

'I want to be the best physicist I can be' – Prof Sifiso Ntshangase

NALEDI HLEFANE

"THE acid test for the reputation and success of any university is the character, knowledge and skills of its graduates."

This is an extract from Strategic Objective 6 of Strategic Goal 3 in the UNIZULU Vision 2027 strategic plan. The strategic objective in question speaks to facilitating and monitoring selected graduate attributes.

Professor Sifiso Senzo Ntshangase, a three-time University of Zululand (UNIZULU) graduate and full professor in the institution's Department of Physics, is a prime example of the university's effective teaching and learning model. He is a C2 NRF-rated researcher, an internationally published scholar, a visiting professor at York University in the United Kingdom, and a student-centric academic whose primary goal is to develop his students as global change agents.

Prof Ntshangase's UNIZULU story dates back more than 18 years when he matriculated from Dingukwazi High School in the small town of Pongola in Northern KwaZulu-Natal. He enrolled in the BSc Physics programme, after which he completed his Honours and Master's degrees at UNIZULU. He opted to pursue his PhD studies at the University of Cape Town.

Prof Ntshangase was reunited with his alma mater in 2012 when he accepted an offer to become a physics lecturer. He had previously worked as an accelerator physicist at iThemba LABS since 2009. His 12-year tenure at UNIZULU has been characterised by healthy advancement from rank to rank. Two years after his appointment, he was promoted to Physics Senior Lecturer, and thereafter served as Associate Professor from 2018 to 2021. Following this, the



Professor Sifiso Senzo Ntshangase, full professor in the Department of Physics at UNIZULU. | Samkele Sokhela

academic ascended to full professor level, effective January 2022.

His accomplishments certainly do not end there. Prof Ntshangase has conducted extensive research in nuclear structure, nuclear reaction and

environmental radioactivity. He has recently developed interest in nuclear application in medicine, radiation and protection. His work has been published in publications such as Nature, a top international science journal;

Physical Review, an international peer-reviewed scientific journal; and Physics Letters.

Apart from his love for the physics field, the physicist takes great pleasure in imparting knowledge and contrib-

uting to the academic development of his students. To date, he has supervised 20 Master's students and one doctoral student. He has also mentored several postdoctoral fellowships.

"I think as professors, our task is to improve the living conditions of people among whom we live. We should put sunshine in the hearts of the poorest of the poor, our youth. We strive to give our students the best we can in terms of quality teaching and research – not confining them to UNIZULU, but also exposing them to world-class international facilities.

"I have seen my graduates emerging and making a huge impact in our country. This gives me strength, despite all the challenges," said Prof Ntshangase.

Reflecting on his achievements, the physicist said that while various factors had contributed to them, the most important was the unending support of his late mother, Qedizaba Dinah Ntshangase.

"She did not give me fish, but taught me how to fish."

The professor also mentioned his Master's and doctoral supervisor as one of the major contributors towards his success; as he not only guided him throughout his postgraduate studies, but taught him how to think independently.

Prof Ntshangase credited UNIZULU for supporting him during his undergraduate studies and supporting his current research; NRF/ iThemba LABS for providing state-of-the-art research facilities and funding some of his research; and his many collaborators for their backing.

Going forward, Prof Ntshangase intends to attain an A NRF rating and also aspires to establish a centre for nuclear material and environmental research at UNIZULU.

Humanities and Social Sciences Dean leads by example

NALEDI HLEFANE

PROFESSOR Alucia Lulu Shokane, Dean of the Faculty of Humanities and Social Sciences at the University of Zululand (UNIZULU), epitomises exemplary leadership.



Professor Alucia Lulu Shokane. | Supplied

Amid her demanding and time-consuming work schedule in the deanery, her scholarly contributions to the field of social work have not been impeded. Since assuming her first role as the head of UNIZULU's Department of Social Work in 2019, Prof Shokane has participated in four collaborative book projects and six book chapters. She has also contributed to 10 peer-reviewed articles.

For Prof Shokane, academic leadership and knowledge production are inseparable.

"I feel it is a sense of duty and an expected requirement for a professor at the University of Zululand to produce knowledge in terms of research outputs such as accredited journal articles, book chapters, books and conference proceedings."

She underscored that the Vice-Chancellor and Principal of UNIZULU, Prof Xoliswa Mose created a conducive intellectual environment for academics and researchers to challenge the hegemony of ideas, and to meaningfully contribute to the academic discourse. Therefore, she has made a concerted effort to be an agent of social good in the academic space in which she finds herself.

Prof Shokane began practising in the social work field in 2005, under the employ of the Department of Social Development in the Mopani District Municipality, Limpopo Province. By 2012 she had risen through the ranks from social worker to Senior Social Worker, to Principal and Supervisor Social Worker to Sub-District Head. She thereafter crossed over to academia, beginning as a lecturer in the University of Venda in 2012.

Her first book chapter contribution was a collaboration with her doctoral promoter, Professor Hanna Nel of the University of Johannesburg. The chapter was titled "Community Development Intervention Guidelines for Communities Affected by Natural Disasters" and was published in 2017 in the book "Social Work Promoting Community and Environmental Sustainability: A Workbook for Global Social Workers and Educators". The chapter is also accessible via the International Federation of Social Workers (IFSW) book titled "Global Agenda for Social Work". Evidently, Prof Shokane's keenness to perpetually produce knowledge began here.

"I have collaborated with various academics and the best in the field as co-editors – including Lisa Blitz of Binghamton University, New York; Mogomme Masoga of the University of Free State; John Rautenbach of the University of Zululand; Jabulani Makhubele from the University of Venda; and Kelly Gross from Albany University, New York.

"The contribution of the volume editors was solely of editing and providing guidance. Each chapter has undergone a rigorous review assessment process for the core qualities of scholarship that we deemed necessary for readers to have confidence in the trustworthiness and importance of the ideas and messages presented in the books. The co-editors evaluated each submission for originality, integrity, accuracy, relevance, credibility and hermeneutics.

"I have further contributed and co-authored various book chapters with Professor Hanna Nel, who was my doctoral promoter at the University of Johannesburg, as well as with my mentor Professor Masoga and emerging academics at UNIZULU."

Prof Shokane is passionate about contributing to a scholarly understanding of social work issues by conceptualising problems through research methods. Book publishing is an outlet she thoroughly enjoys exploiting, as it is rewarding and impacts positively on the development of knowledge and students in her field for posterity. The professor has also learnt key lessons from book writing, which include the discipline to begin and complete a project, understanding that no writing is objective as one eventually takes a position when you state your thoughts, and the responsibility to interrogate an issue by asking pertinent and relevant questions.

True to her nature of seeking to raise other leaders, Prof Shokane dedicates herself to supporting and offering opportunities to other academics and scholars to publish – thereby sustaining the academic discourse on social work education. She is currently finalising book projects with an academic from the Department of Anthropology and Development Studies.

Deep dive into mathematics, physical science and accounting teachers' seminar

NOMVELO XULU

EDUCATORS and professionals in the fields of mathematics, physical science and accounting recently converged at the University of Zululand (UNIZULU) for a two-day seminar aimed at fortifying teaching practices in these crucial subjects.

Hosted in collaboration with the King Cetshwayo District (KCD) Municipality Department of Basic Education (DBE) and the South African Institute of Chartered Accountants (Saica), the seminar served as a platform for teachers to engage with the latest pedagogical methods, exchange ideas and explore innovative approaches to enhancing student learning outcomes.

These seminars are viewed as one of the contributory factors to the great improvement observed in the mathematics and physical science performance of learners in KCD Municipality. This is according to Lihle Madondo, Mathematics Senior Education Specialist and the co-ordinator of the teachers' seminar.

"In 2023, we have seen the mathematics performance also breaking the 60% ceiling. This has further pushed the province to break the same ceiling, because KCD is one of three districts in KZN that have large enrolments of learners taking mathematics. This is history that has never been witnessed before," Madondo said.

She added that the inclusion of Saica and the subject of accounting had further enriched the intervention, and was received with great appreciation by both



Umr Chippandale, Outreach Co-ordinator at the Cape Town Science Centre, facilitated the physical science and chemistry break-away sessions. | Samkele Sokhela

the teachers and subject advisors who were experiencing the workshop for the first time. The target group constituted 50 Grade 12 teachers per the three subjects. They were all from schools that obtained a pass rate of less than 75% during the 2023 National Senior Certificate (NSC) examination. Due to limited attendance space, only a few schools that fit into this category could be accommodated.

The seminar was segmented into

break-away sessions, with the accounting sessions facilitated by a select group of staff members from UNIZULU's Department of Accounting and Auditing, led by the department head Sipehele Khomo CA(SA).

The physical science and chemistry sessions were facilitated by Umr Chippandale, Outreach Co-ordinator at the Cape Town Science Centre; while the mathematics sessions were facilitated by Jurgens J Basson, a Grade 12 math-



Jurgens J Basson, a Grade 12 mathematics textbook author, was the facilitator of the mathematics break-away sessions. | Samkele Sokhela

ematics textbook author.

Through a series of workshops, presentations and interactive sessions, participants had the opportunity to engage in meaningful discussions, share best practices and collaborate on effective teaching techniques. By fostering a spirit of collaboration and continuous learning, the seminar not only aimed to enrich the professional lives of teachers, but also create a ripple effect that would positively impact the educational jour-

ney of countless students.

As the seminar concluded, participants left with a renewed sense of purpose and a wealth of knowledge to apply in their classrooms.

UNIZULU, the DBE and Saica remain committed to supporting educators in their quest to nurture the next generation of critical thinkers, problem solvers and innovators in the fields of mathematics, physical science and accounting.

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