, so my previous PhD supervisor had a look at my thesis and she said, "You know what, your writing has improved a lot." Not everybody comes into postgraduate courses and can write. We

must also consider the languages of the students. I do not think it is the case of having the skills when you start, but it is a case of developing it as you go along.

The writing centre at SA1 housed the writing coaches who had also been delegated the responsibility of delivering a postgraduate mentorship programme. The programme was designed to provide mentorship through guidance on proposal writing and effective research practices. The proactive practice of establishing a writing centre and a mentorship programme had a high potential to foster SRCB among doctoral students. However, it was necessary to increase awareness of such valuable resources to maximise their impact. As Participant D explained:

We have a postgraduate mentorship programme in the writing centre. We have a whole department supporting students on how to write the proposal and how to do research in libraries. I think there is a lot of support and a lot of sound principles and practices in place at postgraduate level, but I think that making them aware of it is important.

Having dedicated offices and individuals to provide editorial support for postgraduate students was not the only function of the writing centre. The writing centre created a scholarly community by providing students with a space to develop their knowledge, values, and competencies, which would lead to developing the expertise and motivation for SRCB. As revealed in the document analysis and the semi-structured interviews, by employing doctoral or postdoctoral students as writing coaches (and providing a salary), the programme created a collaborative environment in which experienced researchers could mentor their peers. For second-language speakers, the availability of writing coaches enabled them to express their ideas in a manner that was clear and concise. In the experience of Participant B:

This is the nice thing that I love about the institution—they offer writing coaches. As a supervisor, I send the form to my students and say, “Please go and see if you can get a writing coach at the postgraduate office,” which usually employs doctoral or post-doctoral students to become writing coaches for other students, and it becomes such a nice community of practice. Especially for students who struggle to sit and write, and especially for second-language speakers.

Support was not limited to second-language speakers. Participant B added that inclusive support was offered by the postgraduate office. The findings of the document analysis also referred to support provided by the postgraduate office. SA1 showed a commitment to accessibility and equity in postgraduate education from which SA2 could learn. According to Participant B:

The institution has done quite well, as they have a nice postgraduate office that offers support. For example, I have a PhD student with a disability, who is in a wheelchair. He cannot easily use his hands, so they offer that kind of support for people with special needs. There is quite a lot of support. I must say, for postgraduate students in the department, and also through the Research Office, and through the NRF processes.

Workshops and Colloquia

The ongoing support provided by the postgraduate department through workshops and colloquia held throughout the year was the second practice employed. Ongoing workshops play a pivotal role in the quest for lifelong learning and are essential for the development of the next generation of researchers. The availability of workshops allows students to engage with numerous aspects of research and develop their research expertise. In turn, doctoral students are equipped with the necessary knowledge and competencies to be skilled research practitioners. At SA1, a colloquium served as a platform for presenting research chapters and receiving constructive feedback from expert research professionals. As Participant D explained:

I still get the emails from the postgraduate department, and they have workshops right through the year. What is nice [...] in our faculty [...] we have what they call a colloquium twice a year, and with that colloquium, we present a chapter, and you get feedback from people outside, and you can work those comments into your chapter.

In this regard, senior professors conducted workshops focused on proposal writing and literature reviews. These workshops were essential for equipping students with the knowledge and competencies to develop their thesis proposals. As Participant E stated:

We will usually have workshops at the beginning of the year, where some of our senior professors will host workshops on how to write the proposal and how to write a literature survey. It is important for them to attend these sessions, and then at least they have a thesis proposal.

Although there were workshops in the context of SA2, Participants F and J remarked that it was challenging for doctoral students to balance academic commitments with full-time jobs:

They have also been capacitated in various workshops and training. (Participant F)

Details get sent out to the student. I am one of those supervisors. I do not know if the others do that, but whenever I see an advert or a training workshop or something for us as supervisors and students, I send it to all my postgraduate students. Obviously, it is difficult when it comes to master's and PhD students because usually these are people who also have a full-time job. Not all of us were full-time students. It makes it a little bit more difficult for them to attend, but there are definitely opportunities available for them. (Participant J)

Writing Retreats

Writing retreats that focus on teaching postgraduate students about the foundations of research and research integrity accounted for the third practice. Similar to writing coaches and workshops, writing retreats were another proactive practice that aimed to improve students' research knowledge and competencies (expertise) and foster the value of ethics in their research endeavours. As Participant I stated:

There are students we supervise, and we go for a retreat where we teach them about what research is. We motivate them and we inculcate the culture of ethics and the correct way of doing of research.

At SA1, the postgraduate research office assumed the role of facilitating writing retreats and workshops on different research designs. Seasoned research practitioners led the practice of writing retreats. It held promise that the opportunity was accessible to most postgraduate students. According to Participant B:

The postgraduate research office also runs writing retreats and workshops on statistical research and qualitative research design that anybody can attend.

Conferences

Participating in conferences had the potential to develop motivation, confidence and improve research practices, which accounted for the last practice. The positive outcomes of conferences were that students were mentored and had an opportunity to present their research papers. The power of the practice was that it contributed to their professional growth and established a sense of continuity and community in research:

There are opportunities because I came from a conference this week. Two of my students presented papers at those conferences. We are growing older, and then there are the younger people who are coming into the field. (Participant H)

I am going to a conference, one of my students who completed and graduated this year will be attending the conference with me and will be presenting a paper. (Participant I)

However, attending conferences was associated with the challenge of securing funding. Financial barriers could limit students' ability to engage in valuable networking and learning experiences. In the words of Participant G:

Some of us also accompany our students to a conference, but getting finances is a problem, even for me as an academic; getting money to go to conferences is difficult, and the students normally do not have money for that.

The practices that were employed to foster SRCB in postgraduate education were proactive and commendable, and other SA HEIs can learn from the two SA HEIs under study. For improved practice, SA2 can consider the incorporation of a dedicated office and space for collaboration, mentorship and editorial support for their doctoral students. Moreover, SA1 can provide its doctoral students with the necessary funding to build their confidence and network through conference participation.

Discussion

The aim of this grounded theory study was to explore the practices employed to promote the SRCB of the next generation of academics in two South African HEIs. In summary,

the findings revealed that the two SA HEIs under investigation employed effective practices to build the research capacity of doctoral students, which is supported by available scholarly literature, as discussed below. The document analysis highlighted that practices aimed at fostering SRCB in doctoral education included participation in conferences and writing retreats; providing mentorship; availing research assistant jobs; and offering training for supervisors. The semi-structured interviews revealed that writing coaches, a writing centre, workshops and colloquia, writing retreats, and conferences were the implemented practices.

Focusing on the first practice, academic conferences, Fakunle et al. (2019) and Vattøy (2025) argue that providing doctoral students with the opportunity to participate in conferences is crucial for their holistic development as research practitioners. Conferences create a valuable space for networking, which, in turn, significantly contributes to shaping the academic identity of doctoral students. The sustainable development of doctoral students hinges upon their comprehensive academic identity development, which necessitates exposure to both traditional and non-traditional learning environments. The rise of virtual conferences, as a result of the pandemic, presents a unique opportunity to expand access and foster diverse learning experiences. However, it is crucial to assess whether virtual environments adequately replicate in-person events' networking and experiential learning opportunities. Kuzhabekova and Temerbayeva (2018) found that attending conferences enhances doctoral students' public presentation skills and writing competencies.

The second practice employed to foster SRCB among the next generation of academics is the implementation of writing retreats. Davis, Wright, and Holley (2016) highlight that many doctoral students are registered as part-time students while simultaneously managing full-time employment, which leads to feelings of isolation and lack of support. Scholars such as Tremblay-Wragg et al. (2020) demonstrated that writing retreats provide essential support and enhance doctoral students' writing abilities.

The third practice that South African HEIs employ is mentorship of the next generation of researchers. Mentorship is vital to promoting personal and societal advancement (Niemczyk 2019). Mentors possess the ability to transfer critical knowledge and competencies to their doctoral mentees, guiding them through the complexities of academic life (Kumar and Johnson 2017; Singe et al. 2021).

The fourth notable practice implemented by South African HEIs is appointing doctoral students as research assistants. Research by Feizi and Elgar (2023) and Niemczyk (2019) explained the benefits of this role, as it positions research assistants alongside experienced supervisors in collaborative interdisciplinary environments. This exposure provides doctoral students with invaluable opportunities to engage in various critical research processes, including ethical clearance, report writing and disseminating findings. Such engagement enhances the practical skills of doctoral students and allows them to shape their own research identities within a supportive academic framework.

Although financial viability is a significant advantage of research assistantships for doctoral students (Christiaens et al. 2024), it is crucial to ensure that these assistantships provide ongoing intellectual growth.

Concerning the fifth practice, Borders, Wester, and Driscoll (2020) emphasise that inadequate supervision can leave doctoral students ill-equipped for independent research. In the South African higher education landscape, institutions have acknowledged that there is a pressing need for professional development among supervisors. By intentionally investing in the capacity-building of supervisors, South African HEIs take a crucial step towards enhancing the sustainability and quality of doctoral education. To enhance the sustainability of supervision capacity, professional development initiatives should prepare supervisors for the challenges they face in mentoring diverse student cohorts.

The sixth practice is establishing a writing centre and the availability of writing coaches for doctoral students. This practice is particularly effective because supervisors tend to assume that doctoral students enter postgraduate education as proficient writers and do not devote enough attention to developing this essential skill (Addae and Kwapong 2023).

The last implemented practice is workshops and colloquia, which have been shown to be effective in the context of Ghana. The effectiveness of workshops and colloquia is grounded in the fact that doctoral students are provided with a platform to engage with and learn from experienced researchers and their peers (Addae and Kwapong 2023). Although initiatives such as workshops and colloquia are made available at the two South African HEIs under study, many doctoral students do not attend. Nwosu et al. (2024) recommended that postgraduate students attend workshops because it can promote an increased understanding of research methodology and enhance their overall research capacity. The Council on Higher Education conducted a study that included all the universities in South Africa that offered doctoral education and found a “glaring absence of doctoral students” at workshops and training (Council on Higher Education 2022, 9). A lack of attendance is likely because many doctoral students work full-time jobs.

Limitations

Considering time management, available resources, and accessibility to HEIs and academics, this study included only two HEIs. Therefore, the study was informative. However, the findings cannot be generalised.

Concluding with an Emerging Theory

According to Merriam and Grenier (2019), grounded theory studies differ from other qualitative research designs in that they aim to develop an emerging theory based on the findings of the research. This is called emerging substantive theory, which depicts a

specific practice grounded in reality so that the research findings are relevant to said practice. In the current study, the findings provided the foundation for an emerging substantive theory rather than a formal grand theory because the substantive theory has not been verified in a broader range of practices. The emerging theory was derived by grouping initial concepts from open coding into categories during axial coding and examining their relationships. Selective coding then integrated these categories into overarching themes. The systematic process led to the development of an emerging theory that revealed the sustainability of practices employed to foster SRCB among doctoral students.

The emerging theory indicates that the current research ecosystem in doctoral education is making considerable progress in reaching a sustainable state. The findings and existing scholarly literature show that the implemented practices (conferences, writing retreats, mentorship, research assistants, supervision, workshops, and colloquia) are all effective in nurturing the next generation of academics. However, while the benefits of improving supervision capacity, networking at conferences, writing retreats, and participating in research assistant jobs are well-documented, not all doctoral students have equal access to these opportunities due to financial constraints, geographic limitations, and institutional support disparities.

If access is uneven, the development of academic identity may disproportionately favour those already in privileged positions within the academic landscape. Therefore, enhancing equitable access to the implemented practices should be a priority, potentially through funding initiatives or institutional policies that actively support underrepresented groups. While the skills learned from these implemented practices are undoubtedly valuable, the emerging theory indicates that it is worthwhile to explore how these competencies translate into long-term career success and contribute to the overall research capacity of institutions. With the element of sustainability in mind, there is a need to explore mechanisms that can support the ongoing use of skills and connections established during supervision, at conferences, writing retreats and in research assistant jobs. Sustainable research capacity building will require HEIs to facilitate continuous engagement among doctoral students after being supervised, attending conferences, participating in writing retreats, and being employed in research assistant jobs. In turn, their newly developed skills can be integrated into their research practices and enhance their overall contributions to their fields.

Writing centres and writing coaches at South African HEIs are ideal for lifelong learning, fostering writing competencies and assisting doctoral students to think like researchers. With sustainability in mind, writing coaches should receive adequate, ongoing training. In addition, a writing centre should ensure that it is well-positioned to cater to the diverse backgrounds and writing abilities of students. In short, the emerging theory points out that while most students have access to a writing centre and writing coaches, other South African HEIs may not have the resources and expertise to implement this practice. Furthermore, sustainably nurturing the next generation of

academics is threatened by unequal access to the implemented practices. Longitudinal studies and case studies exploring the SRCB of the next generation of academics in the context of South African HEIs have the potential to test, or expand on, the emerging theory generated from the findings of this study.

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