

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

THE 5TH EDUCATION FOR SUSTAINABLE DEVELOPMENT
INTERDISCIPLINARY INTERNATIONAL RESEARCH
CONFERENCE (ESDIIRC)

CONFERENCE PROGRAMME

VENUE: MOTSAMAI GUEST LODGE (17 TENNYSON RD,
MALINDELA, BULAWAYO)



NATIONAL UNIVERSITY OF
SCIENCE AND TECHNOLOGY

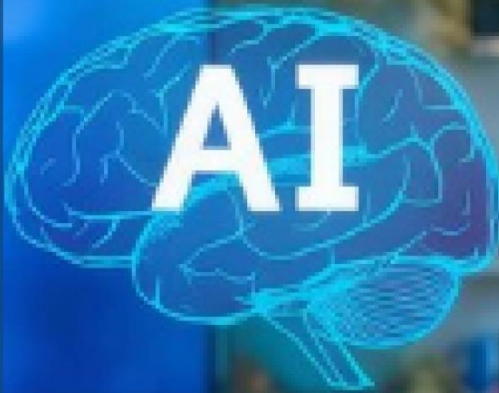
5th EDUCATION FOR SUSTAINABLE DEVELOPMENT INTERDISCIPLINARY INTERNATIONAL RESEARCH (ESDIIRC) BLENDED CONFERENCE

CONFERENCE THEME

**Innovative Pathways to
Education for Sustainable
Development: Leveraging
Technology, Promoting
Inclusivity, and Cultural
Heritage for a Resilient
Future**

DATES

**24-26
September 2025**



Prof Tawana Kupe
GUEST OF HONOR

Former Vice-chancellor: University of
Pretoria.



Prof. Jean Greyling
Keynote Speaker

Nelson Mandela University, South Africa



Dr. Yogesh Velankar
Keynote Speaker

Indian Institute of Technology Bhilai
Innovation and Technology Foundation,
India.



Prof. Lawrence Meda
Keynote Speaker

Sharjah Education Academy,
United Arab Emirates (UAE)

For more information on the international conference, please contact
the following:

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**SCAN QR CODE
FOR MORE INFO**



DAY 1: WEDNESDAY 24 SEPTEMBER 2025			
TIME	PROGRAMME ITEM	PRESENTER	FACILITATOR
08:30 - 09:00	Check in and Registration	All participants	Prof Nduduzo Phuthi Conference Chair: Department of Art. Design and Technology Education: NUST
09:00 – 09:10	Welcome and Introductions	Prof Nduduzo Phuthi Conference Chair: Department of Art. Design and Technology Education: NUST	
09:10 - 09:20	National Anthem & Prayer	Pastor Tomson Dube University Chaplain, NUST	
09:20 - 09:15	Vice Chancellor : Welcome Remarks	Prof M.E. Dlodlo : Vice Chancellor: NUST	
09:15 – 09:20	Introduction of Guest of Honor	Prof M.E. Dlodlo : Vice Chancellor: NUST	
09:20 - 09:45	Guest of Honor Presentation	Professor Tawana Kupe	
09:45 - 09:50	Question and Answer Session	Dr Mabhena Mpofu , Department of Science, Mathematics and Technology Education (Researcher, NUST)	
09:50 – 09:55	Introduction of Keynote speaker	Prof Lwazi Sibanda : Executive Dean Faculty of Science and Technology Education, NUST.	Dr D Chasokela (FSTE Research Conference Coordinator), NUST
09:55 - 10:15	Keynote Presentation	Dr Yogesh Velankar India Institute of Technology Bhilai, Innovation and Technology Foundation India	
10:15 – 10:20	Question and Answer Session	Dr Paul Makoni , Chief Research Officer, NUST-(Q and A Facilitator),	
10:20– 10:25	Announcements	Mrs Nomathemaba Moyo , Department of Science, Mathematics and Technology Education, NUST	

10:25 - 10:45	TEA BREAK		TEA BREAK	TEA BREAK
VENUE	VENUE: ROOM 1		VENUE: ROOM 2	
	Parallel Session A Chair: Dr Mabhena Mpfu		Parallel Session B Chair: Dr Elphina Mhlanga	
	Rapporteur: ICT Technician: Mr N Nhlabano		Rapporteur: ICT Technician: Mr B Mpande	
10:45 - 11:05	AI and educational equity: empirical evidence from underserved secondary schools advancing sustainable development in lupane district.- Fedinah Moyo		Climate literacy and environmental education in Zimbabwean textbooks: The role of publishers in advancing education for sustainable development content - Hazellynne I. N. Ndlovu, Priscilla Nkomazana, Effort C. Chiware, Sifundo Nkomo	
11:05 - 11:25	Leveraging digital platforms to deliver culturally relevant financial literacy Education to marginalized youth in lupane - Gochera Sekai (Virtual Presentation)		Viability of Virtual Presentation internships and apprenticeships within Tvet Institutions in Manicaland Province: A feasibility study - Chikuni Hudson	
11:25 - 11:45	Innovative Pathways to Education For Sustainable Development: Leveraging Technology, Promoting Inclusivity And Cultural Heritage For A Resilient Future - Ngoni Nhari (Virtual Presentation)		Greening assessment methods for sustainability in institutions of Higher learning: practices, challenges and way forward — A case study of Higher Institutions in Gweru - Ngara R & Dr L Hadebe (Virtual Presentation)	
11:45 - 12:05	Strategies utilised by Science Teachers in integrating technology to support learners with disabilities in Manzini Primary Schools of Eswatini - Maseko Thamsanqa, Bhebhe Sithulisiwe, Dlamini Mfanasibili (Virtual Presentation)		Teacher Education for Sustainable Development in Zimbabwe in the 21st Century. Challenges and opportunities - Sibanda Louis	
12:05- 12:25	The impact of technology on curriculum development in Higher and Tertiary Education institutions in Manicaland, Zimbabwe - Chapeyama Sylviah		Technology for Sustainable Development in Zimbabwean community gardens: engaging University students in green processing of indigenous plants - Lilian Manwa, Molyn Mpfu And Jenet Mudekunye	
12:25 - 12:45	Exploring the potential of AI in Chemistry Education: Development and evaluation of the ZIMCHEM tutor, an offline-first mobile application for Zimbabwean students— Matibela Ipelegeng, Gutuza Bongani		Unlocking potential: transformational leadership for inclusive and sustainable education in selected marginalised schools communities in Lesotho and Zimbabwe - Guvhu Rosemary, Hungwe, Sally-Anne, Marake, Maphole	
12:45 - 13:05	Predictive learning analytics for Sustainable Development Education: Early intervention systems to reduce dropout rates in STEM programs - Guvava Brian Tinashe		Total Quality Management practices in Higher Education. A case of five State Universities in Zimbabwe - Dr John Tenha and Dr Denias Muzenda	
13:05 - 14:00	LUNCH BREAK		LUNCH BREAK	
VENUE	VENUE: ROOM 1		VENUE: ROOM 2	
	Parallel Session C Chair: Mr Mkwelie Nhlanhla		Parallel Session D Chair: Dr Fedinah M	
	Rapporteur: ICT Technician: Mr N Nhlabano		Rapporteur: Onesimo Hahlani ICT Technician: Mr B Mpande	

14:00 - 14:20	Gamification of Algebra: Innovations in Teaching for Conceptual Understanding and Lifelong Learning - Sibanda Sipho, Moyo Ever (Virtual Presentation)	
14:20 - 14:40	ICT Tools in Schools as a Catalyst For Heritage-Based Innovation and Economic Transformation in Zimbabwe - Mlungisi Moyo & Nqobile Nhongo	
14:40- 15:00	Leveraging technology for supervision in Teaching Practice: Insights from Students in Continuous Teacher Professional Development Programmes in Zimbabwe- Sebele Florence, Hahlani Onismo Stephen, Makombe Faith	
15:00 - 15:20	Innovation in Educational Book Design: Exploring the use of Interactive Media by Zimbabwean Publishers - Priscilla Nkomazana, Hazellynne Ndlovu, Sifundo Nkomo, Effort Chiware	
1520-1530	AFTERNOON TEA BREAK	AFTERNOON TEA BREAK AFTERNOON TEA BREAK
15:30 - 15:50	An Investigation On The Effects Of Pepper-Bark Plant (Warburgia Salutaris) Leaf Extract As A Potential Organic Fungicide For Tomato (Solanum Lycopersicum Var Jemar) Crop Protection - Gaviyao Mary	
15:50 - 16:10	The role of technology in enhancing sustainable teaching and learning methodologies: a case of Interactive White Boards (IWB) at Shakashe Primary School - Isaac Chidaura	
END OF DAY 1		

DAY 2: THURSDAY 25 SEPTEMBER 2025			
TIME	PROGRAMME ITEM	PRESENTER	FACILITATOR
08:30 - 09:00	Check in and Registration	All Participants	Dr Elphina Mhlanga Faculty of Science and Technology Education, AAD Chairperson, NUST
09:00 - 09:10	Recap of Day 1 Presentations	Mr Tapiwa Muzari Faculty of Science and Technology Education, TEET Chairperson	
09:10 - 09:20	Introduction of Keynote speaker	Dr Florence Sebele Faculty of Science and Technology Education, NUST.	
09:20 - 09:55	Keynote Presentation	Professor Jean Greyling Nelson Mandela University, RSA	
09:55 - 10:10	Question and Answer Session	Mr Israel Dabengwa Research Uptake Manager (RIO, NUST)	

10:10 - 10:30		TEA BREAK	TEA BREAK	TEA BREAK
VENUE	VENUE: ROOM 1		VENUE: ROOM 2	
	Parallel Session E Chair: Dr E Mhlanga		Parallel Session F Chair: Mrs Kuda Moyo	
	Rapporteur: Mr L Mpofu ICT Technician: Mr N Nhlabano		Rapporteur: Mr Z Sibanda ICT Technician: Mr B Mpande	
10:30 - 10:50	Gender responsive budgeting; inclusive and quality education; sustainable development; Zimbabwe - Maruzani Nyevero, Maruzani Bhasera		An Assessment on the Effectiveness of Environmental Sustainability Mechanism in Technical And Vocational Education and Training Institutions in Manicaland, Zimbabwe - Vincent Ndlovu	
10:50 - 11:10	Teaching mathematics to visually impaired learners in rural Zimbabwe: A case study of inclusive practices in Bulilima district in Zimbabwe- Mrs Sibanda Sipho (Virtual Presentation)		Transforming Summative Assessment in Design and Technology: A Shift Toward Sustainability-Aligned Evaluation in Continuous Teacher Development Programs - Florence Sebele, Elphina Mhlanga, Faith Tlou	
11:10 - 11:30	Exploring the support given to students with visual impairments in Tertiary Education- Dr. Moyo Nonzma & Mr Cosmas Khumalo (Virtual Presentation)		Exploring Barriers To Equitable and Meaningful Stakeholder Engagement In Global Internet Governance Processes: A Case Study Of Zimbabwe - Charity Ncube, Andrew Mangena, Ntokozo Ncube	
11:30 - 11:50	The role of scaffolding in developing mathematical skills among low-achieving learners at a selected school in Zimbabwe- Sesilani Nkomo and Fungai Gonhi		Whose role is it anyway? A Critical Review of Responsibilities of Computer Science Lecturers and Students in a Contemporary Learning Environment - Dr Watson Manduna	
11:50 - 12:10	Harnessing Indigenous Knowledge and Digital Technologies To Foster Inclusive and Sustainable Education For Marginalized Communities In Zimbabwe – Muziti Petronnella		Aspiration for Education for Peace in Guidance and Counselling Curriculum for Teachers: Education for Sustainable Development Agenda - Malephoto Niko Ruth Lephoto (Virtual Presentation)	
12:10 - 12:30	Higher Education and graduate Employability : An Analysis of Student Industrial Attachment versus the demands of Education 5.0, the Zimbabwean Experience – Chimumoyo Bayya and Muzari Tapiwanashe		Financial Literacy in Higher Education: Examining Student Teachers' Competency at a South African University - Kimanzi Mathew, Peens Shaun, Vuthela Zamagebe (Virtual Presentation)	
12:30 - 13:00	Gender and stem education in rural Zimbabwe: Exploring socio-cultural barriers and emerging technologies - Mawarire Chrispen, Masvimbo Nomore		Discourse versus concrete commitment: an evaluation of Inclusive Education implementation in TVET institutions in Manicaland Province - Mlambo Melsie (Virtual Presentation)	
13:00 - 13:55	LUNCH BREAK		LUNCH BREAK	
1400 - 1415	SPONSOR PRESENTATION			
	VENUE: ROOM 1		VENUE: ROOM 2	

	Parallel Session G Chair: Dr Florence Sebele	Parallel Session H Chair: Mr Z Sibanda
	Rapporteur: ICT Technician: Mr N Nhlabano	Rapporteur: ICT Technician: Mpande B
14:20 - 14:40	Repositioning Indigenous Knowledge Systems In Engineering Education: A Zimbabwean Inquiry - Maphosa Michelle Rutendo Sibongile, Marufu Hapinos	Synthesis And Characterisation Of A Bioplastic From Purple Prickly Pear (Opuntia Ficus - Indica) Fruit From Chivi District In Zimbabwe.- Gudoshava Innocent
14:40- 15:00	Strategies for integrating Education for Sustainable Development in Higher Education. A bibliometric analysis - Mkwelie Nhlanhla	Community Resilience and Grassroots Development - Mandida Gusha
15:00 - 15:20	Nurturing Practicable Students' Understanding Through Creative and Innovative Teaching Practices: A Case Study Of The Science Foundation Students - Mokganya Mg and Matsilele O (Virtual Presentation)	Albinism And Vitiligo In TVET: Investigating For A Potential Formulation Protocol For An Ellagic Acid And Shinorine Based Photo-Protective Sunscreen Cream For People With Albinism And Vitiligo To Reduce Risk of Skin Cancers - Delight Saurowe
1520-1530	AFTERNOON TEA BREAK	AFTERNOON TEA BREAK
15:30 - 15:50	Impact of AI in Employability in Nigeria - Abubakar Lawal Bello, Mujidapha Bature, and Tanimu Lawal (Virtual Presentation)	Bourdieu's Cultural Capital Theory And Global Citizenship Education: A Sociological Analysis - Phoke Alpha Rakgwata (Virtual presentation)
15:50 - 16:10	Garlic, Aloe, and Hot Pepper As A Natural Aphid Control: A Sustainable Approach to Vegetable Pest Management - Leaketso Moyo; Langalenkosi Mangena; Muyeudziri Magoho; Moreblessing Dube	Technology and Innovation in Education For Sustainable Development - Daisy Chipfunde
17:00 - 18:30	NETWORKING DINNER	

DAY 3 : FRIDAY 26 SEPTEMBER 2025			
TIME	ACTIVITY	PRESENTER	FACILITATOR
08:30 - 09:00	Check in and Registration	All Participants	Professor Faith Tlou, Faculty of Science and Technology Education
09:00 - 09:10	Recap of Day 2 Presentations	Mr Louis Sibanda, Faculty of Science and Technology Education, SMTE Chairperson	
09:10 - 09:20	Introduction of Keynote speaker	Dr Elphina Mhlanga Faculty of Science and Technology Education, AAD Chairperson, NUST.	

09:20 - 09:55	Keynote Presentation	Professor Lawrence Meda Sharjah Education Academy, United Arab Emirates	
09:55 - 10:10	Question and Answer Session	Dr Fedinah Moyo, Faculty of Science and Technology Education, NUST.	
10:10 - 10:30	TEA BREAK		TEA BREAK
	VENUE: ROOM 1		VENUE: ROOM 2
	Parallel Session I Chair:		Parallel Session J Chair:
	Rapporteur: Mrs Nomathemba Moyo ICT Technician: Mr N Nhlabano		Rapporteur: Mr Moyo Mehluli ICT Technician: Mr A Mangena
10:30 - 10:50	The Role of Fintech in Driving Financial Inclusion in Developing and Emerging Markets - Muleya Henry, Gochera Sekai. J., Abel Sanderson		
10:50 - 11:10	Realisation of the Right to Education: The Digital Divide - Mildred K Chanhwa		
11:10 - 11:30	Sustainable Development Through Sport: An Inquiry Of Community Women In Masvingo Clubs - Jenet Mudekanye, Lilian Manwa, Molyn Mpofu		
11:30 - 11:50	The Role of Libraries in Education for Sustainable Development: A case of Harare, Bulawayo and Masvingo - Tevera Masunga , Ndlovu Sipo		
11:50 - 12:10	Transformative Role Of Design And Technology For Sustainable Development In Education At Secondary School Level In Zimbabwe - Elphina Mhlanga, Faith Tlou And Florence Sebele		
12:10 - 12:30	Heritage-Based Curriculum Implementation And Its Impact On Global Citizenship Development In Zimbabwean Schools - Tapiwanashe Mutohori		
12:30 - 12:35	Summary Reports on day 3 Sessions	Mr Tapiwa Muzari, Faculty of Science and Technology Education, TEET Chairperson	
12:35 - 12:45	Conference Round Up and way Forward	Prof Lwazi Sibanda, Dean, Faculty of Science and Technology Education, NUST	
12:45 - 12:55	Closing Remarks and announcements	Prof Nduduzo Phuthi: Conference Chair: Director (Institutional Research and Quality Management), NUST	
12:55- 13:00	Vote of Thanks	Dr Paul Makoni, Chief Research Officer, NUST	
GROUP PHOTO: ADMIN FOYER			