RISG Research and Innovation Biennial Dialogue

21-22 September 2023

REPORT

Research and Innovation for Societal and Economic Impact

Coastlands Umhlanga Hotel and Convention Centre

CoPPGES
Community of Practice for Postgraduate Education and Scholarship

UNIVERSITIES SOUTH AFRICA

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Foreword

It is with great pleasure that Universities South Africa (USAf) extends a warm welcome to delegates attending the 2023 RISG Research and Innovation Biennial Dialogue under the strategic leadership of the Research & Innovation Strategy Group (RISG), chaired by Professor Thoko Mayekiso, Vice-Chancellor, University of Mpumalanga.

The theme for this year's dialogue is Research and Innovation for Societal and Economic Impact. This theme is apt for the sector, as it will contribute to creating a more inclusive, creative and sustainable economy and improve the wellbeing of our communities and environment. As faculty and leaders of research and innovation at universities, we need to be striving for the design and implementation of new and innovative ideas to bring about much-needed change. As such, it is key that, as USAf, we provide opportunities like these to engage and share ideas with each other.

In line with USAf's mandate to strengthen research and innovation in the higher education sector, this Dialogue brings together a selected group of delegates from universities, government departments, industry and other agencies to engage on a range of matters of collective interest for research and innovation in Higher Education. These include, for example, research and innovation impact, transformative internationalisation and student mobility.

We are confident that this event is a significant opportunity to facilitate learning and to deepen our collaboration and exchanges on topics of high relevance within the university sector to envisage together a future of promising development within this field.

Dr Phethiwe Matutu

Chief Executive Officer, Universities South Africa

List of Acronyms

CEO	Chief Executive Officer
CHE	Council for Higher Education
COIL	Collaborative Online International Learning
DHET	Department of Higher Education and Training
DRC	Democratic Republic of Congo
DVC	Deputy Vice Chancellor
EDHE	Entrepreneurship Development in Higher Education
EU	European Union
GDP	Gross Domestic Product
HE	Higher Education
HEIs	Higher Education Institutions
IEASA	International Education Association of South Africa
HSRC	Human Sciences Research Council
KNUST	Kwame Nkrumah University of Science and Technology
MEGA	Mpumalanga Economic Growth Agency
NEF	National Empowerment Fund
NRF	National Research Foundation
NRIAS	National Research Impact Assessment System
NSI	National System of Innovation
R&D	Research and Development
REF	Research Excellence Framework
RISG	Research and Innovation Strategy Group
R&I	Research and Innovation
SALAR	Systemic Action Learning and Action Research
SARChI	South African Research Chairs Initiative
SDGs	Sustainable Development Goals
SGCI	Science Granting Councils Initiative
STI	Science, Technology and Innovation

TMU	Toronto Metropolitan University
TVET	Technical and Vocational Education and Training
UCT	University of Cape Town
UK	United Kingdom
UKZN	University of KwaZulu Natal
UMP	University of Mpumalanga
UNECA	United Nations Economic Commission for Africa
USAf	Universities South Africa

1. Introduction

USAf hosted the 7th Biennial Research and Innovation Dialogue with the theme '*Research and Innovation for Societal and Economic Impact'*. The dialogue is an important event in the RISG calendar for Vice-Chancellors, Deputy Vice-Chancellors: Research, Research Directors, International Offices' Directors, researchers, academics, and policy makers.

The dialogue took the form of an action-oriented event, aiming to bring solutions to the priority areas of the RISG, which include innovation and social entrepreneurship, measuring research impact, international collaboration, and engaging in science and scholarship.

Attended by invitation only, the 2023 dialogue brought together 70 delegates from government, science councils and the higher education sector to deliberate on these matters, and to collectively bring to the fore solutions that can be pursued by the higher education community. These priority areas are in the form of four key thematic areas:

Thematic area 1: Research & innovation impact
Moving towards a conceptual framework for research and innovation impact for universities.

Thematic area 2: Student mobility
Rethinking student mobility nationally and internationally

Thematic area 3: Social innovation & entrepreneurship for societal impact
Creating an enabling ecosystem for social innovation and entrepreneurship at universities

Thematic area 4: Transformative internationalisation
Towards a transformative and inclusive internationalisation strategy for USAf

The RISG dialogue is a part of a broader journey towards transforming the higher education system and fostering meaningful impact. It calls for collaboration, networks, and partnerships to address challenges, create positive change and shape the research and innovation agenda for the university and society.

2. Keynote Address

Kwame Nkrumah University of Science and Technology (KNUST), Ghana: Research and Innovation for Societal and Economic Impact

Professor Nathaniel Boso, OR Tambo Africa Research Chair in Entrepreneurship and Employability

The central theme of the keynote address revolved around the pivotal role of research, innovation, and entrepreneurship in Africa's quest for societal and economic development.

Professor Boso shared his personal journey, which involved transitioning from the University of Leeds in the United Kingdom (UK), and back to Ghana, motivated by a persistent question he faced at international conferences. Attendees would often ask, "What are you doing here in England?" This question led him to confront the formidable challenges that Africa faced and fuelled his passion to explore the transformative potential of entrepreneurship.

Challenges in Africa

Professor Boso outlined the challenges confronting the African continent. He highlighted the fact that Africa contributes very little to global research and innovation output, despite its vast resources and young population. Africa contributes a mere 3% to international trade and has a global Gross Domestic Product (GDP) share of less than 3%, despite controlling 60% of the world's arable land. Professor Boso attributed this underperformance to Africa's contribution of only 1% to global research and innovation output. An even more alarming statistic revealed that Africa generated less than 0.1% of all global patents. Professor Boso emphasised the need for increased investment in research and innovation to drive economic development and address societal challenges in Africa.

Global Success Stories

The keynote address then turned to global success stories that highlighted the transformative potential of research and innovation. The United States, South Korea, and Israel served as prime examples. The National Science Foundation of the United States stated that research and innovation were critical for competitiveness, prosperity, and security. This commitment was reflected in a significant increase in research and development (R&D) spending, leading to advances in fields like healthcare, technology, and engineering, along with new job creation.

South Korea's journey, referred to as the "Miracle on the Han River," illustrated how research and innovation investment transformed a poor nation into a global technology giant. Companies like Samsung, Hyundai, and LG Electronics now hail from South Korea. Israel, a nation with seemingly unfavourable conditions for agriculture, became a food-exporting powerhouse through research and innovation.

African Realities

Despite its immense potential, Africa continues to struggle to make its mark on the global stage. The lack of investment in research and innovation has stifled the continent's ability to fully harness its resources and human capital. South Africa, a leader in the region, only spent less than 1% of its GDP on research and innovation in 2022. Professor Boso expressed his concern that this funding rate would yield minimal annual increments over the next decade. He emphasised that countries with higher R&D spending tend to be more competitive and prosperous globally.

Proposed Strategies for Africa

The keynote address did not dwell on the challenges, but rather offered a blueprint for change. It proposed several strategies to improve research, innovation, and entrepreneurship in Africa:

i. Creating a conducive environment in universities, fostering a culture of research and innovation.
ii. Addressing the brain drain by building opportunities for research and innovation within Africa.
iii. Developing post-graduate research talent, supported by universities' investments in research, innovation, and entrepreneurship.
iv. Promoting a scientific culture as the pillar of economic transformation and policy decision-making.

Initiatives for Transformation

Professor Boso praised South Africa's National Research Foundation (NRF) for its leadership in building a robust research system and the launch of the OR Tambo African Research Chair. He showcased a gender-responsive entrepreneurship training programme aimed at supporting women entrepreneurs and addressing the issue of small businesses that struggle to expand and survive.

The keynote address concluded with a call to action, encouraging African universities to prioritise research and innovation, to link research to entrepreneurship, and to transform the continent into a job-creating society. Professor Boso emphasised the importance of collaboration and partnerships to address the challenges and reverse the negative narratives about research and innovation in Africa. He added that these combined efforts could fund and sustain research and innovation capacity to propel Africa toward economic transformation and inclusivity.

3. Theme 1: Research and Innovation Impact

Dr Phethiwe Matutu, Chief Executive Officer of Universities South Africa and Session Chairperson, set the stage for conversations around the first thematic area, ***Research and Innovation Impact, moving towards a conceptual framework for research and innovation impact for universities.*** Dr Matutu highlighted the impressive progress made in South Africa's research and innovation landscape. She emphasised the need to advance research and innovation impact within higher education institutions (HEIs). The lack of clear definitions, frameworks, strategies and guidelines in this regard present an opportunity for collaboration and developing ideas to move forward.

Demonstration of research and innovation impact

Professor Chris Brink: Former Vice-Chancellor, Newcastle University, United Kingdom (UK)

Professor Brink drew from his extensive experience, having been involved in research impact for many years, and having contributed to various research assessment initiatives, such as the Research Assessment Exercise (RAE) in Hong Kong and the Research Excellence Framework (REF) in the UK. His presentation highlighted the practical aspects of understanding and evaluating research impact.

He began with defining impact, emphasising that research impact is about the demonstrable, beneficial change or influence that research has on society. He further highlighted that impact is not a complicated concept; it simply requires a shift in perspective to focus on societal impact, distinct from peer-reviewed academic impact.

Professor Brink provided an example of the UK's REF, where universities are required to submit case studies of research impact. He demonstrated how the REF database can be used to explore various impact case studies from different disciplines, emphasising the importance of societal impact. He provided examples of impact case studies from various disciplines, such as agricultural robotics, environmental impact, and cataract surgery improvement. Each case study outlined the societal impact of the research conducted in specific departments. Professor Brink emphasised the need for case studies to be research-based, substantiated by verifiable evidence, and demonstrating a demonstrable beneficial effect.

In terms of evaluating research impact, Professor Brink addressed that while peer-review panels and societal input remain important, there is a need to prioritise qualitative assessments over quantitative metrics to measure impact. He further discussed the criteria for assessing impact, such as reach and significance, and emphasised the importance of having a portfolio of case studies to showcase the societal impact of research.

Additionally, Professor Brink addressed common misconceptions and debates surrounding research impact, including the idea that it is separate from research excellence and the relevance of impact in various disciplines. He encouraged delegates to look at impact from a different perspective and focus on what difference research has made in society, rather than focusing on what they intend to do in the future.

Drawing from his experience, Professor Brink shared several lessons learned, including how people initially may find it challenging to shift their mindset to embrace research impact. However, with time, individuals often become more receptive to the idea and recognise the benefits of focusing on societal impact. He also pointed out that impact does not fit neatly into disciplinary boundaries and is inherently multidisciplinary.

Professor Brink's presentation served as a valuable introduction to the topic of research and innovation impact and offered practical insights into its definition, evaluation, and broader implications, along with valuable lessons from his experience in the field.

By showcasing real examples of societal impact across various disciplines, through his demonstration of the REF 2021 database, Professor Brink made the concept of research impact tangible and relatable. The presentation enabled delegates to see concrete examples of how academic research has made a difference in the real world. Additionally, Professor Brink's emphasis on the need for a mindset shift from traditional peer-reviewed evaluations to considering societal impact provides a thought-provoking perspective on the broader significance of academic research.

Institutionalising Impact - Processes and Practices

Professor Heidi Van Rooyen, Group Executive, Impact Centre, Human Sciences Research Council (HSRC)

In her presentation, Professor van Rooyen discussed the importance of institutionalising impact within an academic context. Sharing similar sentiments to Professor Brink, she emphasised that impact should go beyond traditional measures of success and focus on making a difference in society. In doing this, she highlighted that there is a need for academia to recognise the importance of making a difference in society, rather than focusing solely on citations and impact factors.

Professor van Rooyen mentioned that the Human Sciences Research Council (HSRC) has been engaging with the concept of impact over the last three years. There have been decades of engagement on research impact. However, the HSRC acknowledges that the idea of impact has been slow to gain traction in South Africa but is increasingly recognised as important for global competitiveness, excellence, and accountability in research and academia. There is also an increased need for institutions to show value and legitimacy in knowledge creation.

Professor van Rooyen highlighted the need for research to have a tangible impact on society, addressing issues such as poverty, inequality, and unemployment. She suggested that impact should be driven by a desire to make a difference and emphasised the importance of leadership and resources in pushing for institutional change and impact. Professor van Rooyen stressed that impact should be embedded into the culture of institutions and called for a shift in mindset and identity among researchers.

The presentation also touched on different ways of thinking about and achieving impact, including making research accessible, translating evidence, engaging with stakeholders, and demonstrating the value of research in social change.

Professor van Rooyen delved into the challenges and politics associated with the impact conversation. She mentioned the pressure from the neoliberal apparatus, emphasising the need to be critical of its influence. Professor van Rooyen also discussed the idea that knowledge is only valued if it can be monetised, and she encouraged a deeper understanding of impact beyond economic terms.

Professor van Rooyen advocated for the infusing of the impact conversation with concepts, methods, and frameworks from the South, including indigenous knowledge systems, stories, words, performance, and poetry. This could be seen as a way to enrich and transform the global discourse on impact. One of the comments from delegates around this was for the HSRC to consider how they can promote cohesion and utilise competitive advantages in areas such as performance, arts, and indigenous knowledge systems for greater impact.

In terms of the HSRC's approach to impact, Professor van Rooyen's presentation outlined the HSRC's focus on three key areas: relevance, methodological considerations, and visibility. She stressed the importance of asking the right questions, addressing relevant issues, and making impact visible to different stakeholders.

She further discussed the efforts made by the HSRC in the last three years to institutionalise impact. This has involved developing strategies, systems, and processes to support sustained uptake of impact principles and practices across the organisation.

In conclusion, Professor van Rooyen encouraged academic institutions and researchers to focus on impact, engage with stakeholders, and infuse the conversation about impact with indigenous knowledge and regional perspectives. She emphasised that achieving impact takes time, persistence, and an ongoing commitment to making a meaningful difference in society.

Towards assessing research and innovation impact at a university level

Dr Linda Mtwisha, Executive Director Research, University of Cape Town (UCT)

In her presentation, Dr Mtwisha shared insights and experiences from the University of Cape Town (UCT) on their journey towards research impact. Traditionally, the university's focus has been on academic excellence, but there has been a growing emphasis on research impact in recent years. Dr Mtwisha highlighted the intrinsic motivation within UCT to extend the impact of their research, emphasising that research impact is not only externally driven but also deeply ingrained in the institution's culture.

UCT considers research impact to be embedded in teaching, research activities, and management. Social responsiveness is not treated as a separate stream but is fully integrated into the university's core activities.

Dr Mtwisha touched on the value of partnerships and collaboration in helping UCT realise its vision to "unleash human potential for a fair and just society." The institution acknowledges that this goal cannot be achieved in isolation. There must be collaborations with other universities, civil society organisations, government, and industry in order to achieve this goal.

She added that UCT recognises the importance of advancing impact literacy among its researchers and students. The institution has been providing training and support to increase awareness and understanding of research impact and its significance. In addition to this, UCT is investing in interdisciplinary research programmes to encourage researchers to work in teams and extend their collaborations beyond traditional boundaries. The aim is to address global challenges by working across sectors and disciplines.

Dr Mtwisha explained that UCT is in the process of developing its own definition of research impact. This will help the university articulate what research impact means in its context and guide future efforts.

As a recommendation, Dr Mtwisha suggested that organisations like the National Research Foundation (NRF) could play a role in extending the framework for social and knowledge impact and influencing how researchers assess and evaluate their impact. Additionally, the idea of a National Research Impact Assessment System (NRIAS) is proposed to collect information on research output and impact at a systemic level, benefiting universities across South Africa.

Comments raised in Theme 1

The questions and comments raised in Theme 1 touched on topics such as funding, collaboration, job creation, technology's role, the scope of research impact, and the challenges in demonstrating impact, providing valuable insights and considerations for the panel to address.

1. **Leveraging Resources for Research Funding.** A question was raised pertaining to how researchers and institutions can promote the leveraging of resources and skills to improve research efficiency, especially in the face of limited funding.
2. **Minimising Competition in Multidisciplinary Research.** The importance of setting up systems to minimise competition in multidisciplinary research could involve creating structures that facilitate collaboration, sharing resources, and ensuring that researchers are encouraged to work together rather than compete against each other.
3. **The Role of Industry in Job Creation and Technology.** In addressing this, the panel discussed the importance of leveraging industry's role in job creation and the need for students to create jobs. It was suggested that this can be achieved through stronger collaboration between universities and industry, which includes curriculum development based on industry needs and encouraging students to develop entrepreneurial skills. Technology also plays a crucial role in enabling innovation and job creation, and it should be harnessed for these purposes.
4. **Expanding the Scope of Impact Beyond Socio-economic Impact.** The point raised was around the importance of acknowledging that impact should not be limited to socio-economic impact. Researchers and institutions should consider a broader range of impacts, depending on the nature of their work.
5. **Advising African Ministers of Science and Technology.** African universities can play a vital role in advising governments on science and technology funding by actively engaging with policymakers, contributing to research policies, and advocating for the importance of funding for research. These collaborative efforts can lead to more informed funding decisions.
6. **Demonstrating Impact Quantitatively vs. Qualitatively.** The panel emphasised that research impact does not always lend itself to quantitative metrics. Some impacts are qualitative and cannot be easily quantified. It is important to use a combination of quantitative and qualitative indicators and to provide narratives and stories that illustrate the impact of research. Researchers can engage with target groups and stakeholders to collect testimonies and evidence that demonstrate impact.

4. Theme 2: Student mobility

Session Chairperson, Professor Stephanie Burton, Professor at Future Africa, University of Pretoria; Chairperson of the USAf Community of Practice for Postgraduate Education and Scholarship, introduced Theme 2, ***Student mobility: Rethinking student mobility nationally and internationally*.** She mentioned that student mobility and postgraduate mobility is a topic of long-standing concern.

Professor Burton acknowledged the perceived benefits of mobility for students and institutions but recognised the challenges in efficiently managing this process. The impact of mobility on students' career paths, research progress, capacity development, and experiences are central to the discussion. Additionally, she highlighted that early career researchers' experiences and effective collaboration are required between organisations where students are mobile.

Professor Burton emphasised the need to consider the value of mobility and exchange for postgraduate students, particularly in terms of the attributes they are expected to acquire.

New thinking around student mobility in Higher Education in South Africa

Professor Jesika Singh, Deputy Vice-Chancellor for Research, Innovation, and Partnerships, University of Limpopo

Professor Singh began her presentation by setting the context and acknowledging the importance of reevaluating traditional approaches to student mobility.

She posed a series of questions to the audience, challenging them to consider new ways of approaching student mobility. These questions encouraged delegates to explore innovative ways to approach student mobility, including how it can be funded and who will benefit. She invited delegates to envision a new model and seek inspiration from successful practices in other institutions or countries.

Professor Singh discussed an example that could potentially enhance student mobility: requiring all doctoral candidates to spend three to four weeks at another university, nationally or internationally, as part of their doctoral experiential learning. She emphasised the importance of considering the implications of such a change, including conceptualisation, accreditation, graduate attributes, input and output subsidies, implementation, and funding.

To illustrate the benefits of student mobility, Professor Singh shared a heartwarming example of three young undergraduate agricultural students from France who visited South Africa. They embraced the culture, enjoyed unique experiences, and gained a newfound perspective within a short period of time. Such experiences, she emphasised, open opportunities for enriched cultural and academic growth. She highlighted additional potential benefits of student mobility, such as attracting more students to the sector, enhancing their experiences, graduate attributes, and contributing to lifelong learning.

Professor Singh further discussed potential funding sources for these initiatives, including doctoral mobility grants, research funding agency grants, industry partnerships, and even self-funding by students.

In conclusion, Professor Singh emphasised the need for action and change and highlighted the positive impact student mobility can have on students, institutions, and the broader community. She urged delegates to consider why not pursue these new approaches to student mobility.

National review of doctoral degrees, graduate attributes, student mobility, and accreditation of joint programmes

Dr Whitty Green, Chief Executive Officer, Council for Higher Education (CHE)

Dr Green presented insights on the National review of doctoral degrees, graduate attributes, student mobility, and accreditation of joint programmes in South Africa. Referring to a study conducted to investigate the evolving landscape of postgraduate programmes in South Africa from 2005 to 2020, the presentation revolved around various challenges and potential solutions in the higher education sector.

The first challenge outlined by Dr Green was that the decrease in available NRF funding has created financial challenges for students. Additionally, student funding is often insufficient and does not cover various essential costs like technology, fieldwork, journal page fees, and living expenses. The inadequate financial support for students has led many to pursue part-time doctoral studies, resulting in extended completion times and reduced full-time student participation.

At the level of Supervision, Dr Green indicated that there is a shortage of both quantity and quality of supervisors, leading to inadequate supervision for doctoral students. The reliance of many institutions on a one-on-one supervision model, exacerbate the lack of supervisory capacity in the context of a limited number of supervisors.

He added that students entering doctoral programmes often appear underprepared, reflecting issues in the pipeline below the master's degree level. Questions have been raised about the quality and effectiveness of master's degree programmes, indicating a need for a closer examination of the programmes. Dr Green explained that there is also a lack of support systems and facilities to support doctoral students.

In terms of the uptake of the 'professional doctorate variant', South Africa has a limited number of professional doctorate programmes, with a strong focus on more research-oriented academic doctorates. Currently, the professional doctorate variant is underutilised, which may be hindering South Africa's ability to contribute to innovation, entrepreneurship, and societal development. Dr Green also addressed the inappropriate use of qualification designators and qualifiers, which creates confusion and complicates the accreditation and registration of qualifications. He added that many institutions are offering similar postgraduate programmes due to funding and planning mechanisms that prioritise subsidy maximisation with minimal investment. This has led to a lack of differentiation in the postgraduate programme offerings.

Dr Green presented the following recommendations as a way forward:

i. Comprehensive national programmes to support doctoral education, similar to the successful South African PhD project.

ii. National funding and coordinated initiatives to develop postgraduate supervisory capacity.

iii. A review of master's level education and qualifications to improve student preparedness for doctoral programmes.

iv. International support for postgraduate centres at universities offering doctoral and postgraduate programmes.

v. A national dialogue to address issues related to naming conventions and the diversification of doctoral qualifications.

Dr Green emphasised the need for a more holistic approach to improve the doctoral education system and address the challenges facing South African postgraduate education.

Findings and recommendations from the National PhD Tracer Study

Mr Bheki Hadebe, Director High-End Skills, Department of Science and Innovation (DSI)

Mr Hadebe presented on the multifaceted nature of student mobility, emphasising the importance of international collaborations, funding strategies, and addressing challenges to strengthen South Africa's education and skills development ecosystem.

On the funding issue, mentioned in previous presentations, Mr Hadebe discussed the policies introduced by the NRF to support postgraduate students with full cost of study funding. He added that to augment limited funding, South Africa is engaging with private sector partners and international collaborators. The National Skills Fund has pledged significant support for student mobility initiatives.

On an international mobility level, South Africa has established a Global Knowledge Partnership Programme to connect its students with global knowledge networks. The initiative involves sending students to meet Nobel laureates in various fields, providing them with a life-changing experience.

Mr Hadebe outlined the South African Science, Technology, and Innovation (STI) Decadal Plan. This plan emphasises modernising key sectors, including agriculture, mining, manufacturing, health innovation, and more. It also addresses societal grand challenges, such as future work and education, providing a comprehensive framework for South Africa's STI endeavours. Mr Hadebe further highlighted the importance that research collaborations, joint research calls, bilateral and multilateral collaborations, and research infrastructure access programmes play in enhancing South Africa's R&D landscape.

Mr Hadebe touched on the National PhD Tracer Study, a study focused on tracking the career trajectories of PhD graduates from South African universities between 2002 and 2018. The study found that the higher education sector was the largest absorber of PhD graduates. Furthermore, the study demonstrated South Africa's appeal as a training destination for PhD students, resulting in a net gain of skilled individuals.

Mr Hadebe addressed mobility at multiple levels, from within the education pipeline to mobility within institutions and sectors. The review of South Africa's higher education system showed a need to encourage more movement and diffusion of people and information across various sectors of the innovation system.

International Scholarships and Capacity Building Opportunities

Dr Mtheto Moyo, Acting Director International Scholarships, Department of Higher Education and Training (DHET)

Dr Moyo presented on international scholarships and capacity building opportunities offered by the Department of Higher Education and Training (DHET). These opportunities encompass both undergraduate and postgraduate levels and include mobility programmes. The primary goal of these scholarships is to support education and capacity development.

Dr Moyo emphasised the issue of low uptake in some of their mobility programmes, despite efforts to promote them. Scholarship programmes serve as a vehicle to address the skills gap in areas like STEM, support Masters and PhD degrees as a priority and help marginalised groups.

Dr Moyo mentioned several international scholarships for staff & students with mobility and joint degree options, explaining the focus of each scholarship and the varying levels of study.: French South Africa Scholarship; Swiss Government Excellence Scholarship; Hungericum Stipendium Programme; Mauritius Africa Scholarship Scheme; Russian Government Scholarships; Chinese Government Kader Asmal Master's Programme; Japan SDG Global Leader Programme; Swedish Institute Scholarships; Commonwealth Master's Scholarships.

In addition to the scholarships, Dr Moyo discussed the Erasmus+ programme and its significance as a flagship initiative. The Erasmus+ programme places a strong emphasis on collaboration. He highlighted the importance of national collaboration, regional collaboration, and international collaboration. This implies that the programme is not limited to individual student scholarships but seeks to foster partnerships and exchange programmes between different countries and regions. Dr Moyo mentioned that there has been low uptake of these funds, and efforts are being made to promote inclusivity and expand faculty participation.

In summary, Dr Moyo discussed a range of international scholarship opportunities and mobility programmes, addressing challenges and low uptake. These programmes are aimed at supporting capacity development, addressing skills gaps, and promoting inclusivity in higher education.

Academic mobility: opportunities and challenges

Professor Loyiso Nongxa, Former Vice-Chancellor, University of the Witwatersrand

Professor Nongxa's presentation provided insights into various aspects of academic mobility, including its different dimensions, objectives, and models.

Professor Nongxa highlighted the numerous dimensions of academic mobility, such as physical and virtual mobility, geographic diversity, the direction of student movement, the duration of mobility, and the objectives of mobility.

He introduced the National Graduate Academy, where he volunteers, which primarily focuses on postgraduate students at the master's and PhD levels, along with early career academics. The Academy aims to encourage collaboration, break down knowledge silos, and foster communities of students and academics across different universities.

Professor Nongxa emphasised the importance of knowledge acquisition, transfer, and circulation, pointing out that international networks play a crucial role in achieving these goals.

He discussed the challenges faced in offering coursework at the master's and PhD levels, believing that students should not specialise too early. He encouraged the exchange of expertise between universities to ensure students' exposure to a wide range of mathematical sciences.

Professor Nongxa went on to highlight a new initiative under the National Institute for Theoretical and Computational Sciences aimed at offering coursework and creating a platform for students to learn from lecturers at other universities. The focus would be on historically black universities, where the MOU has been drafted, and they aim to begin coursework next year.

Lastly, Professor Nongxa touched on the leadership of the research enterprise and postgraduate programmes, emphasising the need to incentivise research-only master's programmes, address the resource requirements for these initiatives, and tackle obstacles like credit transfer and workload concerns.

In essence, Professor Nongxa's presentation highlighted the complex landscape of academic mobility and the importance of collaboration, knowledge-sharing, and breaking down silos to provide South African students with diverse and high-quality educational experiences.

Barriers to collaboration: Incentives at university and government level

Dr Kwezi Mzilikazi, Deputy Vice-Chancellor Research and Postgraduate Studies, Rhodes University

Dr Mzilikazi's presentation focused on the barriers to collaboration in the context of student mobility and academic partnerships at both university and government levels. She highlighted the importance of research collaborations as essential facilitators for student mobility, emphasising that this discussion on incentives and barriers must consider research collaborations as a fundamental mechanism for student movement.

Dr Mzilikazi recognised that student mobility allows postgraduate students to experience increased academic rigor, competitiveness, international collaboration, mentorship, networking opportunities, and intercultural competencies. The national funder has various strategic enablers in place to promote this.

At the institutional level, universities have the option to participate in networks and partnerships, which allow the pooling of resources, collaboration, and unique programme creation. These collaborations can lead to more impactful initiatives and synergies among institutions.

Dr Mzilikazi addressed challenges regarding the funding model and its impact on research collaborations. She mentioned that financial incentives for research outputs might inadvertently hinder collaboration. There is a concern that researchers might be reluctant to collaborate due to the belief that the more collaborators, the smaller their share of the funding. She expressed that although these incentives are important, too much emphasis is often placed on them. She called for universities to take responsibility for overseeing the research conduct of their academics.

Dr Mzilikazi then discussed the issue of rankings, where universities have varying views on the importance of participating in ranking systems. This difference in approach can influence collaboration partners and directions. Another aspect that can influence collaboration partners is the impact of decolonisation of higher education. Tackling issues like coloniality in bibliometrics, decolonisation, and recognising multiple forms of knowledge can affect collaboration decisions.

She categorised the barriers to collaboration into several types, including personality differences, hierarchy issues, geopolitics, cultural and social barriers, organisational challenges, and protection of personal information. These barriers can affect the extent and nature of collaborations in the academic world.

In closing, Dr Mzilikazi suggested actions to overcome these challenges. She introduced the concept of "equitable partnerships" and provided ten actions to promote effective collaborations. These actions could lead to a framework for equitable partnerships, encouraging support for the research partnership ecosystem and the implementation of processes and procedures that sustain partnerships. Dr Mzilikazi stressed the need to invest in the long-term sustainability of collaborations and strengthen research relationships and systems.

Comments raised in Theme 2

The discussion session covered various topics related to graduate mobility, doctoral programmes, the use of AI in education, and more. The key points and comments made during the session are as follows:

1. **Benefits of Short-Term International Mobility**: Mention was made of a study that proved the advantages of short-term international mobility. The delegate emphasised the need for universities to take more individual responsibility in offering quality exposure and positioning opportunities for graduates, whether through national or international engagements.

2. **Professional Doctorates**: There was a discussion about the slow uptake of professional doctoral degrees in South African universities. Suggestions were made to foster collaboration between universities, industry, and science councils to offer such programmes. The need for flexible regulations to accommodate credit-bearing components in doctoral degrees was also highlighted.

3. **Virtual Mobility**: The importance of virtual mobility and online learning, particularly in South Africa's under-resourced higher education environment, was stressed. Virtual exchanges and collaborative online international learning (COIL) were seen as inclusive alternatives to traditional physical mobility and should be considered.

4. **Graduate Attributes and Internationalisation at Home**: The discussion also touched on the need to focus on institutional and national levels to address challenges in graduate education. Several speakers emphasised the importance of internationalisation at home and integrating global perspectives into the curriculum.

5. **Library Support and AI Literacy**: The role of libraries in supporting students and faculty in AI literacy was highlighted. The need for training and resources to help students and academics understand and utilise AI effectively in their work was discussed.

6. **National Credit Transfer and Collaboration**: Participants raised the idea of implementing national credit transfer mechanisms to facilitate mobility and credit recognition among South African universities. Collaboration and resource-sharing among universities were seen as essential to create credit-bearing programmes with a wider reach.

7. **Funding and Scholarships**: Lack of awareness, lack of confidence among students, and difficulties related to dependents were identified as barriers to students accessing scholarship opportunities for international mobility. More efforts are needed to inform students about available scholarships and provide support for their specific needs.

8. **Geopolitical Challenges**: Some students have faced challenges related to geopolitical issues in certain countries, which can impact their experiences and opportunities when studying abroad.

Professor Mayekiso, Vice-Chancellor, University of Mpumalanga | Chairperson of the Research and Innovation Strategy Group (RISG) provided closing remarks following the first day's proceedings. In her closing remarks, she highlighted the insightful, thought-provoking, informative, and inspiring nature of the day's deliberations on research and innovation impact and student mobility.

She expressed appreciation to all the participants, including keynote speakers, panelists, session chairs, and the USAf colleagues for their contributions to the successful dialogue.

Professor Mayekiso encouraged continued conversation, collaboration, and networking, emphasising the importance of establishing relationships among colleagues from different institutions and sectors to foster cooperation and partnership.

5. Theme 3: Social innovation & entrepreneurship for societal impact

Dr Norah Clarke, Director EDHE, delivered a welcome address in which she introduced theme 3, ***Social innovation and entrepreneurship for societal impact: creating an enabling ecosystem for social innovation and entrepreneurship at universities***. She emphasised the importance of taking action based on the discussions at the dialogue. She mentioned that the dialogue aimed to connect entrepreneurship with research and innovation and also focused on commercialisation.

Dr Clarke highlighted the diverse panel of speakers, including international and local voices, who would discuss various aspects of social entrepreneurship in the context of universities. She also discussed the Entrepreneurship Development in Higher Education (EDHE) programme at USAf, which focuses on student entrepreneurship, entrepreneurship research, and the development of entrepreneurial universities.

The Role of Universities in Entrepreneurship-led Development: An Entrepreneurial Ecosystem Approach

Professor Erik Stam, School of Economics, Utrecht University, Netherlands, Visiting Professor, Stellenbosch University

In his presentation Professor Stam shared exciting news about the birth of the Allan Gray Centre for Africa Entrepreneurship, which aims to enhance entrepreneurial ecosystem development across the African continent, indicating a pan-African focus.

Professor Stam emphasised that universities are not isolated entities but integral players in a broader ecosystem. Universities can be key players in fostering entrepreneurial ecosystems. It is not just about research and education, but they can actively contribute to creating an environment where entrepreneurship can lead to sustainable development and address societal challenges.

In defining entrepreneurship, Professor Stam presented a broad definition that goes beyond business start-ups, including using education, translating research, addressing societal challenges, and connecting investments in knowledge and talent with creative individuals who can identify and act upon opportunities for value creation.

He then discussed the concept of entrepreneurial ecosystems, which involve a complex network of actors and factors working together to promote productive entrepreneurship contributing to prosperity, well-being, and sustainable development. These ecosystems have ten key elements, which he outlined. These include formal institutions, culture, connectivity, physical infrastructure, purchasing power, intermediaries, talent, knowledge, leadership, and investment finance.

Professor Stam mentioned his leadership in a global community of scholars from various disciplines focused on studying entrepreneurial ecosystems, highlighting the wealth of studies on this topic.

Professor Stam spoke of how universities can play a significant role in each of these elements within an entrepreneurial ecosystem. Universities can take leadership roles, provide infrastructure, stimulate culture, contribute to research and education, and serve as intermediaries. They have the potential to contribute to leading economic development, knowledge transfer, and more prosperous communities. This perspective challenges the

traditional roles of universities and how they can actively engage with various elements of the entrepreneurial ecosystem.

In order to improve the entrepreneurial ecosystem, data-driven decision-making should be followed. A collective learning process, supported by data and dialogue, can help regions identify strengths, weaknesses, and investment priorities to enhance entrepreneurship.

Professor Stam presented a "theory of change" framework, which involves assessing the current ecosystem, prioritising investment in education and research, implementing activities, and measuring outputs and outcomes to achieve increased prosperity and well-being. He briefly discussed an example from the Netherlands, where the Dutch Valorization Programme aimed to professionalise entrepreneurship and innovation structures within regional consortia, involving universities, firms, municipalities, and other stakeholders. This collaborative approach reflects the recognition that effective ecosystem development requires a concerted effort from universities, businesses, local governments, and other actors. Sharing the learnings from the programme indicates a willingness to leverage past experiences, both successes and challenges, to inform and improve future initiatives.

Professor Stam presented a vision for the future - a vibrant entrepreneurial ecosystem in South Africa, where universities actively contribute to addressing societal challenges and fostering a rainbow nation of entrepreneurship, collaboration, and prosperity. Overall, his presentation emphasised the vital role that universities can play in driving entrepreneurship-led development and the importance of a collective approach to ecosystem enhancement, involving data analysis, dialogue, and a focus on long-term impact and sustainable development.

University of Mpumalanga (UMP): The importance of leadership in enabling social innovation and entrepreneurship at universities

Professor Thoko Mayekiso, Vice-Chancellor, University of Mpumalanga

Professor Mayekiso's presentation highlighted the pivotal role of a university's vision in shaping its leadership and strategic direction, using the University of Mpumalanga's vision as a guiding beacon. The vision, centered around being an African university leading in creating opportunities for sustainable development through innovation, serves as the institution's compass for fostering innovation.

The strategic focus of the university aligns seamlessly with this vision, emphasising the promotion of entrepreneurship and creative problem-solving. This strategic direction is a tangible manifestation of the commitment to fostering innovation for sustainable development.

A significant aspect of the discussion revolved around the university's dedication to instilling innovative and entrepreneurial attributes in its graduates. The commitment to integrating entrepreneurship into formal education, exemplified by the BCom degree programme allowing students to major in entrepreneurship, reflects a holistic approach to cultivating these attributes.

The university's Centre for Entrepreneurship and Rapid Incubator, established in 2020, takes center stage, serving as a catalyst for various initiatives. The centre provides essential services, including intrapreneurship training, mentorship, coaching, and networking opportunities for students, alumni, and the wider community. Emphasis is placed on collaboration, evident through partnerships with organisations like CEDAR, the National Empowerment Fund (NEF), and the Mpumalanga Economic Growth Agency (MEGA).

International collaboration takes a prominent role in the university's approach to entrepreneurship. The partnership with a consortium of nine universities in Asia focuses on entrepreneurship, startups, and incubators. This global engagement includes active participation in webinars and entrepreneurship summits, providing students with opportunities to showcase their skills on an international platform.

The formation of an advisory board, led by the Vice-Chancellor, emphasises the university's commitment to strong leadership and guidance for the Centre for Entrepreneurship. The inclusion of external members, including international representatives, adds diversity and expertise to the board.

A standout perspective is the university's dedication to providing entrepreneurship opportunities for all students, regardless of their field of study. This inclusive approach aims to instill an entrepreneurial mindset across disciplines, acknowledging that innovation can thrive in various academic domains.

Professor Mayekiso's presentation also touched on the university's impact and recognition in entrepreneurship competitions, exemplified by winning the Best Pitch Award at an entrepreneurship summit in Asia. Such accolades indicate the broader success and recognition of the university's initiatives on the global stage.

In essence, the University of Mpumalanga is firmly committed to fostering an entrepreneurial culture and providing opportunities for students to test the viability of their ideas, pitch to potential investors, and grow their business ventures. Their vision, values, and strategic plan are all aligned in support of this goal, and their journey toward sustainable development and success is well underway. While they acknowledge that they are in the process of building their success story, their dedication to entrepreneurship and innovation is clear.

University of Venda (Univen): A case of social innovation at a rural-based university

Professor Vhonani Netshandama, Director Community Engagement, University of Venda

In her engaging presentation, Professor Netshandama, the Director of Community Engagement at the University of Venda, shared the inspiring journey of their rural-based university's approach to entrepreneurship, innovation, and community engagement. She began by acknowledging the pivotal role that leadership plays in fostering entrepreneurship and innovation. She highlighted the importance of a Vice-Chancellor who leads by example, setting the stage for the institution to embrace entrepreneurship.

Professor Netshandama explained how they view their rural location as an opportunity rather than a limitation. Their university is uniquely situated in the UNESCO Biosphere Reserve, which inspires their approach to engaged scholarship, entrepreneurship, and innovation.

The university's strategic plan reflects their ambition to lead in engaged scholarship and incorporates an entrepreneurial thrust and student-centeredness. They emphasise a focus on African heritage and indigenous knowledge. These pillars guide their initiatives, focusing on justice, transformative education, and social capital development.

Their progressive leadership, led by Vice-Chancellor Prof Bernard Nthambaleni, plays a crucial role in driving entrepreneurship, innovation, and community engagement. Other DVCs supports these efforts, ensuring a collaborative approach. International and local partnerships are fundamental to their ecosystem, promoting transdisciplinary collaboration and facilitating global learning.

A remarkable aspect of their approach is the intentional involvement of traditional leaders. These leaders contribute to all stages of their programmes, from recruitment and identification

of community needs to solution design, enhancing the sustainability and relevance of their initiatives.

The university aims to demystify entrepreneurship, focusing on value creation and emphasising that entrepreneurship is not solely about starting a business but creating value. They have implemented an integrated entrepreneurship, innovation, and biodiversity plan, aligning with their unique location and resources.

The university's programmes, such as the Demystifying Innovation and Entrepreneurship campaign, aim to build entrepreneurial culture and creativity among students. They also foster inclusive innovation by strategically deploying local economic champions to tackle local issues. This approach promotes community awareness, inclusivity, and intergenerational learning.

To broaden the horizons of their students, the university collaborates with international partners and other African universities. They aim to create borderless classrooms and bridge the gap between traditional teaching methods and innovative, collaborative, and cross-disciplinary learning.

In conclusion, Professor Netshandama emphasised the importance of intentionality, context awareness, mindset shift, and boundary crossing in fostering entrepreneurship, innovation, and community engagement. Their approach at Univen, driven by strong leadership, collaboration with traditional leaders, and an inclusive ecosystem, serves as an inspiring example of what can be achieved in a rural-based university.

Comments raised in Theme 3: Part 1

During the discussion session of the dialogue, several key comments and points were raised:

1. **Embracing entrepreneurship:** Professor Netshandama's presentation highlighted the importance of embracing entrepreneurship in rural-based universities and viewing their location as an opportunity for abundance and innovation.

2. **Demystifying innovation and entrepreneurship:** The concept of demystifying innovation and entrepreneurship was discussed, emphasising the need to make these concepts accessible to students and staff, especially those from diverse academic backgrounds.

3. **Creating an enabling ecosystem:** Strategies for creating an enabling ecosystem for students, such as student ambassador programmes, were mentioned as effective approaches to promote entrepreneurship education.

4. **Staff development:** The role of staff development in entrepreneurship education was emphasised, including the need for staff to be equipped with entrepreneurial skills and knowledge.

5. **Partnerships:** The importance of partnerships, both with industry and other institutions, in scaling up entrepreneurship initiatives was highlighted, with the recognition that universities cannot scale up on their own. The discussion raised questions and challenges related to fostering entrepreneurship within universities and the role of partnerships in driving entrepreneurship-led development. The role of international collaborations and leveraging resources to support entrepreneurship initiatives beyond South Africa was acknowledged.

6. **Overcoming challenges:** Overcoming challenges in entrepreneurship, including financial constraints, resource limitations, and the importance of a resilient mindset and risk-taking, was discussed.

The delegates also expressed their appreciation for the speakers and engaged in further discussions on these topics. The conversation was set to continue in a subsequent session, emphasising the importance of ongoing dialogue and collaboration in promoting entrepreneurship and innovation.

Systemic Action Learning and Action Research (SALAR) as an enabling tool for entrepreneurial universities

Professor Thea van der Westhuizen, Academic Leader: High Impact Community Engagement and Internationalisation, University of KwaZulu Natal (UKZN), School of Management, IT and Governance

Professor van der Westhuizen, continued the discussion on social innovation and entrepreneurship for impact by discussing the concept of systemic action learning and action research for enabling entrepreneurial universities and building entrepreneurial ecosystems. She emphasised the interconnectedness of different aspects within a university context, including community engagement and internationalisation.

She began her presentation by expressing the sense of a shared community among the delegates and the importance of working together to enhance best practices in the realm of entrepreneurship. She used the term "systemic entrepreneurial ecosystems" to refer to the strategies involving community engagement, action research, and action learning within a university.

Professor van der Westhuizen highlighted the complexity of building entrepreneurial universities, with the vision of embedding aspects of entrepreneurship across various academic disciplines. She stressed that applying this vision required engaging the entire ecosystem, combining action learning and action research to yield meaningful outcomes.

The presentation focused on the "Inspire" programme within the School of Management and Governance at the University of KwaZulu-Natal. She highlighted the heart, head, and hands concept, linking inspiration to innovation and generative thought, and its importance in entrepreneurial ecosystems.

The trajectory of entrepreneurship modules offered at the university spanned from the first year to postgraduate levels. The "Inspire" programme aims to inspire the mindset of students, enabling them to take entrepreneurial actions. By emphasising the holistic development of students, the "Inspire" program extends beyond traditional academic boundaries. It acts as a catalyst for cultivating not only an entrepreneurial mindset but also instilling a sense of purpose that transcends the classroom. The trajectory of entrepreneurship modules, spanning from the foundational first year to advanced postgraduate levels, highlights the programme's commitment to nurturing a continuous and evolving entrepreneurial journey. This comprehensive approach not only equips students with theoretical knowledge but empowers them with practical skills, encouraging proactive entrepreneurial actions throughout their academic pursuits and beyond.

Professor van der Westhuizen discussed the theoretical framework of the heartset, mindset and handset, emphasising the significance of both internal and external domains. The heartset represents the emotional and motivational aspect of individuals within the entrepreneurial ecosystem. The mindset corresponds to the cognitive and intellectual orientation of individuals. The goal is to mobilise and enable individuals to adopt an entrepreneurial mindset, characterised by innovative thinking and a proactive approach. The handset refers to the practical application of inspired thoughts and an entrepreneurial mindset. It involves taking concrete entrepreneurial actions based on the generated ideas and innovative thinking.

Professor van der Westhuizen acknowledged the complexity of building relationships with various stakeholders and partners within the ecosystem, which can be a time-consuming process.

The presentation outlined the "Ace Youth Entrepreneur Support Network" as part of the ecosystem, and the co-initiated, co-inspired approach based on Otto Scharmer's theory. She explained that this model combined the action learning and action research processes with the ecosystem approach, focusing on workshops, engagement, and both qualitative and quantitative interventions.

Furthermore, Professor van der Westhuizen touched on the importance of disseminating best practices within South Africa and beyond, showcasing the good work of universities through initiatives like the Eddy Learning and Teaching Awards.

In conclusion, she emphasised the role of inspiration in enabling entrepreneurial ecosystems and the need for co-inspiring heartsets, mindsets, and handsets to drive innovation and entrepreneurship within universities.

Advancing social innovation and entrepreneurship for societal impact.

Professor Steven Liss, Vice President of Research and Innovation, Toronto Metropolitan University (TMU), Canada

Professor Liss delivered a presentation focused on advancing social innovation and entrepreneurship for societal impact. He highlighted the remarkable growth and transformation that TMU has experienced over the past 30 years. The university has witnessed tremendous growth and development, largely driven by deep and intentional relationships established by its faculty, students, and staff. He emphasised that a successful university in the 21st century is characterised by the depth, breadth, and sustainability of its partnerships and collaborations at regional, national, and global levels. The university's integration into the socio-economic fabric of its region is a critical component of these relationships.

TMU's journey began in 1948 as a response to the need for skilled people following World War II, with a focus on supporting returning veterans and facilitating their transition into the post-war economy. Over time, the university expanded its programmes and offerings and was authorised to grant degrees in 1971. In 1993, TMU achieved university status, and less than a decade later, in 2002, it was granted the mandate to award graduate degrees and engage in advanced research. TMU's research funding nearly tripled between 2017 and 2022, solidifying its reputation as a research-intensive institution. It is continuing to expand, with the establishment of a School of Medicine and a strategic vision for the future.

The strategic research vision at TMU is based on its core purpose and values, driving it to further its agenda and identify key areas of focus. A strategic research plan serves as a dynamic tool, enabling TMU to adapt to changing circumstances and respond to opportunities. This plan helped the university understand its strengths and weaknesses, leading to the creation of a health strategy and the establishment of a School of Medicine. The key is to create a living document that evolves as circumstances change.

Professor Liss highlighted the importance of community connections in building comprehensive research programmes that can bring about meaningful change. TMU supports its researchers in forming partnerships with governments, healthcare organisations, and community-based organisations, allowing them to inform real-world policies and practices.

One major focus area is health and wellbeing, with 44% of TMU's research directly related to this field.

The creation of the Centre for Immigration and Settlement and the award of a Canada Excellence Research Chair in migration integration are evidence of TMU's research success. These programmes involve a wide range of stakeholders and demonstrate the value of cultivating diverse relationships.

TMU's zone learning system fosters entrepreneurial activities among students and community partners. With more than ten different zones, each focusing on specific global challenges, TMU encourages innovation and provides resources, mentorship, and technology for entrepreneurs. One such programme supports black-owned tech startups and others target female innovators.

TMU actively contributes to shaping the future of work through research, ensuring that underserved communities can fully participate in the labour market and keeping Canada competitive in the global economy. The university uses research and collaboration to anticipate emerging sectors and workforce needs, particularly in response to technological advances and automation.

Professor Liss highlighted the example of the Future Skills Centre, hosted at TMU, as an initiative aimed at ensuring no one is left behind in the rapidly changing workforce landscape. It provides support for people to acquire new skills and for companies to adopt a future-ready workforce.

The presentation also emphasised the significance of industry-facing relationships in the establishment of the Rogers Cybersecure Catalyst, a Canadian network supporting the cybersecurity ecosystem. This initiative exemplifies how TMU builds collaborations with industry and contributes to solving complex issues. The university's commitment to science diplomacy and the free movement of people across the globe is essential for addressing global challenges such as climate change and public health.

Professor Liss concluded by emphasising the importance of connections and collaborations at local, regional, national, and international levels, with TMU actively participating in the recruitment of scholars and experts from around the world to further its global impact.

Comments raised Theme 3: Part 2

During the question-and-answer session, several important discussion points were raised:

1. **Community Engagement:** One of the key topics discussed was the involvement of the community within the university. Professor Liss highlighted the importance of community engagement and the role of the university in supporting both students and the broader community. A question was posed regarding whether communities are allowed to come in for incubation of their own businesses, and Professor van der Westhuizen mentioned that they have been intentional about including communities in their initiatives. They collaborate with TVET Colleges in the area and use collaborative learning methodologies to ensure that both students and community members engage in the innovation process.

2. **The Role of Tech Transfer Offices:** Another important discussion revolved around the role and expectations of technology transfer offices within universities. The speaker emphasised the need for a broader view of the tech transfer office's role beyond just generating income. The traditional focus on patents, research income, and commercialisation was challenged, with an argument for a more holistic approach

that prioritises research dissemination, societal impact, and collaboration for innovation. The discussion encouraged universities to reconsider their indicators and measures for tech transfer offices to align with broader societal goals.

Overall, the discussion emphasised the importance of community engagement, collaboration, and a more inclusive approach to innovation. It also highlighted the need for universities to redefine the role of tech transfer offices to support broader goals beyond income generation.

6. Theme 4: Transformative internationalisation

Mr Mahlubi Mabizela, Director Operations and Sector support, USAf introduced theme 4 titled: **Transformative Internationalisation: *Towards a transformative and inclusive internationalisation strategy for USAf.*** He welcomed the panelists that would address this important topic.

The state of internationalisation in South African universities: Preliminary Findings of the IEASA – British Council Study

Dr Samia Chasi, Manager of Strategic Initiatives, Partnership Development and Research, International Education Association of South Africa (IEASA),

Dr Chasi's presentation focused on the preliminary findings of a study conducted in collaboration with the British Council on the state of internationalisation in South African universities. The study aimed to address three main purposes: Understand the current South African higher education internationalisation environment; Assess the implementation readiness of South African HEIs regarding the recently adopted internationalisation policy framework; and provide guidance for universities.

The presentation highlighted several key findings and observations. In terms of the general environment, South African universities have embraced internationalisation as an integral part of their core missions, encompassing research, teaching, learning, and engagement. A significant emphasis has been placed on enhancing international competitiveness, particularly in research and innovation. However, tensions arise when it comes to the recruitment of international staff, as it collides with local political considerations. Notably, there is a noticeable disconnect between the broader institutional goals of internationalisation and the functions of the international office.

Dr Chasi also addressed specific South African needs. The study has revealed that internationalisation in South African universities often carries the influence of Eurocentric and neocolonial assumptions. The widespread use of English as the primary medium of instruction has the potential to reinforce a European stronghold on higher education in South Africa. Furthermore, certain institutions tend to prioritise more immediate and pressing concerns over internationalisation efforts. There is a call for the validation and recognition of post-colonial discourses on internationalisation. To ensure a more nuanced perspective, it is essential to engage more deliberately with regional and continental discourses.

With regards to implementation readiness, the research indicates that South African universities exhibit varying levels of readiness and awareness concerning the policy framework for internationalisation. There are several challenges faced, including academic xenophobia, a lack of scholarly leadership in internationalisation initiatives, a decline in the recruitment of international students (aggravated by the impact of COVID-19), silence on decolonisation in the policy framework, inadequate funding, and a significant reliance on funding from the Global North for international activities.

Dr Chasi added that the inclusive internationalisation perspective must encompass the diverse landscape of South African institutions, their geographical locations, historical context, academic disciplines, organisational structures, and perspectives. It must also tackle issues of equity and justice, particularly within the context of environmental sustainability.

South Africa has an influential role in reshaping the global discourse on internationalisation, bringing its unique experiences and perspectives to the forefront. Despite the challenges faced by South African institutions, they are emerging as leaders in areas such as collaborative

online international learning, emphasising an internationalisation approach centered around equity and justice.

In summary, Dr. Chasi's presentation highlights the significance of contextualising internationalisation within the South African higher education landscape. It further highlights the imperative for research, innovation, and scholarship to contribute to and shape the global dialogue on internationalisation, taking into account the diverse needs, perspectives, and transformative potential in South Africa's context.

Comments raised in Theme 4: Part 1

During the discussion following Dr Chasi's presentation on the state of internationalisation in South African universities, several key aspects were addressed:

1. **Academic Xenophobia:** One delegate expressed concern about the use of the term "academic xenophobia." They worried that it might be overly negative and potentially delegitimise the role of unions on interview panels. Dr Chasi acknowledged that the term had been used in the research findings and pointed out that it was meant to highlight some of the challenges and complexities faced by academics in internationalisation. She noted that while the choice of the union example might not have been ideal, the intention was to shed light on dynamics within South African higher education. Dr. Chasi emphasised that racism and xenophobia are issues in internationalisation worldwide and need to be addressed. She mentioned that it's crucial to look at different levels of xenophobia, including the selection criteria and processes for academics.

2. **Decolonising Neoliberal Apparatus:** Another question focused on how South African institutions can use their agency to decolonise the neoliberal aspects of internationalisation and establish more equitable partnerships, especially when dealing with well-resourced institutions like the Toronto Metropolitan University. Dr. Chasi highlighted various efforts, including offering workshops, empowering Global South scholars, and engaging with northern sister organisations to bring global South perspectives to the table. She stressed the importance of recognising and leveraging the unique strengths and experiences of South African institutions and individuals in international collaborations.

3. **COIL Programmes and Postgraduate Level Initiatives:** The final question centered on Collaborative Online International Learning (COIL) programmes. The delegate sought information about whether the study had uncovered good examples of postgraduate-level programmes, such as joint degrees, and the extent of participation among South African universities in such initiatives. They were interested in understanding if there was room for improvement in this area. Dr Chasi noted that the study did not specifically focus on COIL, but it is implemented at various levels, including undergraduate and beyond. She suggested looking into additional resources and literature on COIL programmes for more information.

These questions and comments from the discussion touched on important aspects of internationalisation in South African higher education, bringing attention to the complexities and challenges within internationalisation in the South African context.

The discussion was followed by presentations of case studies on transformative internationalisation.

From mobility to comprehensive internationalisation (inclusive of COIL)

Mr Varkey George, Social Entrepreneur

Mr George shared his experiences and insights into internationalisation, focusing on various concepts and practices related to this field.

Mr George introduced the topic by sharing how he was introduced to the field of internationalisation while lecturing in Europe. He questioned the difference between globalisation and internationalisation and discussed the perception that globalisation is often associated with capitalism.

Mr George emphasised the importance of internationalisation in developing graduate attributes. He highlighted that while universities provide specialised knowledge and skills, graduates should also be open to different forms of thinking and develop intercultural competence. This prepares them to work in diverse, multicultural teams and respect different belief systems. Mr George also discussed the evolving nature of truth and the need to understand that there are various truths, even in science. He emphasised the importance of nurturing open minds to accept different truths and beliefs.

While universities teach students how to succeed and compete in exams, Mr George pointed out that emotional and social intelligence are essential aspects of personal development and that universities often overlook teaching students how to deal with failure.

In terms of global challenges, Mr George highlighted that we live in a world where challenges like climate change, artificial intelligence, biotechnology, and global health issues cannot be addressed in isolation. The speed of innovation has increased, making international collaboration essential. He discussed how nations have gradually moved towards international agreements and regional blocs to address global challenges. The trend seems to be shifting away from rigid nation-states towards a more interconnected global citizenship.

Mr George shared his experiences working with the Erasmus Mundus programme from 2017 to 2018. He highlighted the programme's role in sending South African students for post-doctoral studies in Europe and the challenges and successes encountered in improving African student representation.

Mr George went on to discuss various challenges to student mobility in South Africa, including financial constraints and differences in fee structures between European and South African universities. Touching on the concept of COIL, Mr George explained that it emphasises the importance of collaboration, online learning, and international engagement. He also discussed the outputs and goals of COIL initiatives.

Mr George advised institutions to consider self-sustainability when pursuing internationalisation initiatives. He mentioned options such as short-term study abroad programmes, online learning, and internationalisation at home, and stressed the need to set self-sustainability targets. He further encouraged students to address global challenges, such as affordable sanitary pad production, improved education access, and other pressing issues. He highlighted the positive outcomes of these initiatives.

Overall, Mr George's presentation explored the various dimensions of internationalisation, the importance of graduate attributes, global challenges, and trends in shifting from nation-states to global citizenship. He shared his experiences in promoting internationalisation and emphasised the need for self-sustainability in internationalisation efforts.

African partnerships

Ms Mandry Ntshani, Director of Africa Multilateral Cooperation, Department of Science and Innovation (DSI)

Ms Ntshani presented on African partnerships, highlighting the various aspects and initiatives related to science, technology, and innovation cooperation in Africa.

She began by emphasising the importance of the work undertaken in the Department of Science and Innovation within the African portfolio. She explained that the department is engaged in both bilateral and multilateral partnerships and is responsible for advancing strategic objectives related to science, technology, and innovation. These efforts are aimed at achieving economic and social development across the region and the continent.

The department collaborates extensively within the African community and is involved in several flagship programmes with organisations such as the African Union Development Bank and the European Union (EU). Ms. Ntshani discussed the role of the "high-level policy dialogs" within the EU and their impact on Africa's science and technology landscape.

The presentation highlighted the importance of being aligned with policy guidelines, specifically referencing the white paper on science, technology, and innovation, which places a strong emphasis on Pan-Africanism. This alignment ensures that the work conducted supports the strategic objectives of the region and the African continent as a whole.

A significant part of the presentation focused on the strategic objectives outlined in the department's decadal plan, with a specific emphasis on the value of collaboration and partnerships. Ms Ntshani noted the role of internationalisation in helping achieve the outlined objectives, particularly in modernising South Africa's economy and various sectors such as agriculture and mining.

She discussed how science transcends geopolitical dynamics, emphasising that science knows no borders, and the department continues to foster collaborations in the field of science and technology even in politically complex situations. The presentation delved into the department's engagement with BRICs countries (Brazil, Russia, India, China, and South Africa) and how this collaboration plays an essential role in the department's work.

In terms of internationalisation, Ms Ntshani outlined the key priorities and strategic focuses, particularly focusing on how joint research and innovation initiatives can be transformative and inclusive. The DSI aims to strengthen the connection between science and economic diplomacy, ensuring that research and development efforts translate into value-added products and services.

Regarding bilateral agreements within the African continent, the presentation noted that the department has 25 such agreements. However, there was an acknowledgment that most active agreements are predominantly with English-speaking countries, and the department is actively seeking to engage more with French-speaking African nations.

Ms Ntshani elaborated on various areas of collaboration, such as space sciences, health innovation, and indigenous knowledge systems, that are common in these bilateral agreements. She provided examples of successful innovation projects that have been funded in collaboration with African partners, highlighting the positive impact of these projects.

In discussing intra-Africa mobility, Ms Ntshani stressed the importance of encouraging South African students to study in other African countries. She noted that funding is not the primary challenge, but rather it is the low uptake of these opportunities by students.

The presentation concluded with an overview of the DSI's involvement in an initiative with the United Nations Economic Commission for Africa (UNECA), which aims to advance entrepreneurial universities in Africa. It also highlighted the department's efforts to work with industry partners to provide postdoctoral researchers with experiential learning in energy-related subjects.

Ms Ntshani's presentation offered valuable insights into the DSI's work and partnerships in the field of science, technology, and innovation within Africa, showcasing the collaborative efforts to foster development and progress in the region and the continent.

Understanding the Research and Innovation Landscape: The Case of the OR Tambo Chairs and Other Agreements

Dr Nana Banduo, Director of SARChI Chairs, National Research Foundation (NRF)

Dr Banduo delivered a presentation on " The presentation focused on the role of the NRF in advancing research, international collaboration, and fostering innovation.

Dr Banduo began by emphasising that the NRF's mandate is centered on advancing knowledge, transforming lives, inspiring innovation, and strengthening the national system of innovation (NSI). The NRF has various funding instruments aimed at demonstrating the transformative potential of internationalisation and its impact on research, development, and postgraduate education in South Africa and across the African continent.

In terms of international partnerships, the presentation highlighted the NRF's involvement in various networks, initiatives, and partnerships. These include the Transatlantic Platform, Intercontinental Africa-Europe partnerships, Africa-Asia partnerships (specifically with Japan), and several agreements with African countries. These partnerships focus on capacity development, knowledge sharing, and enhancing Africa's scientific excellence.

Dr Banduo discussed the Science Granting Councils Initiative (SGCI), launched in 2015, which plays a crucial role in promoting research and innovation across Africa. The initiative involves multiple partners, including the NRF, the German Research Foundation, and other stakeholders. Its goal is to strengthen capacity development in support of research and innovation on the African continent.

The presentation focused on the OR Tambo Africa Research Initiative, launched in 2017. This initiative is a collaboration between the NRF, GSI, Oliver Tambo, and the Democratic Republic of the Congo (DRC). Its primary aim is to support a new generation of researchers with a strong focus on Africa and inclusivity. The initiative seeks to have a catalytic impact on research and contribute to knowledge production aligned with Agenda 2063.

Dr Banduo listed the countries in which OR Tambo Chairs have been awarded, including Botswana, Burkina Faso, Ghana, Mozambique, Tanzania, Uganda, and Zambia. These Chairs have made significant contributions, including the development of entrepreneurial and competency frameworks, innovation hubs, and initiatives for tracking and managing outbreaks.

He discussed the distribution of Chairs, centres of excellence, and research facilities across various sectors. These initiatives align with the Sustainable Development Goals (SDGs) and Agenda 2063, providing a comprehensive framework to measure societal impact. He highlighted the importance of co-creation and co-design in research. He emphasised the need to build impact into the research process from the beginning. The success factors included control over research activities, transferability of research outcomes, and the influence of research, leading to impactful results.

In summary, Dr Banduo's presentation showcased how the NRF, through initiatives like the OR Tambo Chairs and international partnerships, is contributing to the advancement of research, innovation, and the broader scientific landscape in South Africa and Africa as a whole. The NRF's efforts align with national and continental development goals, emphasising the importance of inclusivity and knowledge sharing.

Comments raised in Theme 4: Part 2

In the discussion session, several key points were raised:

1. **Extension of Chair Funding:** Dr Banduo mentioned that there is currently a five-year funding horizon for the chairs, but they are considering extending the funding period to deepen research and support provided to the chairs.

2. **Location of Chairs:** The OR Tambo Chairs are specifically located in African countries other than South Africa, emphasising the initiative's focus on fostering research excellence across the African continent. These Chairs are typically hosted at African universities, although partnerships with other research organisations are possible.

3. **Leveraging Bilateral and Multilateral Partnerships:** A question was posed regarding leveraging partnerships and initiatives to address the issue of academic xenophobia. The suggestion was made to define a clear African agenda for intra-Africa mobility, which goes beyond education and research to address specific problems and challenges. Creating a vision around this issue could help galvanise support and resources.

4. **Transformative and Inclusive Internationalisation:** Panelists discussed the meaning of transformative, inclusive internationalisation. Transformative internationalisation involves shifting thinking and activities to bring about positive changes and outcomes. Inclusive internationalisation seeks to provide opportunities for everyone within the university context, ensuring that internationalisation efforts are accessible to all, including those who may not have the mobility to travel.

5. **Encouraging Collaboration:** Panelists highlighted the importance of inclusivity by fostering partnerships between academia, industry, Technical and Vocational Education and Training (TVET) colleges, and entrepreneurs to create a holistic approach to transformation and internationalisation.

6. **Implementing Transformative Initiatives:** Leveraging initiatives like the Pan-African University and deepening initiatives focused on African science and excellence on the continent can help facilitate transformative change.

7. **Student Mobility within Africa:** Promoting student mobility within African countries can help create intercultural relationships, tolerance, and acceptance, contributing to the transformation of the African education system.

The session recognised the need for deeper collaboration, tolerance, and acceptance among African countries and organisations to drive transformative internationalisation and address challenges such as academic xenophobia.

7. Summary of proceedings: Day 1

Dr Thandi Mgwebi, the Deputy Vice-Chancellor of Research, Innovation, and Internationalisation at Nelson Mandela University, summarised the proceedings of Day 1 of the dialogue, shedding light on the critical issues to be addressed:

1. First, she recounted the keynote address by Professor Boso, the OR Tambo Research Chair in Entrepreneurship and Employability at KNUST in Ghana. Professor Boso discussed the global landscape of R&D spending, underlining the disparity in investments between countries like the US and South Korea, and the African continent. He stressed the need for African nations to intensify R&D investments and patent filings. His insights called for higher R&D budget allocations and collaboration between academia, government, and industry to propel innovation.

2. Dr Mgwebi then discussed key recommendations emerging from the session on "Research and Innovation Impact." These recommendations included advocating for increased R&D investments; promoting intellectual property and patenting; strengthening research infrastructure across various fields; developing research capacity; focusing on societal challenges like healthcare and education and encouraging international collaborations. Additionally, she emphasised the importance of measuring impact and ensuring accountability.

3. In the session "Rethinking Student Mobility in National and International Contexts," the focus was on adapting to evolving educational landscapes and catering to students' diverse needs. Recommendations in this context included: enhancing digital learning and virtual mobility; facilitating hybrid learning models; promoting research and academic exchange programmes; strengthening collaboration between institutions at local, national, and international levels; advocating for immigration policies that support student mobility. Moreover, fostering entrepreneurial and innovation opportunities and encouraging lifelong learning and alumni engagement were deemed vital for enhancing student mobility.

In conclusion, Dr Mgwebi highlighted the significance of integrating the humanities and social sciences into scientific endeavours to ensure comprehensive societal impact. These recommendations and identified key issues will shape the implementation plans and drive forward the agenda discussed going forward.

8. Summary of proceedings: Day 2

Dr Vathiswa Papu-Zamxaka, the Deputy Vice-Chancellor for Research, Innovation, and Engagement at Tshwane University of Technology, summarised the dialogue proceedings of Day 2. The central theme that emerged from the day's discussions was the role of universities in addressing societal challenges by collaborating with government and industry.

Dr Papu-Zamxaka highlighted key takeaways from the presentations and discussions:

1. **Universities as Problem Solvers:** The presentations throughout the day reinforced the idea that universities exist not just to educate but to actively engage in solving societal challenges. This is done through collaborations with government and industry.

2. **Embedding Entrepreneurship into Academia:** Dr Papu-Zamxaka emphasised the importance of infusing entrepreneurship into academic programmes. The case study presented showed how an entrepreneurship centre was closely linked to academic curricula and encouraged students to develop entrepreneurial ideas, fostering startup development.

3. **Scaling Up for Societal Impact:** Collaboration and partnerships are vital for scaling up initiatives. The discussions highlighted the importance of involving external stakeholders, including funders, and the role of diagnostic tools in assessing the strengths and weaknesses of these endeavours.

4. **Resilience Training:** Students pursuing entrepreneurship need to be equipped with the interpersonal skill of resilience. The recognition that entrepreneurship often involves failure and setbacks emphasises the need to prepare students for these challenges.

5. **Community Involvement:** Embedding communities into the process rather than treating their involvement as a mere formality was a key recommendation. This approach fosters a sense of genuine engagement with the community.

6. **Theory of Change:** A theory of change was presented as a practical framework for achieving desired outcomes within the entrepreneurial ecosystem. Universities were encouraged to adapt this framework to suit their unique contexts.

The summary also highlighted the importance of addressing issues such as academic xenophobia, distinguishing between equity and equality in educational access, and emphasising the importance of mutual interest and equity in international collaborative agreements. The difference between globalisation and internationalisation was noted, emphasising the need for a clear understanding of the two concepts within the academic context.

The significance of collaborative online international learning and the need for well-defined, practical student projects, especially for entrepreneurship students, were discussed as strategies to enhance the impact of entrepreneurial initiatives.

Dr Papu-Zamxaka concluded by calling for universities to be intentional in their approach to entrepreneurship education and project development, as these efforts play a crucial role in shaping the economic landscape of their countries.

9. Closing discussion & Recommendations

In the closing session, final inputs were provided by the delegates. **Professor Sibusiso Moyo, Deputy Vice-Chancellor Research, Innovation and Postgraduate Studies, Stellenbosch University** facilitated the session.

The final discussion encompassed the following points and recommendations:

1. **Importance of a Holistic Approach:** The participants stressed the importance of adopting a holistic approach to research and innovation, considering both global and local contexts. They emphasised the need for global citizenship while recognising the value of local partnerships and engagement.

2. **Documentation of Best Practices:** Delegates proposed the idea of documenting best practices in research, innovation, and entrepreneurship. They recognised the need to create a repository of successful case studies and projects to serve as a valuable resource for universities and institutions.

3. **Research and Innovation Consortiums:** Participants discussed the potential benefits of establishing research and innovation consortiums, which would bring together multiple universities and partners to address complex challenges and drive economic growth.

4. **Equity and Inclusion:** The discussion highlighted the significance of promoting equity and inclusion in research and innovation activities. This involves ensuring that opportunities and resources are accessible to all, regardless of background or location. Projects aimed at ensuring the sustainability of research and innovation initiatives and promoting equitable access to resources and opportunities were discussed. This includes efforts to secure long-term support for programs and to remove barriers to participation.

5. **Engagement with Industry and Partners:** Participants emphasised the importance of meaningful engagement with industry and other partners. This collaboration can drive innovation and enhance the societal and economic impact of research.

6. **Innovative Pedagogies:** The need for innovative pedagogical approaches, especially when it comes to fostering entrepreneurship and intrapreneurship, was discussed. This includes offering programmes that enable students to start their businesses.

7. **Research Collaboration and Inter-Institution Mobility:** The participants recognised the value of research collaboration and mobility among institutions. The idea of creating mobility programs for staff and postdoctoral researchers within the higher education system was proposed. These programs would facilitate knowledge sharing and the exchange of best practices.

8. **Sustainability and Agreements:** The sustainability of research and innovation initiatives was addressed, with agreements seen as crucial for long-term success. Collaborative agreements can help institutions achieve sustainability in their research and innovation endeavours.

9. **Cultural Exchange and Graduate Attributes:** Cultural exchange was highlighted as a valuable component of research and innovation programmes. Additionally, the development of graduate attributes, such as adaptability, was emphasised as an essential aspect of higher education. The idea of creating innovative pedagogical approaches and enhancing graduate attributes, particularly adaptability, was raised.

These initiatives would equip students with the skills and knowledge needed for entrepreneurship and successful careers.

10. **Partnerships and Economic Growth:** The delegates emphasised the importance of partnerships and collaboration in driving economic growth. They discussed how universities can play a crucial role in creating innovative ecosystems to foster economic development. The discussion also emphasised the importance of creating local collaborations within regions or provinces. These initiatives could involve various universities, local governments, and industries to address specific challenges and opportunities in those areas.

11. **Streamlined Administrative Processes:** The need for streamlined administrative processes within universities was addressed. Ensuring efficient processes, including financial management, was seen as crucial for creating an environment conducive to research and innovation. The delegates acknowledged the importance of supporting administrators involved in research and innovation roles. Training and capacity-building programs for these professionals were suggested to improve the efficiency of administrative processes.

12. **Commercialisation and Ecosystem Building:** The discussion also covered commercialisation efforts and the development of ecosystems that support entrepreneurship and innovation. Delegates acknowledged the need to create an environment where researchers can efficiently translate their work into practical applications.

13. **National Program for Impact Assessment:** There was a call for the development of a national program focused on measuring and demonstrating the impact of universities' research and innovation activities. Such a program would provide a comprehensive approach to assessing and showcasing the contributions of HEIs to society and the economy.

The final discussion of the dialogue emphasised the multifaceted nature of research and innovation in higher education. It stressed the importance of various factors in promoting societal and economic impact. The projects and initiatives recommended by delegates represent a collective effort to enhance the impact of research and innovation in higher education. These insights will likely inform future strategies and actions in the field of research and innovation.

10. Vote of thanks

Dr Phethiwe Matutu, CEO of Universities South Africa, delivered the closing vote of thanks. She expressed her gratitude to everyone who contributed to the successful two-day deliberations.

Dr Matutu acknowledged the USAf RISG for their support in planning the event. She also appreciated the valuable contributions of international speakers, former vice-chancellors, esteemed speakers, session chairs, government representatives, and university staff.

Dr Matutu highlighted the commitment of the participants and the sharing of expertise during the sessions. She expressed her gratitude to the hotel staff for their hospitality. Additionally, she thanked the USAf staff for their dedicated support.

Dr Matutu emphasised the importance of staying connected and continuing the discussions beyond the event.

11. Resources

All of the dialogue presentations and related news articles (13) are available on the USAf website at:

https://www.usaf.ac.za/the-risg-biennial-research-and-innovation-dialogue-2023/

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