FUNDANI CHED
10 ANNUAL RESEARCH IN TEACHING AND LEARNING (RITAL) CONFERENCE 2022

Beyond the Pandemic: Rethinking and Revitalising our Pedagogical Practices in Higher Education Institutions

The RITAL conference will bring together academics across the disciplines who are interested in discussing teaching, learning, curriculum and pedagogical practices beyond the COVID-19 pandemic. The COVID-19 pandemic forced us to confront the vast inequalities concerning resources such as digital devices, laptops, data, and spaces to study. Digital inequality remains, and with the rapid increase in digital learning, poor and disadvantaged students struggle to access learning. The RITAL conference will enable academics to rethink and revitalise our roles as lecturers beyond the pandemic. A key concern for all academics is to use technology meaningfully by placing PEDAGOGY at the centre of student learning.

- How do we create a pedagogy that enables students to engage with knowledge in a dialogical manner between lecturers and students and between students and students?
- How do we ensure access to knowledge through our mixed, blended and contact modes of delivery?
- How do we shift from traditional top-down pedagogical practices to active learning pedagogies?
- How does technology-enhanced learning influence our perspectives of decolonisation in higher education?
- How can technology-enhanced learning lead to transformative learning among our students?

Find more RITAL information HERE.

Keynote speaker

Prof Mncedisi Maphalala

Prof Mncedisi Maphalala is a Director: of the Centre for Excellence in Learning and Teaching (CELT) at the Durban University of Technology and a former Dean in the Faculty of Education at the University of Zululand. He holds a D.Ed in curriculum studies from the University of Zululand. His career in Higher Education spans over 16 years as a Research Professor (North-West University), Professor at the University of Zululand and UNISA and Institutional researcher at the University of the Witwatersrand. He has also previously worked for the KZN Department of Education (as a teacher, HOD and Deputy Principal); between May and August 2015, he was a Visiting Scholar at the University of North Dakota (USA).   Prof Maphalala is an established researcher who has edited three books and two special journal issues and published a number of book chapters and research articles in peer-reviewed journals. Prof Maphalala has presented research papers at various local and international conferences. As a postgraduate supervisor and mentor, Prof Maphalala has supervised to completion Masters and doctoral candidates. He has conducted a number of large-scale commissioned research projects by external organisations such as the South African Institute of Distance Education (SAIDE), Human Sciences Research Council (HSRC), and Council on Higher Education (CHE). He has served on the Umalusi Research Forum, a sub-committee of the Umalusi Council, for a four-year term. He also serves on the CHE working group on Higher Education Practices Standards, Guidelines and Criteria Development and Quality Assurance Framework Capacity Development. His research interests are teacher education, self-directed learning, blended learning and Scholarship of Teaching & Learning.

	Research in Teaching and Learning (RITAL) 2022 CONFERENCE **THEME: Beyond the Pandemic: Rethinking and Revitalising our Pedagogical Practices in Higher Education Institutions**
	Auditorium
09h30–09h45	**Welcoming and Introduction: Auditorium** Learning and Teaching at CPUT Dr Xena Cupido, Director of Fundani CHED Dr Najwa Norodien-Fataar, Research Coordinator and HoD: Curriculum Development Unit
	Auditorium
09h45–10h15	**Keynote Address** **Prof Mncedisi Maphalala** **Re-imagining Higher Education online learning environments Post Covid-19 and beyond: A self-directed learning (SDL) Perspective** **Q & A** Dr Najwa Norodien-Fataar

	Auditorium	Imbizo Room
10h20–10h40	**Session 1** **Digital transformation – How are we reshaping post-COVID in engineering?** Authors: Dr Sweta Patnaik and Dr Bronwyn Swartz Chair: Frederika De Graaff	**Session 2** **Authenticity in the English curriculum: a continuing decolonial project** Author: Prof Candice Livingstone Chair: Nomxolisi Jantjies
	AB Room	**Imbizo Room**
10h45–11h10	**Session 3** **WORKSHOP 1** **Change Laboratories for academic development in higher education** Presenter: Prof James Garraway	**Session 4** **WORKSHOP 2** **Implementation of RPL as a specialised pedagogy** Presenter: Frederika De Graaff
11h10–11h25	**TEA**	

	Auditorium	Imbizo Room	AB Room
11h30–11h50	**Session 5** **Towards a hybrid education delivery model for a post-pandemic era at a university** Author: Dr Errol Francke Chair: Lutendo Nendauni	**Session 6** **Using Activity Theory to reflect on Learning, Teaching and Assessment in disruptive environments** Authors: Ms Anthea Pinto-Prins and Dr Lizel Hudson Chair: Mawanda Tshozi	**Session 7** **Post-COVID-19: Reflection on Pedagogical practice within the Arts** Dr Samantha Kriger Chair: Alexa Anthonie
	Auditorium	**Imbizo Room**	
11h55–12h15	**Session 8** **Maslow before Bloom: Unpacking application and registration data to enhance student success** Authors: Prof Oluwaseun Oyekola and Dr Lizel Hudson Chair: Lauren Davids	**Session 9** **Most of the time we are taking decisions for children** Author: Dr Naseema Shaik Chair: Alexa Anthonie	
	Auditorium		

12h20–12h50	Session 10 Teaching Excellence Award: Winner Dr Sweta Patnaik Using e-learning to support entrepreneurs at a time of crisis – A South African perspective	
13h00–14h00	LUNCH	
	Auditorium	**Imbizo Room**
14h00 – 14h20	Session 11 The integration of Work-integrated Learning (WIL) modalities as teaching tools towards Complex Practice of Food Science & Technology Author: Prof Jessy Van Wyk Chair: Dr Najwa Norodien-Fataar	Session 12 Supporting pre-service teachers' pedagogical reasoning: a pilot study Author: Dr Rolene Liebenberg Chair: Puleng Sefalane
	Auditorium	**Imbizo Room**
14h25–14h45	Session 13 Evaluating the effect of COVID-19 on assessment at a University of Technology: Legitimation Code Theory Author: Dr Elise de Vries and Dr Ncediwe Ndube-Tsolekile Chair: Nomxolisi Jantjies	Session 14 "SEAmester": A challenging classroom Author: David Walker Chair: Frederika De Graaff

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	Auditorium	Imbizo Room
14h50 – 15h10	**Session 15** **The Role of Empathy-Based Pedagogy in a Tutor Mentoring Programme** Author: Dr Koebraa Peters Chair: Mawande Tshozi	**Session 16** **Exploring Boot Camp as an Intervention Strategy for First-Year Mathematics and Physics at CPUT** Author: Dr Frikkie George Chair: Alexa Anthonie
	Auditorium	**Imbizo Room**
15h15-15h35	**Session 17** **Death, trauma, distress, fragility and the way forward: An autoethnographic reflection of an academic literacy lecturer** Author: Lutendo Nendauni Chair: Puleng Sefalane	**Session 18** **A multimodal approach to laboratory skills development** Author: Dr Courtney Puckree-Padua Chair: Lauren Davids
15h35–16h00	**Auditorium** **Vote of thanks and reflection and closing** Puleng Sefalane Dr Najwa Norodien-Fataar	

ABSTRACTS

Session 1
Digital transformation – How are we reshaping post-COVID in engineering?
Authors: Dr Sweta Patnaik and Dr Bronwyn Swartz

To be successful, all universities need a strategy. Digital transformation is unavoidable for all organisations to survive in contemporary times. The university where this research takes place has the One Smart Vision 2030 strategy - but the relationship is unclear if the One Smart Vision strategy supports digital transformation. Although the global pandemic eventually will come to an end, it will undoubtedly leave traces of its impact, on an unprecedented scale, including on the world's most developed educational institutions. Digital technologies have the power to transform existing products, services, and work processes in engineering. One way of finding this can be by adapting to a particular University of Technology's seven focus areas of One Smart Vision 2030 strategy. The significance of this study does not stem only from the critical role of higher education in building the workforce and knowledge economy but also being a pioneer and leader in seeing through transformation around the engineering curriculum. This is aligned with the institution's Vision 2030 and its goal to be ONE SMART Institution; in addition, we are not only addressing the institutional and faculty's transformation but also contributing towards internationalisation as well as the sustainability of the curriculum post-COVID-19. This two-stage study triangulates the findings of multiple research instruments, including surveys, interviews, and direct observation. Stage One was an attempted census online survey, which was sent to all teaching staff in the faculty. Some open-ended questions were posed at the end of each section of the survey, which was analysed qualitatively, and emerging themes were used to develop the qualitative data collection instrument (interview schedule), which was used in stage two, which involved online focus group sessions with semi-structured interviews which were an extension of the survey. This study found that successful digital transformation can be accomplished only if it is part of an institutional strategy.

Session 2
Authenticity in the English curriculum: a continuing decolonial project
Author: Prof Candice Livingstone

At a Faculty of Education in the Western Cape, the reliance on Eurocentric canons and traditional pedagogies in an English in Education B.Ed degree has come under scrutiny. The reason for this was initially rooted in the #FeesmustFall student movement, which called for the decolonisation of the current South African Higher Education landscape. As part of an ongoing study, a narrative research approach was implemented, with the narrative as the unit of analysis. What this narrative study has found is the essential inclusion of what I call the '3 A's', which are important for decolonising an English in Education curriculum. These are: Africology, Authenticity and Autobiographical learning. Storytelling artifacts were analysed, and it was found that lecturers who use autobiographical storytelling in their teaching challenge the Eurocentric manner in which content is delivered. Epistemic awareness of Africology and inculcating authenticity (as proposed by Richard Pinner) has also been suggested as a way of facilitating the inclusion of Afrocentric thinking in the English curriculum. This study shows that authenticity can be instilled in the curriculum using translanguaging, African graphic novels and the localised contextualisation of Shakespeare. These approaches ensure authenticity in language use and the creation of authentic tasks and show that students were able to leverage their lived experiences to produce authentic autobiographical texts, all of which foreground the importance of in-person context authenticity.

Session 3

WORKSHOP 1

Presenter: Prof James Garraway

James Garraway, Najwa Norodien-Fataar and Xena Cupido: **Professional Education Research Institute (PERI) and Fundani-CHED**

Change Laboratories are formative workshops that assist social groups in dealing with changes in working life. They are based on a learning theory, Activity Theory, developed by Yrjo Engeström (Sannino and Engeström, 2017). In this session, the change laboratory methodology is presented as a developmental tool for HE and its possible use in the graduate attributes project outlined. CPUT has recently launched a move to address the development of graduate attributes. Introducing the graduate attributes (GA) into the curriculum is a type of intervention of

something relatively new into what already exists. It goes alongside other interventionist projects like e-learning, epistemological access, service learning and so on. What they all have in common is that they envisage some sort of change and development of current practices and that staff must necessarily undergo learning in working with the intervention. For staff, there will always be clashes, discontinuities and difficulties between what they currently teach and the GA that they need to develop in the curriculum. In Activity Theory, these are points of learning as staff problem-solve these clashes, so producing some new ways of thinking and doing for their fields of study. In Activity-based change labs, we highlight the emerging clashes/difficulties and assist staff in understanding them as being embedded within the university systems (its culture and its history, for example). We then provide staff with theoretical tools (our main tool is the activity system triangle) to develop these clashes into productive learning events so that something combinatory and better can emerge. We develop their ability to formulate new knowledge or knowledgeable agency that goes beyond the workshops into the future. The Change Laboratory CL involves a series of 5- 8 facilitated workshops in which selected participants grapple with problems in working life and attempt to resolve these through developing new visions for practice (Virkkunen and Newnham, 2013). Participants are those who deal with the problems in their day-to-day lives and indicate a commitment towards working with these problems. The workshops begin with participants identifying issues in their working lives, which are then theorised as deep-seated and historically-based contradictions. Participants then, with the assistance of the facilitator, progressively develop new ideas or practices to resolve the problems. Each session is recorded and videotaped. This allows the opportunity for the facilitator to identify key moves (for example, key contradictions or key breakthroughs) in preceding workshops, which can then be used to stimulate discussion in following workshops.

Sannino, A. & Y. Engeström. 2017. Co-generation of Societally Impactful Knowledge in Change Laboratories. Management Learning 48, 1: 80-96.

Virkkunen, J., & D. Newnham. 2013. The Change Laboratory: A Tool for Collaborative

Session 4

WORKSHOP 2: **Implementation of RPL as a specialised pedagogy**.

Presenter: Fredericka De Graaff

Recognition of Prior Learning (RPL) is about social justice, inclusivity, and Lifelong Learning. RPL worldwide, but especially in SA, is an alternative route for access into a qualification and/or exemptions for knowledge gained outside the academia. RPL is seen in recent years as a specialised pedagogy: "RPL is a distinctively specialised process of mediating knowledge claims that originate from two or more sets of discursive practice, and this gives rise to particular configuration and enactments of RPL curricula, pedagogic practice and methods of assessment." (Cooper (et al.), 2016, 157) Interpreting RPL as a specialised pedagogy requires RPL practitioners to unpack the RPL process as a pedagogy rather than just an assessment. To understand and implement RPL within this paradigm, this workshop will start by unpacking the types of knowledge included in qualifications offered as CPUT. The types of knowledge - procedural or principled (Gamble, 2006, 2007) and the interaction between these two types influence the manner in which RPL can be interpreted and planned for a specific qualification. The interaction between the academic department, the discipline, and the profession all impact the interpretation of knowledge. In conclusion, this workshop will unpack the phases of RPL planning and implementation at the departmental level. We will unpack the roles of various RPL Practitioners and their interaction with the rest of the department.

Session 5

Towards a hybrid education delivery model for a post-pandemic era at a university

Author: Dr Errol Francke

This exploratory study aims to understand the lessons learned during COVID-19 and the potential benefits of a hybrid model for teaching and learning at university in a post-pandemic era. Seven lecturers in the Department of Information Technology at the Cape Peninsula University of Technology were surveyed. Grounded Theory is implemented as an epistemological framework. This research method guided what was to be explored, how it was to be researched, what constituted sufficient evidence, and why the knowledge produced was important. Results revealed

that online learning deprived students of socialising with their peers and other social and academic benefits from engaging with academics at a university. On the other hand, results also indicated that academic time was wasted on repeating the same content by delivering repeated lectures in the traditional face-to-face model. Interpretation of the data revealed that the Department of IT at the Cape Peninsula University of Technology should capitalise on the investment of time and resources expended during the pandemic. Although there was a strong consensus that online learning presents its challenges, all participants reported that a hybrid model would be preferable. In light of these, this study recommends changing the focus from a purely face-to-face contact teaching and learning model to a hybrid model for teaching and learning at a university.

Session 6

Using Activity Theory to reflect on Learning, Teaching and Assessment in disruptive environments

Authors: Ms Anthea Pinto-Prins and Dr Lizel Hudson

This paper focuses on disruptive environments in the Faculty of Health and Wellness Sciences at a University of Technology. A narrative timeline is used to indicate the transition from emergency remote learning to developing sustainable yet agile procedures and principles to continue (Learning, Teaching and Assessment (LTA) practices during disruptions. Activity Theory resonated with the context of this paper in that the interconnectedness and complexity of the disruptive Higher Education (HE) environments needed to be understood first in order to navigate forward with possible solutions. Therefore, by using Activity Theory as an analytical tool, the authors begin to shape their understanding of the complexities of inter-organisational LTA in HE. As the Faculty Teaching and Learning, and WIL Coordinators, using a qualitative, autoethnographic approach, the authors reflect on how the Faculty's Learning, Teaching and Assessment Strategy (FLTAS) aligns to the institutional Vision2030, that is to contribute toward "building One Smart CPUT" which fosters a sense of belonging and connectedness among staff and students and strives toward develop students with "a deeper sense of connectedness and sharing, whilst being highly competent to work in a technology driven economy and world" (CPUT, 2021, p.6). The FLTAS provides further guidance for the implementation of the institutional Learning, Teaching and Assessment (LTA) Policy and also facilitates the realisation of V2030. By building One Smart Faculty first, we aim towards developing transparent, functional and relevant faculty structures - and in doing so, we strive towards reaching our goal of One Smart CPUT.

Session 7

Post COVID-19: Reflection on Pedagogical practice within the Arts

Author: Dr Samantha Kriger

This paper is a reflection on successful pedagogical practice post-COVID -19 using the twenty first century skills competencies as stated by the world economic forum, namely: Critical thinking, Creativity, Communication and Collaboration (the 4 C's).

This reflection describes integrating the 4 C's into pedagogical practice moving from face-to-face to online teaching. How this took place, what was successful and what mechanisms were used will be described.

Since Kolb (1984) considers reflection a valuable contribution to the concept of learning from experience, this paper will form valuable insight into structuring our pedagogical practice to successfully develop the twenty first century learner.

Session 8

The integration of Work-integrated Learning (WIL) modalities as teaching tools towards Complex Practice of Food Science & Technology
Author: Prof Jessy Van Wyk

Food Science and Technology (FST) is widely considered a scarce and even critical skill. The growing urgency exists for FST graduates to have critical and decision-making skills and competencies to effectively address complex issues when employed. Comprehensive surveys among FST professionals and academics around the globe concerning training and career requirements/job market needs of future FSTs underscored the vital importance of mastery of effective communication, critical thinking, problem-solving, product development and quality and food safety management skills. FST curricula need to impart skills and competencies concerning innovation, and responsiveness to current/modern challenges (e.g., food safety and security; sustainable and environmentally friendly development), i.e., inculcate the complex practice of this multi-disciplinary field. To this end, a new curriculum (NC) was developed at CPUT. The hallmark of the NC is that complex practice is driven by

a central project (focused on integrating knowledge and skills and inculcating practice) from the first day of the first year, while a "silo approach" is further avoided through horizontal and vertical discourse within and among all levels of the course. These projects integrate all theory and practical skills among subjects and also address various elements of "Professional Practice", the cornerstone of which is effective communication (verbal, written et al.).Another key focus is WIL, the different modalities of which run as a common thread through all elements of the curriculum structure, each of which will be presented in detail using specific examples. Constructive alignment (i.e., application of revised Bloom's taxonomy) between instructional and assessment objectives, as well as the importance of a quality management system, are key aspects of the curriculum. Quality Circles are used to enhance student involvement in this regard. Innovation in terms of delivering in a normally strictly practical-bearing subject during Covid-19 Lockdown level 5 will be covered, i.e., how we used agile pedagogy to rapidly find a solution to: "How does one do NPD in the virtual space?"

Session 9

Most of the time we are taking decisions for children
Author: Dr Naseema Shaik

It is imperative that children's participatory rights are supported, and therefore it is incumbent upon adults to genuinely listen to them and take their decisions seriously. However, twenty-eight years into a democratic South Africa and children's participatory rights are not fully actualised, and implementation seems to be problematic in early childhood education. In this paper, I explore thirteen Diploma Grade R students' understandings about children's participatory rights and how these rights influence their practice using Lundy's model of participation (2007) and Honneth's theory of recognition (1995). A qualitative approach was applied, and data was collected through a focus group interview that was undertaken online through Microsoft teams. The data revealed that the teachers had a limited understanding of children's participatory rights but aligned more towards children's protection rights. The participants also lacked the understanding of the concepts of Lundy's model of participation and the adult's role in supporting children's participatory rights.

Session 10
Teaching Excellence Award presentation

Author: Dr Sweta Patnaik
Using e-learning to support entrepreneurs at a time of crisis – A South African perspective

The pandemic has left many new and existing entrepreneurs in the clothing manufacturing industry at a 'blind-alley'. On the other end, there are many leftovers off cuts and swatches disposed of by manufacturing units and retailers that could be otherwise given a meaningful purpose to contribute towards minimising waste and supporting the circular economy. This will prevent environmental pollution in many ways and contribute towards a sustainable world. While web-based interventions have been the highlight for many years, especially since the COVID-19 pandemic, we thought of bringing this into the world of the less privileged, where survivalist entrepreneurs, Small Medium and Micro Enterprises (SMEs) and the unemployed can benefit. South Africa is currently facing a high rate of unemployment; therefore, this effort is to slightly minimise this and contribute towards employment and skill building. We, through our final year diploma students at the Department of Clothing and Textile Technology at the Cape Peninsula University of Technology, presented the concept of an entrepreneurial hub. The project involved creating waste and minimising creative artefacts in various forms. There were multilingual digital storytelling videos as well as compressed videos and images for low-tech accessibility. The project currently has no cost involved to any party, yet it earns new skill sets and provides a source of income during these difficult times. The goal is to transform the primary idea that people have; a unidimensional understanding of what sustainability comprises and not how it could have a multidimensional impact on society's environment and improve the quality of life. There has been a lot of interest from the community and retail clothing industry offering support. The approach to the impact has been multimodal, with pre and post-surveys and focus group interviews with entrepreneurs and small businesses. Feedback has been positive, with people highlighting the need for such a change in South Africa and the culmination of such a platform where unemployment could be minimised. A qualitative study with key role players indicated the need for a formal free and open-access platform that needs to be made available, and we are in discussion at the institutional level. Further research will include establishing an entrepreneurial hub to ensure access to stakeholders with lab equipment funded by the department and the technology station.

Session 11

Maslow before Bloom: Unpacking application and registration data to enhance student success

Authors: Prof Oluwaseun Oyekola and Dr Lizel Hudson

The increased yet diverse student profile seeking access to the university calls for varied support offerings and resources for them to succeed. However, challenges in understanding student success lie in the complex and dynamic nature of the undergraduate student profile and landscape. As part of the national Siyaphumelela Network 2.0 project, this study aims "to improve institutional capacity to collect and use student data to improve student success across the higher education sector". The culmination of two Teaching Advancement at University 3 projects will be presented, where existing student application and registration data were used to inform and streamline university support initiatives and strategies to enhance student success. The institutional project is transformative and offers, through an understanding of the student profile, data to provide appropriate and tailor-made support to students of diverse backgrounds and educational experiences. This ensures appropriate engagement and subsequent scaffolding to enhance learning after enrolment. This approach also intends to be proactive as opposed to the conventional reactive measures implemented during the first year, evaluating students at risk after the first term or first semester through university formative assessments. Using this traditional approach, it might be too late for some students when the lapses are detected. The recommendations from this study promise to facilitate a shift from traditional top-down pedagogical practices to active learning pedagogies.

Session 12

Supporting pre-service teachers' pedagogical reasoning: a pilot study

Author: Dr Rolene Liebenberg

If pre-service teachers are to understand teaching as a knowledge-based reasoned practice, they must be given learning experiences in which they do more than observe what teachers do but understand the choices teachers make. The aim of this pilot study is to explore how technology such as video and an online platform can support pre-service teachers in developing knowledge-based reasons for the teaching and learning interactions planned in lessons. This study is longitudinal and builds on current research that tracks the shifts in pre-service teachers' reflective practice when provided explicit support on how to draw on conceptual knowledge to enhance their interpretation of teaching practice.

Legitimation Code Theory is used to analyse the reflections of the pre-service teachers with the aim to see how their reflections shift after the support provided. This paper will report on how videos of third-year pre-service teachers' mathematics lessons taught during teaching practice are used to support their reflective practice.

Session 13

Evaluating the effect of COVID-19 on assessment at a University of Technology: Legitimation Code Theory

Author: Dr Elise de Vries and Dr Ncediwe Ndube-Tsolekile

Evaluating the effect of COVID-19 on assessment at a University of Technology: Legitimation Code Theory
Student assessments serve as a critical tool in evaluating learning outcomes, and designing assessments that fit the intended purpose is essential. Using the Semantics dimension of Legitimation Code Theory (LCT) is an effective tool for gauging assessment practices, and its application has been used to evaluate chemistry assessments (Blackie 2018). This dimension provides a valuable way of assessing the complexity or abstraction of an assessment question. The terms semantic gravity (SG) and semantic density (SD) relate to context and the degree to which meaning is condensed. Therefore, SG is related to abstraction, while SD is related to the degree of complexity (Maton 2011, Maton 2014). This paper interrogates the effect of the COVID pandemic on the assessment criteria in terms of delivery, content covered, and semantics dimensions (namely, SG and SD). Furthermore, a comparative analysis of the assessment outcomes was undertaken to assess the effect of the changed criteria on overall course performance. Two fundamental chemistry assessments (one from 2019 and a second from 2020) were analysed using a published semantic translation device (Blackie, 2018). Comparative analysis of the assessments indicated that 2019 had similar semantics to the 2020 assessment paper. Although there were differences in content delivery, the results suggest that the pandemic did not compromise the quality of the assessment, and subsequently, teaching outcomes were maintained. Furthermore, the results revealed that the 2020 class average and pass rate was higher than the class of 2019. Therefore, we recommend integrated semantics dimensions for level 1 chemistry assessments.

Session 14

"SEAmester": A challenging classroom

Author: David Walker

SEAmester, South Africa's only class afloat, was initiated in 2016 by Prof Isobel Ansorge, from the Department of Oceanography, University of Cape Town, and has been held 5 times since its inception. Cape Peninsula University of Technology lecturers and students have been part of the programme since the beginning and have played an integral part in its development. The programme takes place during the July university vacation every year (covid permitting) aboard the South Africa's world class polar research vessel, the SA Agulhas II. The programme, which typically runs over 12 days, aims to combine limited theoretical lectures with hands-on practical work on a range of oceanographic instruments and systems, all under the framework of cross disciplinary research. Postgraduate students and lecturers from all universities in South Africa are invited to apply for a berth on the course. The benefits of the course will be discussed using the conceptual framework of antifragility as developed by Nassim Taleb and expanded by Jonathan Haidt. This is the notion that many aspects of human development improve under positive stress. Some of the aspects of the challenging classroom include close-quarter living with others of varied languages and backgrounds, potentially hazardous working conditions on a moving ship, sea-sickness and unfamiliar and complex equipment. All of this is done in the context of a scientific programme where mistakes matter. Students were asked to provide extensive feedback at the conclusion of the programme. The overall impression is that students experienced profound personal and academic growth as a result of SEAmester. The possible opportunities for CPUT lecturers and students will be highlighted.

Session 15

The Role of Empathy-Based Pedagogy in a Tutor Mentoring Programme

There is a clear need for more extensive academic and student support programmes in higher education institutions. This is particularly necessary since many students come from previously disadvantaged secondary institutions (Loots 2009). Peer tutoring is often used as a means to enhance students' academic performance (Clarence 2016). CPUT currently has an active peer-tutoring programme; however, a clear gap was identified in the support programme. Tutors are currently provided with two days of tutor training, and whilst it is beneficial, the training is broad, with no additional academic support provided. Several tutors mark erroneously due to a lack of knowledge regarding the marking process, as well as

course content. Furthermore, there have been cases in which feedback provided by tutors is either absent, unclear or derogatory. This observation prompted the initiation of a tutor support programme to guide tutors and teaching assistants (TAs) through the programme. Tutor programmes that focus on the needs of all those involved (i.e. academics, tutors and tutees) are essential. Further, it is important that during these programmes, the knowledge that is shared should be co-constructed as this collaborative process ensures cognitive development for all involved (Carnow et al. 2020). Studies have demonstrated that incorporating an Empathetic-Based Pedagogy approach is a vital component for successful teaching and learning (Warren 2014, Meyers et al. 2019, Altavilla et al. 2021). Further, discipline-specific tutor programmes have proved to be beneficial across varying disciplines (Baik and Greig 2009, Appelby-Ostroff 2017). The proposed tutor mentoring programme incorporates both of these paradigms and highlights the benefits of providing support to tutors in the Department of Conservation and Marine Sciences in the Faculty of Applied Sciences. For a peer-tutor programme to be efficient, appropriate tutors with adequate knowledge of the subject are crucial, including knowledge regarding the marking process and providing constructive feedback (Clarence 2016). Preliminary findings have demonstrated that the current programme has enhanced the tutors' method of support to tutees, improved their own professional development and consequently, enriched the learning experiences of both tutors and tutees.

Session 16
Exploring Boot Camp as an Intervention Strategy for First-Year Mathematics and Physics at CPUT
Author: Dr Frikkie George

Student support for student success is the key focus of the Fundani Student Learning Unit at CPUT, housing the STEM sector. The academic support provided by the STEM sector mainly focuses on Mathematics and Science. These courses seem very challenging for students and produce low pass rates and throughput rates at the university. Many factors can be attributed to the poor performance of STEM students. To address this challenge and recognise our students' socio-economic realities, we conducted a Boot Camp for first-year students at risk of failing Mathematics and Science courses during the September 2022 recess. The main aims of the Boot Camp were to provide just-in-time academic support for students deemed to be at risk of failing (borderline) and prepare them for the end-of-year assessments. This case study reflects on the Boot Camp activities and the findings of the diagnostic tests and interviews that were conducted. The data analysis shows that the students

benefited positively from the Boot Camp activities, although some students expressed concerns about the appropriateness of the content for the different courses. The results of the pre-and post-diagnostic tests indicate an improvement in the conception of the students who attended. We believe the Boot Camp initiative contributes positively to the Oneness and Smartness dimensions espoused in CPUT's Vision 2030 policy.

Session 17
Death, trauma, distress, fragility and the way forward: An autoethnographic reflection of an academic literacy lecturer.
Author: Lutendo Nendauni

Covid-19 forced a paradigm shift in the delivery of education; higher education (HE) institutions transitioned from face-to-face pedagogy to virtual platforms. The adoption of online learning consequently resulted in challenges of accessibility, affordability, flexibility and learning pedagogy. These challenges ultimately exposed a relational gap between lecturers and students due to emotional despair, trauma, distress, fragility, and changes in lifestyle and livelihoods. Existing literature on HE highlights that Covid-19 effects are emotionally taxing to both lecturers and students (Scherman, 2020; Wilson et al., 2020; Godbear & Atkins, 2021; UNESCO, 2022). The question is, what is the way forward? Drawing from this, the current study presents the personal narratives of an academic literacy lecturer on the relational gap due to the impact of Covid-19 on HE teaching and learning. In addressing the relational gap, the current paper adopts an autoethnographic approach to investigate best practices going forward for an academic literacy lecturer. The adopted qualitative autoethnography methodology seeks to describe and critique my own personal beliefs, experiences, knowledge, and values on how I supported students during the Covid-19 pandemic and how I intend to improve my practice. This methodology was chosen on the basis that it balances intellectual and methodological rigour, emotion, and creativity; and strives for social justice to enhance successful learning for students and myself as a lecturer. This ongoing paper will have an impact on how academic literacy lecturers/coordinators can support students while at the same time encouraging reflexive practices in teaching and learning.

Session 18
A multimodal approach to laboratory skills development
Author: Dr Courtney Puckree-Padua

In the pure sciences, laboratory skills development is an integral component in developing a well-rounded young scientist (Yap et al. 2021). In 2021, a multi-model teaching and learning approach was implemented in the practical component of the Marine Biology 1 subject. The approach was aimed at conforming to the regulations of Covid-19 while attempting to reduce the negative impacts online learning and teaching may have on the learning outcomes of the subject. The BioNetwork Virtual Microscope, which is a fully interactive 3D microscope, was incorporated to teach students the basic skills of microscopy. Students were instructed on how to use the simulator and were then tasked with various activities based on the simulator. Simulation activities included how to focus prepared slides under different magnifications. Based on student questionnaire feedback (92 % of students, N = 25), the microscopy simulation activities assisted in preparing them for the face-to-face practical session. Furthermore, all students suggested that the simulation be incorporated into the subject in the future because it provided a more interesting and interactive method of learning about microscopy. This year (2022), the laboratory simulations were assigned to the extended curriculum program students only, alongside complimentary face-to-face practicals. Due to the higher workload mainstream students experience, simulations were not compulsory for them though they were required to attend the face-to-face practicals. From general discussions, students indicated that the simulations assisted in completing the face-to-face practical and found the simulations more interesting than traditional tutorials. It is important to note simulators will never be able to be completely substituted for hands-on laboratory skills learning and teaching (Lewis 2014). As post-Covid-19 learning and teaching strategy, when used in conjunction with face-to-face practicals, laboratory simulations reduce the time spent face-to-face as students are better prepared, provides a more interesting and interactive method of preparing students for the practical and arguably the most important factor, it hopefully improves the student's self-confidence in completing the face-to-face practical activity.

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