



**Mangosuthu  
University of Technology**

# **6<sup>th</sup>** *Teaching and Learning Colloquium 2018*

**“ The Future of Higher Education  
in the 21st Century:  
The Big Technology  
Balancing Act? ”**

**Southern Sun Elangeni, Durban  
11 - 13 April 2018**

**Hosted by the Teaching and Learning Development Centre (TLDC)**

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*6<sup>th</sup> Teaching and Learning  
Colloquium 2018*

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*6<sup>th</sup> Teaching and Learning  
Colloquium 2018*

## *The 2018 Colloquium Planning Team*



*Dr PR Gumede*  
Abstract Reviewer



*Dr MM Chili*  
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*Mr MF Mhlongo*  
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Conference Coordinator

*6<sup>th</sup> Teaching and Learning  
Colloquium 2018*

# 6<sup>th</sup> Teaching and Learning Colloquium 2018

*11 – 13 April 2018*  
*Southern Sun Elangeni, Durban*

**Theme: The future of higher education in the 21st century: the big technology balancing act?**

Globally, the focus of teaching and learning has been shifting from traditional teaching-centred paradigms to an increasing reliance on technology. The shift, influenced by multiple factors, is not without challenges or resistance. How do we balance this rapid shift with the question of quality? How do we creatively, proactively and constructively leverage the rapidly changing teaching and learning environment to respond to new generations of students while ensuring that academic excellence and quality are not compromised?

At the Teaching and Learning Colloquium 2018 we will deliberate on these and many other questions.

**The sub-themes are:**

- Deployment of creative technologies to enhance learning
- Innovations and emerging technologies for 21st century teaching & learning
- Going beyond PowerPoint
- Student Success / Assessment in education
- Student placement / profiling / diagnostic tests: are these useful?
- Making the first-year experience a success
- Data analytics for student success
- 21st century learning environment
- Student identity – who are we dealing with? Who are our students in the 21st century?
- 21st century trends in higher education
- Teaching today's students on their terms
- Professional development for the 21st century university teacher: What should we be focusing on?
- Lecture capture
- Quality teaching: does it really matter?
- The impact of globalisation on higher education
- Work-integrated education for the 21st century workforce
- 21st century graduate attributes

# *Welcome to the Teaching and Learning Colloquium 2018*



Dr JM Makua  
Senior Director  
Teaching and Learning Development Centre (TLDC)

2017 was the year in which we celebrated the 5th anniversary of the Teaching and Learning Development Centre (TLDC). It was a milestone that came amidst many developments and achievements for the TLDC. We could never have achieved what we have without the unrelenting support of University Management and our committed academic staff. For instance, most of my colleagues in the higher education sector that I invite to our annual Colloquium are awed by the amount of support we receive from MUT staff who unflinchingly attend in great numbers. They often ask what my secret is, but I don't think I have an answer to this question. I guess the answer could come from my colleagues themselves, for whose support I am always grateful. To them I say, "Keep the MUT flag flying high."

I also wish to give special credit to the colleagues from various academic institutions in the country who attend this Colloquium on an annual basis. We appreciate your support. We also do our best to reciprocate by attending similar conferences arranged by these institutions.

It would not be an exaggeration to say that this annual event is now a national brand and is fast breaking international barriers. Through this conference various partnerships with international institutions have been established. We are also basking in the admiration of the international guests who have attended our Colloquium and have openly endorsed this event as nothing but world class.

As a result of hosting Prof Mark Schofield from Edgehill University in the United Kingdom as our keynote speaker in 2016, I was invited to speak at his Teaching and Learning Conference last year. The invitation has also been extended in 2018. It can only get better from here.

I am obviously very excited by this upwards trajectory for the Colloquium, and our vision for the event is growing and maturing by the year. Colleagues across the sector responded overwhelmingly to our call for papers in 2017, allowing us to host parallel paper presentation sessions for the first time. The response has been even greater in 2018, resulting in more submissions than we could accommodate. Once again, thank you to all of you.

In typical Durban and MUT hospitality, I welcome you to Colloquium 2018.

*Dr JM Makua*  
*Senior Director and Conference Chair*  
*Teaching and Learning Development Centre (TLDC)*

*6<sup>th</sup> Teaching and Learning  
Colloquium 2018*

# General Information

## VENUES

DATES	VENUES	
11 April 2018	<b>Parallel sessions</b>	Great Ilanga, East Ilanga, North Ilanga
	<b>Cocktail Event</b>	Small Ilanga
12 April 2018	<b>T&amp;L Colloquium</b>	Great Ilanga and East Ilanga
	<b>Gala dinner</b>	Great Ilanga
13 April 2018	<b>Workshops</b>	Great Ilanga and East Ilanga

## We are on social media

Follow, 'like' and share the Colloquium on social media!

Facebook: <https://www.facebook.com/MUT-Teaching-and-Learning-Colloquium>

YouTube: MUT: Teaching and Learning Development Centre (TLDC)

## Language

The official Colloquium language will be English.

## University acronyms

Cape Peninsula University of Technology (CPUT)

Central University of Technology (CUT)

Durban University of Technology (DUT)

Mangosuthu University of Technology (MUT)

Tshwane University of Technology (TUT)

University of Fort Hare (UFH)

University of Johannesburg (UJ)

University of KwaZulu-Natal (UKZN)

University of Limpopo (UL)

University of Mpumalanga (UMP)

University of South Africa (Unisa)

Universities South Africa (USAf)

University of Venda (Univen)

University of Western Cape (UWC)

University of Zululand (Unizulu)

Vaal University of Technology (VUT)

Walter Sisulu University (WSU)

# Colloquium Programme

**11 April 2018 – Day 1**

8:30 – 8:45	Welcome - <i>Great Ilanga</i>	Dr JM Makua (MUT)
8:45 – 9:30	Keynote address - <i>Great Ilanga</i>	Dr WJ Green (DHET)

## PARALLEL SESSIONS

	<b><i>Great Ilanga</i></b> (Chair: Pillay R)	<b><i>East Ilanga</i></b> (Chair: Moodley M)	<b><i>North Ilanga</i></b> (Chair: Loqo T)
9:30 – 9:50	Majake T – Univen	Mathunjwa M – Unizulu	Dube MC – Unizulu
9:50 – 10:10	Makhanya NLB – MUT	Makhathini TP – MUT	Gumede PR – MUT
10:10 – 10:30	Mhlongo VX – MUT (Paper 2)	Taiwo M – Unizulu	Krishnannair A & S – Unizulu

**10:30 - 10:45**

**TEA BREAK - *Banqueting Foyer***

## PARALLEL SESSIONS

	<b><i>Great Ilanga</i></b> (Chair: Thopola MK)	<b><i>East Ilanga</i></b> (Chair: Mabote E)	<b><i>North Ilanga</i></b> (Chair: Krishnannair A)
10:45 – 11:05	Mohan George B – MUT	Nofemela F – MUT	Makhanya S – MUT
11:05 – 11:25	Sibuqashe MR – Unizulu	Makou T – TUT	Mnengi-Gweva D – WSU
11:25 – 11:45	Ndovela S – MUT	Magaret D & Maharaj A – UKZN	Motsoeneng M – CUT
11:45 – 12:05	Shange TGC – TUT	Mhlongo VX – MUT (Paper 1)	Siguntu M – VUT
12:05 – 12:25	Kgomo NP – UL	Machingambi S – UMP	Chikoko R – UKZN
12:25 – 12:45	Gumede M – MUT	Khuzwayo N – MUT	Ntwasa S – WSU

**12:45 - 13:30**

**LUNCH BREAK - *Lingela Restaurant***

**PARALLEL SESSIONS**

	<b>Great Ilanga (Chair: Naidoo K)</b>	<b>East Ilanga (Chair: Ramrung A)</b>	<b>North Ilanga (Chair: Gumede PR)</b>
13:30 – 13:50	Chili MM – MUT	Mdanyana L – WSU	Scheepers I & Rugbeer Y – Unizulu
13:50 – 14:10	Matenda S & Ncube R – WSU	Gupta K – UJ	Timm D – DUT
14:10 – 14:30	Muhuro P – UFH	Mhlana S – Unisa	Ncube B – WSU
14:30 – 14:50	Shamase P – MUT	Rajkoomar M – DUT	Ogle M & Archer V – CPUT
14:50 – 15:10	Loqo T – WSU	Sikhakhane N – MUT	Uleanya C – Unizulu
15:10 – 15:30	Sentsho L – MUT	Obaje TA – DUT	Nyar A – UJ

**15:30 - 15:40****TEA BREAK - Banqueting Foyer****PARALLEL SESSIONS**

	<b>Great Ilanga (Chair: Jinabhai CD)</b>	<b>East Ilanga (Chair: Ntwasa S)</b>	<b>North Ilanga (Chair: Ngcobo S)</b>
15:40 – 16:00	Moodley M – MUT	Pons D – MUT	Ngubane SM, Rugbeer Y & Sibucashe MR – Unizulu
16:00 – 16:20	Mabote NE – TUT	Pillay RP – Unizulu	Makgahlela LA – UL
16:20 – 16:40	Gamede BT – Unizulu	Hove D – MUT	Fon F – Unizulu
16:40 – 17:00	Gogela-Smith M – WSU	Ngubane SM – Unizulu	Dyakopu CN – WSU

**17:00 - 17:30****POSTER SESSION - Great Ilanga**

Presenters: Chihobo J - VUT
Luthuli C - Unizulu
Ramrung A - MUT
Thopola MK - UL

**18:00****NETWORKING COCKTAIL EVENT - Small Ilanga**

**12 April 2018 – Day 2**

8:30 – 8:40	Welcome	Dr JM Makua (MUT)
8:40 – 9:00	VC's address	Prof Marcus Ramogale (MUT)
9:00 – 10:00	Keynote address	Prof Ahmed Bawa (USAf)

**10:00 - 10:30 TEA BREAK - Banqueting Foyer**

10:30 – 11:30	Panel discussion	Prof N Ndlazi (MUT)
11:30 – 12:30	Keynote address	Prof B Cope (University of Illinois, USA)

**12:30 - 13:30 LUNCH BREAK - Lingela Restaurant**

13:30 – 14:30	Keynote address	Prof M Kalantzis (University of Illinois, USA)
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**PARALLEL SESSIONS**

	<b>Great Ilanga (Chair: Chili M)</b>	<b>East Ilanga (Chair: Chihobo J)</b>
14:30 – 14:50	Govender R – UWC	Mtshali ZE – Unizulu
14:50 – 15:10	Moletsane RI – VUT	Mayeza CA – UL
15:10 – 15:30	Naidoo GM – Unizulu	Samkange E – MUT

**18:00 Gala Dinner and Vice-Chancellor's Teaching Excellence Awards  
(Venue: Great Ilanga)**

**13 April 2018 – Day 3**

8:30 – 8:45	Welcome	Dr JM Makua (MUT)
8:45 – 9:00	DVC: Teaching and Learning	Mr G Govender (MUT)
9:00 – 13:00	Workshops	Facilitators

**13:00 LUNCH AND CLOSURE**

## *Profiles of Keynote Speakers and Workshop Presenters*



### **Prof Bill Cope**

Prof Cope is a Professor in the Department of Education Policy, Organization & Leadership, University of Illinois, Urbana-Champaign. His research interests include theories and practices of pedagogy, cultural and linguistic diversity, and new technologies of representation and communication. His and Mary Kalantzis' recent research has focused on the development of digital writing and assessment technologies, with the support of a number of major grants from the US Department of Education, the Bill and Melinda Gates Foundation and the National Science Foundation. The result has been the Scholar multimodal writing and assessment environment.



### **Prof Mary Kalantzis**

Prof Kalantzis was Dean of the College of Education at the University of Illinois, Urbana-Champaign from 2006 to 2016. Before this, she was Dean of the Faculty of Education, Language and Community Services at RMIT University, Melbourne, Australia, and President of the Australian Council of Deans of Education. With Bill Cope, she has co-authored or co-edited: *New Learning: Elements of a Science of Education*, Cambridge University Press, 2008 (2nd edition, 2012); *Ubiquitous Learning*, University of Illinois Press, 2009; *Towards a Semantic Web: Connecting Knowledge in Academic Research*, Elsevier, 2009; *Literacies*, Cambridge University Press, 2012 (2nd edition, 2016); *A Pedagogy of Multiliteracies*, Palgrave, 2016; and *e-Learning Ecologies*, Routledge, 2017.



### **Dr Whitty Green**

Dr Green is Chief Director for Teaching and Learning Development in South Africa's Department of Higher Education and Training. He leads the work of the Department in respect of the following: supporting the development of a university-based teacher education system that is able to produce sufficient numbers of high quality teachers for all education sub-sectors; developing, implementing and monitoring policy and programmes to support capacity development of academics and professional staff at universities (including through management and oversight of the Department's University Capacity Development Programme); and developing a coordinated system for the management of international postgraduate scholarship partnerships. Dr Green was formerly a school teacher, teacher training college lecturer and university academic.



### **Prof Ahmed Bawa**

Prof Bawa currently holds the position of Chief Executive Officer of Universities South Africa (USAf). Until the end of April 2016, he was Vice-Chancellor and Principal of Durban University of Technology. Until August 2010 he was a faculty member at Hunter College in the City University of New York where he was a member of the Department of Physics and Astronomy. He was also a member of the doctoral faculty at the Graduate Centre, also of the City University of New York. During this period he was also Associate Provost for Curriculum Development at Hunter College. He had previously, for about nine years, held the position of Deputy Vice-Chancellor at the University of Natal and then at the University of KwaZulu-Natal.

Prof Bawa has served as the Programme Officer for Higher Education in Africa with the Ford Foundation and led and coordinated the Foundation's African Higher Education Initiative. During this time he worked closely with the Association of African Universities, the Council for the Development of Social Research in Africa and so on. Prof Bawa holds a PhD in Theoretical Physics from the University of Durham in the UK and has published in the areas of high energy physics, nuclear physics, higher education studies, science education and to some extent in the area of science and society.

He served on a number of policy development teams in the post-1994 period and was an inaugural member of the National Advisory Council on Innovation till 2002. He is a Fellow of the Royal Society of South Africa as well as the Academy of Science of South Africa, of which he was one of the inaugural vice-presidents.



### **Prof Christine Winberg**

Prof Winberg of Cape Peninsula University of Technology (CPUT) holds the South African National Research Foundation Chair in Work-integrated Learning and leads the Work-integrated Learning Research Unit in the Education Faculty at CPUT. Her research focuses on professional and vocational education (particularly engineering education), the professional development of university teachers, and technical communication. She obtained a PhD in Applied Linguistics from the University of Cape Town and has lectured in applied linguistics and language education at the University of Cape Town, the University of the Western Cape and the University of Stockholm in Sweden. From 2010 to 2012 she was chairperson of the South African Association for Applied Linguistics. She was also the director of the Fundani Centre for Higher Education Development at CPUT from 2011 to 2015 where she was responsible for supporting curriculum renewal and academic staff development, and for promoting educational research.

# *Keynote Presentation Overviews*

## **New media affordances: Pedagogical alternatives in technology-mediated learning environments**

*Bill Cope*  
*University of Illinois, USA*

Schools and systems of higher education around the world are today undergoing changes that may prove to be as large and significant as the creation of modern education in the nineteenth century, characterised mainly by its infrastructure of the classroom, the textbook and the test. Disrupting this traditional model, we witness today the rise of formal education outside of these institutional forms (for instance: online schools, MOOCs, just-in-time training), as well as substantial changes in pedagogical modes within conventional schools (for instance: project-based learning, increased learner self-regulation, competence/mastery versus norm-based assessment). Educational technologies are a part of this equation. However, the transformation is fundamentally pedagogical, rather than technological. Technologies have the capacity to support pedagogical transformation, but equally to revive and fossilise old pedagogies. The focus of this presentation will be to suggest the shape of a new and emerging wave of pedagogies, and the educational technologies that support these pedagogies. I will provide examples from the experimental Scholar environment we have been developing with the support of grants from the Institute of Educational Sciences in the US Department of Education, and the Bill and Melinda Gates Foundation.

## **E-learning ecologies: Innovative approaches to teaching and learning for the digital age**

*Mary Kalantzis*  
*University of Illinois, USA*

For three decades and longer we have heard educators and technologists making a case for the transformative power of technology in learning. However, despite the rhetoric, in many ways and at most institutional sites, education is still relatively untouched by technology. Even when technologies are introduced, the changes sometimes seem insignificant and the results seem disappointing. If the print textbook is replaced by an e-book, do the social relations of knowledge and learning necessarily change at all or for the better? If the pen-and-paper test is mechanised, does this change the nature of our assessment systems? Technology, in other words, need not necessarily bring significant change. Technology might not even represent a step forward in education.

But what might be new? How can we use technologies to innovate in education? This presentation explores seven affordances of e-learning ecologies, which open up genuine possibilities for transformative, 21st-century learning – or what we call New Learning: 1. Ubiquitous Learning; 2. Active Knowledge Making; 3. Multimodal Meaning; 4. Recursive Feedback; 5. Collaborative Intelligence; 6. Metacognition; and 7. Differentiated Learning.

These affordances, if recognised and harnessed, will prepare learners for success in a world that is increasingly dominated by digital information flows and tools for communication in the workplace, public spaces, and personal life. This presentation offers a wide variety of examples of learning technologies and technology implementations that, to varying degrees, demonstrate these affordances in action.

## *Workshop Outline*

**Exploring the affordances of digital spaces for the development of innovative pedagogies: A workshop introducing the Scholar platform**

*Bill Cope and Mary Kalantzis  
University of Illinois, USA*

In a follow-on to our keynote addresses, join us in a workshop exploring the affordances of the Scholar multimodal writing and assessment environment, developed by a cross-disciplinary team of computer science and educational researchers at the University of Illinois, with the support of a series of research and development grants from the Institute of Educational Sciences in the US Department of Education, the Bill and Melinda Gates Foundation, and the National Science Foundation.

Bring your wireless-connected device (a laptop or a tablet – phones are too small to be particularly useable). In the workshop, we will explore: 1) the classroom discourse space, “Community”; 2) the peer reviewed writing in the multimodal writing and knowledge representation space, “Creator”; and 3) Learning Modules in the “Bookstore” space with which student learning is structured.

Our overarching questions in this workshop will be, how do the multimodal affordances of digitisation change the nature of learning? And what new kinds of curriculum and assessment are possible in “social knowledge” environments?

# *Presenters and Titles - Papers and Poster Presentations*

<b>Name</b>		<b>Title</b>	<b>Theme</b>
<i>Chihobo, Jackie</i> Chihobo.jackie411@gmail.com	VUT (Poster)	Translanguaging: A pedagogical approach for the 21st century	21st century trends in higher education
<i>Chikoko, Rita</i> Chikokor@ukzn.ac.za	UKZN	Experiences of team teaching: Implications for professional development of 21st century university teachers	Professional development for the 21st century university teacher: What should we be focusing on?
<i>Chili, Muntu</i> chilimm@mut.ac.za	MUT	Early warning systems – students at risk of failure	Data analytics for student success
<i>Dube, Mbusiseni Celimpilo</i> dube.mpilo@yahoo.com	Unizulu	The epistemologies of South African history teachers	Professional development for the 21st century university teacher: What should we be focusing on?
<i>Dyakopu, CN</i> cdyakopu@wsu.ac.za	WSU	The use of Safe Assignment and its influence on academic writing efficacy	Going beyond PowerPoint
<i>Fon, Fabian</i> FonF@unizulu.ac.za	Unizulu	Can integration of peer learning with formative assessment improve class pass rates and grades more effectively than summative assessment?	Student success / Assessment in education
<i>Gamede BT</i> gamedeb@unizulu.ac.za	Unizulu	Rural and irrelevant: Exploration of learning challenges among undergraduates in selected South African and Nigerian rural universities	Quality teaching: does it really matter?
<i>Gogela-Smith, M</i> mgogela-smith@wsu.ac.za	WSU	Evaluation of teaching: Amplifying the students' voice	Quality teaching: does it really matter?
<i>Govender, Rajendran</i> rgovender@uwc.ac.za	UWC	An exploration of geometry strategies used by teachers to solve geometry riders	21st century learning environment
<i>Gumede, Mzu</i> gumedema@mut.ac.za	MUT	Motivating students and developing their critical thinking capacities using orally traditioned metaphors	21st century graduate attributes

Name		Title	Theme
<i>Gumede, PR (Sphiwe)</i> siphieweg@mut.ac.za	MUT	The conception of teaching and learning among the Post-graduate Diploma in Higher Education (PGDHE) participants at a university of technology	Professional development for the 21st century university teacher: What should we be focusing on?
<i>Gupta, Kapil</i> kgupta@uj.ac.za kapiliiti@gmail.com	UJ	On innovative and emerging techniques to enhance teaching and learning	Innovations and emerging technologies for 21st century teaching & learning
<i>Hove, Darlington</i> Hoved@mut.ac.za	MUT	Findings from the implementation of structured mathematics tutorials at Mangosuthu University of Technology	Quality teaching: does it really matter?
<i>Kgomo, Ntobeko P</i> ntobekopeggy@gmail.com	UL	Factors affecting the socialisation of postgraduate students in a selected university	21st century trends in higher education
<i>Khuzwayo, Ntombikhona</i> khona@mut.ac.za	MUT	Reflecting on the experiences of first year university students: Lessons learnt	Making the first-year experience a success
<i>Krishnannair, A &amp; Krishnannair, S</i> Krishnannaira@unizulu.ac.za	Unizulu	The conceptual merger of 'university teaching' and 'graduate attributes' in the 21st century: Lessons learnt by a practitioner	Professional development for the 21st century university teacher: What should we be focusing on?
<i>Loqo, T</i> tloqo@wsu.ac.za	WSU	Is there a correlation between academic readiness testing and student success?	Student placement/ profiling/ diagnostic tests: are these useful?
<i>Luthuli, Cleopatra</i> LuthuliC@unizulu.ac.za	Unizulu (Poster)	Assessing environmental literacy of pre-service early childhood educators	21st century learning environment
<i>Mabote, NE</i> mabotene@tut.ac.za	TUT	A transformative approach to assuring the quality of teaching and learning in a multi-campus university of technology	Quality teaching: does it really matter?
<i>Machingambi, S</i> severino.machingambi@ump.ac.za	UMP	The impact of globalisation on higher education: A Marxist critique	The impact of globalisation on higher education

Name		Title	Theme
<i>Magaret, Dzvuka &amp; Maharaj, Ashika</i> maharajash@ukzn.ac.za	UKZN	The migration experience and cross-cultural adjustment of migrant Zimbabwean teachers in eThekweni municipality, KwaZulu-Natal	The impact of globalisation on higher education
<i>Majake, Thibedi</i> Thibedi.majake@univen.ac.za	Univen	Constructive alignment of outcomes, assessment tasks and assessment criteria: Teaching law in the 21st century	21st century trends in higher education
<i>Makgahlela, LA</i> lefose.makgahlela@ul.ac.za	UL	Investigating the information needs and information seeking behaviour of first-entering students: A case of University of Limpopo	Teaching today's students on their terms
<i>Makhanya, Buyi</i> buyi@mut.ac.za	MUT	Teaching assistants as secondary facilitators in an academic support unit in a South African university	21st century trends in higher education
<i>Makhanya, Sizakele</i> siza@mut.ac.za	MUT	My lived experience of mentoring and becoming a 21st century educator at a university of technology	Professional development for the 21st century university teacher: What should we be focusing on?
<i>Makhathini, T</i> thobeka@mut.ac.za	MUT	Recognising student differences: An 'open-mind' approach	Student identity – who are we dealing with? Who are our students in the 21st century?
<i>Makou, Tsabuki</i> MakouTE@tut.ac.za	TUT	Work-integrated education for the 21st century workforce	Work-integrated education for the 21st century workforce
<i>Matenda, S &amp; Ncube, R</i> smatenda@wsu.ac.za	WSU	A study of the metacognitive reading skills of first-year students at Walter Sisulu University's Mthatha Campus	Data analytics for student success
<i>Mathunjwa, Musa</i> MathunjwaM@unizulu.ac.za	Unizulu	Physical activity levels of undergraduate students at the University of Zululand	Student identity – who are we dealing with? Who are our students in the 21st century?
<i>Mayeza Carl A</i> carl.mayeza@gmail.com	UL	Academic adjustment of first-time entering students: How students make sense of surprises in a university setting	Making the first-year experience a success

Name		Title	Theme
<i>Mdanyana, Lungile</i> lmdanyana@wsu.ac.za mdanyanalungile@gmail.com	WSU	The potential of using mobile devices in improving English language among first-year university students	Innovations and emerging technologies for 21st century teaching & learning
<i>Mhlana, Siphe</i> Mhlans2@unisa.ac.za	Unisa	Investigating the impact of ICT use, access in learning in primary schools of South Africa: Gender and cultural belief	Innovations and emerging technologies for 21st century teaching & learning
<i>Mhlongo, VX</i> bhebhe@mut.ac.za	MUT	Investigating IT students' perception of their technical competency after WIL	Work-integrated education for the 21st century workforce
<i>Mhlongo, VX</i> bhebhe@mut.ac.za	MUT	The culture of Shared Personal Practice (SPP) amongst academic staff within a university of technology	21st century trends for higher education
<i>Mnengi-Gweva, Dorris</i> dmnengi@wsu.ac.za	WSU	Academic developers as change agents for learning and teaching in higher education	Professional development for the 21st century university teacher: What should we be focusing on?
<i>Mohan George, Bibin</i> bibin@mut.ac.za	MUT	A case study on out-of-choice decisions of students in career choosing in a university of technology in South Africa	21st century trends for higher education
<i>Moletsane, Ramadile I</i> ramadilem@vut.ac.za	VUT	The 21st century learning environments as electronic waste and their disposal	21st century learning environment
<i>Moodley, Mogasuri</i> Moodley.suri@mut.ac.za	MUT	The mathematics education of engineering students: Constraint or catalyst to progression?	Data analytics for student success
<i>Motsoeneng, M</i> smotsoen@cut.ac.za	CUT	Enhancing problem-solving skills in entrepreneurship education of Technical Vocational Education and Training (TVET) college lecturers	Professional development for the 21st century university teacher: What should we be focusing on?
<i>Mtshali, ZE</i> MtshaliZ@unizulu.ac.za	Unizulu	The teaching of English language comprehension skills in the Grade One multilingual urban classroom: A case study in KwaZulu-Natal	Teaching today's students on their terms

Name		Title	Theme
<i>Muhuro, P</i> pmuhuro@ufh.ac.za	UFH	Learning analytics and student success in higher education in South Africa: Rhetoric versus reality	Data analytics for student success
<i>Naidoo, Gedala Mulliah</i> Naidoog@unizulu.ac.za	Unizulu	Teaching with technology: "We've been having it"	Deployment of creative technologies to enhance learning
<i>Ncube, Busuman</i> bncube@wsu.ac.za	WSU	A comparative survey on the efficacy of orientation towards making the first-year experience a success	Making the first-year experience a success
<i>Ndovela, S</i> ndovelasl@mut.ac.za	MUT	Investigating the prevalence of dishonesty during e-assessments: A case study of End-user Computing students in South African universities	21st century trends for higher education
<i>Ngubane, Sithembiso M</i> Ngubanesm@unizulu.ac.za	Unizulu	Teaching practice: Experiences of PGCE students in secondary schools in KwaZulu-Natal	Quality teaching: does it really matter?
<i>Ngubane, SM, Rugbeer, Y &amp; Sibuyashe MR</i>	Unizulu	Mentorship programme: Experiences of first-year students at the University of Zululand	Making the first-year experience a success
<i>Nofemela, Fundiswa</i> nofemela@mut.ac.za	MUT	Monitoring Work-integrated Learning in the 21st century: Opportunities and challenges presented by technological advances	Work-integrated education for the 21st century workforce
<i>Ntwasa, Simbongile</i> sntwasa@wsu.ac.za	WSU	The importance of building a teaching philosophy to achieve quality learning and teaching experience in higher education	Professional development for the 21st century university teacher: What should we be focusing on?
<i>Nyar, Annsilla</i> anyar@uj.ac.za	UJ	Understanding the first-year experience in South Africa: Preliminary findings from the SANRC FYE Inventory Survey	Making the first-year experience a success
<i>Obaje, Timothy Adujo</i> taobaje@gmail.com	DUT	Furthering techniques for the enhancement of students' knowledge acquisition in tertiary institutions: The experience of Durban University of Technology	Innovations and emerging technologies for 21st century teaching & learning

Name		Title	Theme
<i>Ogle, Marie-Anne &amp; Archer, Vidius</i> oglemarianne@gmail.com boogskut@gmail.com	CPUT	'Uber'-ing Extended Curriculum Programmes into the 2020s – an integrated approach to teaching using past (since 2005) and future initiatives	Making the first-year experience a success
<i>Pillay, RP</i> rpillay23@gmail.com	Unizulu	Quality teaching: A critical reflection of group work for undergraduate Life Sciences Methodology students	Quality teaching: does it really matter?
<i>Pons, Dave</i> dave@mut.ac.za	MUT	Robots talking: How you can use Chatbots	Innovations and emerging technologies for 21st century teaching & learning
<i>Rajkoomar, Mogie</i> mogier@dut.ac.za	DUT	Innovative teaching and learning in a blended learning environment	Innovations and emerging technologies for 21st century teaching & learning
<i>Ramrung, Arthi</i> (Poster) ramrunga@mut.ac.za	MUT (Poster)	Mentorship for the 21st century student: Reflections of a Coordinator	Making the first-year experience a success; 21st century learning environment
<i>Samkange, Edgar</i> edgarts@mut.ac.za	MUT	Pre-enrolment and registration support: Learning from first-year students' initial experiences in a university of technology in KwaZulu-Natal	Making the first-year experience a success
<i>Scheepers, I &amp; Rugbeer, Y</i> ScheepersI@unizulu.ac.za RugbeerY@unizulu.ac.za	Unizulu	"You Belong Here" – The Unizulu Orientation Programme nested in a holistic approach to the first-year experience	Making the first-year experience a success
<i>Sentsho, L</i> sentsho@mut.ac.za	MUT	Data analytics as a mechanism for improving student success: A review	Data analytics for student success
<i>Shamase, Pumla</i> Pumlas@mut.ac.za	MUT	The functionality of static versus dynamic data	Data analytics for student success
<i>Shange, Thembeka</i> shangetgc@tut.ac.za	TUT	Learning English with fun: Examining the role of the English Word Power programme in motivating students to learn English	21st century trends for higher education

Name		Title	Theme
<i>Sibuqashe, Ramos</i> SibuqasheM@unizulu.ac.za	Unizulu	Integration and assessment of graduate attributes into the curriculum	21st century trends for higher education
<i>Siguntu, Mluleki</i> mluleki@vut.ac.za mluleki2000@gmail.com	VUT	The importance of information literacy in academic institutions	Professional development for the 21st century university teacher: What should we be focusing on?
<i>Sikhakhane, Nompilo</i> nompilo@mut.ac.za	MUT	The impact of social networks on the performance of employees: Case of an institution of higher learning	Innovations and emerging technologies for 21st century teaching & learning
<i>Taiwo, Mofoluwake</i> mofoluwaket@gmail.com	Unizulu	A comparative study of factors influencing students' career choice at Unizulu and DUT	Student identity – who are we dealing with? Who are our students in the 21st century?
<i>Thopola, Magdeline Kefilwe</i> Magdeline.thopola@ul.ac.za	UL (Poster)	Effectiveness of midwifery seminars as a teaching-learning method in Midwifery among final-year midwifery students at the University of Limpopo	Teaching today's students on their terms
<i>Timm, Delysia</i> timmdn@dut.ac.za	DUT	Engagement with high impact practices for holistic learning of first-year students: Sharing lived experiences of implementing General Education	Making the first-year experience a success
<i>Uleanya, Chinaza</i> chinazauleanya@yahoo.com	Unizulu	Investigation of the First Year Experience in a rural university in South Africa Cum Learning Experiences	Making the first-year experience a success

# *Abstracts for Parallel and Poster Sessions*

## **Sub-themes:**

- Deployment of creative technologies to enhance learning
- Innovations and emerging technologies for 21st century teaching & learning
- Going beyond PowerPoint
- Student Success / Assessment in education
- Student placement / profiling / diagnostic tests: are these useful?
- Making the first-year experience a success
- Data analytics for student success
- 21st century learning environment
- Student identity – who are we dealing with? Who are our students in the 21st century?
- 21st century trends in higher education
- Teaching today's students on their terms
- Professional development for the 21st century university teacher: What should we be focusing on?
- Lecture capture
- Quality teaching: does it really matter?
- The impact of globalisation on higher education
- Work-integrated education for the 21st century workforce
- 21st century graduate attributes

## Translanguaging: A pedagogical approach for the 21st century

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### **Theme: 21st century trends in higher education**

#### **Abstract**

Over eleven official languages are spoken in the Republic of South Africa, a nation which has a population of over 56 million people. Of these eleven languages, only two (English and Afrikaans) have enjoyed hegemonic status in the classroom, having been made official in the teaching and learning process from kindergarten to higher education. The other languages spoken by the majority of the people, which are African languages, have been marginalised and relegated to informal and oral use. Despite there being language policies waiting to be implemented in schools and higher education, the use of African languages in South Africa continues to remain a challenge that needs to be addressed. Poor performance in school has been attributed to this language dilemma where learners have to learn everything in a second language and never in their home language.

## Experiences of team teaching: Implications for professional development of 21st century university teachers

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**Theme: Professional development for the 21st university teacher: What should we be focusing on?**

### Abstract

This paper explores the team teaching experiences of three lecturers who taught the Education Studies module to final-year Bachelor of Education (B.Ed) students from an institution of higher learning in KwaZulu-Natal province, South Africa. These experiences were examined in terms of implications for professional development of the 21st century university teacher. South Africa has seen an increase in enrolments at institutions of higher learning since the advent of democracy. Increased enrolments have led to large classes as well as the need to increase lecturing staff. The Department of Higher Education and Training is currently engaged in a drive to recruit more lecturers through programmes such as New Generation of Academics Programme (nGAP) and Developmental Lecturers (DHET, 2016). These recruitment programmes target young academics who need professional development. Apart from being necessary for inexperienced lecturers, professional development is also essential for all who teach in universities to catch up with 21st century developments. Professional development is viewed as a process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purpose of teaching (Day, 1999:4). The above view of professional development suggests the value of collaboration (working with others) in contributing to the process of professional development. In this regard, team teaching has implications for professional development.

This is a qualitative study that adopted the narrative inquiry approach to produce the data. The narratives of the team teaching experiences of the three lecturers were analysed carefully to identify themes that relate to professional development. The findings revealed that team teaching was a positive pedagogical experience that created opportunities for, inter alia, collegial relationships through planning and teaching together, broadening of knowledge through sharing, observing and learning from others, and critical thinking – all of which contributed to professional development. Some negative pedagogical experiences were also identified such as inadequate time to complete what was planned and differences in beliefs about teaching. These findings suggested that team teaching, if well planned to counter the negative pedagogical experiences, can be a useful tool for professional development of the 21st century university teacher.

*Keywords: team teaching, professional development, 21st century university teachers, narrative inquiry*

## Early warning systems – students at risk of failure

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### **Theme: Data analytics for student success**

#### **Abstract**

Student failure is a serious negative outcome, but can be predicted in advance. Many activities, such as low attendance at lectures and tutorials and a failure to engage in routine administrative work, can indicate that a student is at risk. An early warning system (EWS) can draw the attention of teachers to students' learning needs early in the course of study, allow monitoring of progress in student learning, and guide the implementation of timely instructional interventions. This project draws on expertise from various student academic support leaders with the intention of developing a tool for predicting risk in advance and trialling it among first-time entering students. In consultations with student support leaders we sought to ascertain how teachers can use data to track and monitor student progress towards the completion of their studies. Students identified as 'at risk' will be invited to a meeting with their tutor/mentor (or other relevant academic staff) for peer-assisted learning and when necessary be referred to relevant support structures. These support structures are designed to improve meta-cognitive skills, approaches to learning, motivation and identifying pathways for student support. Predicting first-year student success has become a priority area for researchers in the student academic support and development units. Various researchers and institutions of higher learning have incorporated different indicators to quickly identify students with different learning needs, or who were at risk of not achieving their qualification for that year. Early warning systems were effective in engaging teachers and students in productive learning dialogues, and in supporting interventions that kept students on track to achieving their qualification.

*Keywords: student engagement, student retention, student success, at-risk students*

## The epistemologies of South African history teachers

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**Theme: Professional development for the 21st century university teacher: What should we be focusing on?**

### **Abstract**

The number of history learners from schools in and around Empangeni has declined since the introduction of Outcomes-Based Education (OBE) in 2005. Consequently, most schools have omitted history as a subject from their curricula. These diminishing numbers of school history learners have affected history teachers as well, with some being declared surpluses in their schools. The views of history teachers pertaining to their subject of specialisation have never been explored. The purpose of this study was to understand the impact of the epistemologies of school history teachers on their teaching in schools. Card sorting, interviews and document analysis were used to generate data from respondents. Results showed that learning history as a school subject equips learners with knowledge and skills that help them survive in life. Some history teachers believe that school history should be made compulsory for all the learners. The study concludes that school history has potential to develop learners by giving them valuable knowledge and skills that are important in capacitating them for life.

*Keywords: school history teachers, school history, epistemologies*

## The use of Safe Assignment and its influence on academic writing efficacy

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### Theme: Going beyond PowerPoint

#### Abstract

Plagiarism by students is an increasing problem at higher education institutions. However, the development of academic misconduct policies has done little to reduce the incidence of plagiarism since many incidences of plagiarism result from ignorance and poor skill development in writing rather than intentional misconduct. The purpose of this study is to examine the use of Safe Assignment and its influence on academic writing efficacy. Safe Assignment is a tool used to prevent plagiarism and to create opportunities to help students identify how to properly acknowledge sources.

Safe Assignment can be effective as both a deterrent and an educational tool for the learner and instructor. It is stimulated by the fact that it compares submitted assignments against a set of sources to identify areas of overlap between the submitted assignment and existing works. Furthermore, Safe Assignment can be a useful platform for learners and instructors in that it is based on a unique text-matching algorithm capable of detecting exact and inexact matching between a submitted paper and source material. This allows the learner or instructor the opportunity to review and rewrite what they have originally submitted, against the comparative results weighed by the Safe Assignment system.

The author shares her experience of using Safe Assignment at Walter Sisulu University, as well as recommendations on how Safe Assignment can be used effectively to develop academic writing skills while managing plagiarism.

*Keywords: writing efficacy, safe assignment, plagiarism, learning and teaching*

## Can integration of peer learning with formative assessment improve class pass rates and grades more effectively than summative assessment?

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### Theme: Student Success / Assessment in education

#### Abstract

Access to higher education has improved since 1994 with the availability of different educational loans, bursaries and government subsidiary strategies for studies. However, the numbers of students completing their diplomas and/or degrees within the minimum required time have dropped. Even those that have managed to complete their qualifications tend to have poor quality degrees. This highlights the need to keep researching assessment methods that can improve both pass rates and the quality of students. This study looked at how the integration of peer learning with formative assessment (M1) can influence class pass rates and grade quality, compared to traditional summative assessments (M2) practised in most schools. The study was carried out using 40 students in a third-year module (Digestive Physiology (DPH)) from the Department of Agriculture, University of Zululand. Two key topics were selected to be used for the study: i) Digestion of protein (TP1) and ii) Digestion of fat (TP2). For M2, TP1 was taught in class with the aid of PowerPoint presentations for 2.5 weeks, after which a summative assessment test was done. For M1, TP2 was divided into four sub-topics with each sub-topic containing 10 students. Each group was assigned to present in class within the first week. They were assessed on the first day of the second week and the assessment was returned on Day 2 with constructive criticism. Revision was done in preparation for a test by the end of the second week, which was also revised before the final assessment as Test 2. For M1 Test 1, 67.2% of the class passed, compared to 14.3% observed in Test 1 of M2. Test 2 of M1 showed a slight increase ( $P < 0.05$ ) in pass rate to 69.7% but 60% of students who failed Test 1 previously passed. In the final Test 2 of M1, the final pass rate dropped to 66% but the quality of the grade was far better. In M1 Test 1, 0% scored between 80-100% but 34.5% was observed in Test 2. In the final assessment for M2, only 51% passed compared to 66% in M1. In terms of grade improvement, only 2.8% scored 80-100% while another 2.9% scored 75-79%. The result in this study showed that M1 has the potential to increase both class pass rates and grade quality compared to M2. Although M1 seems to enjoy more success in terms of grade quality, the percentage class pass did not increase. However, this was associated with students' lack of time to attempt the question in the exam, not a lack of knowledge. Therefore, a further study is requested with more time so as to ascertain the promising results yielded by M1.

*Keywords: peer learning, summative assessment, formative assessment, pass rates, teaching methods*

## **Rural and irrelevant: Exploration of learning challenges among undergraduates in selected South African and Nigerian rural universities**

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**Theme: Quality teaching: does it really matter?**

### **Abstract**

This study explored the experiences and causes of learning challenges among undergraduates in selected rural universities in South Africa and Nigeria. A quantitative research design was adopted for data collection. The simple random sampling technique was used to select 934 students who served as participants in the study. Data for the study was collected through the use of a questionnaire which was analysed using descriptive statistics and Statistical Package for Social Sciences (SPSS). The finding of the study reveals that undergraduates in the two selected rural universities experience common learning challenges (including cognitive challenges, poor academic foundation, and difficult lecturer-student relationships, amongst others). These are caused by a lack of facilities, students' family socio-economic background and other factors. The study therefore recommends that necessary facilities and structures needed to facilitate teaching and learning should be provided, more lecturers should be recruited and cordial student-lecturer relationships should be encouraged. In addition, policies that will ensure safety on campus, as well as the adoption and use of the most suitable language of instruction, should be established.

*Keywords: teaching challenges, undergraduate, university students, rural university, South Africa, Nigeria*

## Evaluation of teaching: Amplifying the students' voice

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**Theme: Quality teaching: does it really matter?**

### Abstract

The use of evaluation of teaching (EoT) is a common practice in many universities across the world. Research shows that data gathered from this exercise can be used for different purposes in different institutions. In some universities for example, EoT is used to inform curriculum development and delivery in the hope that it will improve the quality of teaching and learning. In other universities the information is used for the recognition and rewarding of academic staff in faculties, and sometimes institution-wide. This thus demonstrates that EoT is regarded as a vital evaluative instrument in higher education. An important question that has been raised regarding EoT is “what makes a good teacher and how can we recognise him or her?” (Shevlin, Barnyard, Davies & Griffiths, 2000: 397). In the same vein, I ask myself: “Can EoT assist in determining the attributes of a good teacher?” In an ongoing study that commenced in 2017, I examine the role and extent to which student evaluation can contribute to the process of EoT, as applied at WSU. Data analysed from this study indicates that students do reflect on the teaching and learning process, the lecturer’s pedagogical skills as well as the learning environment, amongst other things. Some concerns however, arise from the students’ reflections on EoT. Other constraints that affect the successful implementation of EoT are also explored. In this paper I share preliminary findings of the study.

*Keywords: curriculum development and delivery, evaluation of teaching, higher education, students, teaching and learning*

Shevlin, M, Barnyard, P, Davies, M, & Griffiths, M. (2000). The validity of student evaluation of teaching in higher education: Love me, love my lectures? *Assessment & Evaluation in Higher Education*, 25(4), 397-405.

## An exploration of geometry strategies used by teachers to solve geometry riders

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### Theme: 21st century learning environment

#### Abstract

Senior Phase teachers enrolled for a mathematics teacher development course requested a workshop on geometry. The objective of the workshop was to refresh and enhance participating teachers' engagement with geometry and where appropriate, make them aware of possible pedagogical issues. Although various activities were dealt with, one of the key aspects was the solving of geometrical riders through reasoning and/or proof. In doing so, teachers were given sufficient opportunity to read, interpret and make sense of given information in relation to the geometrical diagram, and then use a relevant rider strategy to solve the geometry rider problem. Through reflecting on and taking cognisance of teachers' written attempts, as well as video records of group discussions and presentations during the workshop session, this paper (using a set of vignettes) provides a descriptive analysis of how teachers used relevant rider strategies – such as the congruency approach, direct application of theorem(s), the algebraic approach, the use of other branches (topics) of mathematics and analysis – within the context of reasoning a proof to solve the range of given geometry rider problems. More importantly, this paper empirically explores a general strategy that the teachers used to approach and tackle geometry riders.

*Keywords: rider strategy, congruency approach, algebraic approach, direct application*

## Motivating students and developing their critical thinking capacities using orally traditioned metaphors

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### Theme: 21st century graduate attributes

#### Abstract

The lack of motivation among students adversely impacts on their academic success. Hence there is always a great need for higher education practitioners to inculcate a culture of agency in their students. One strategy for instilling agency for the students' own learning and academic skills development is to employ orally-traditioned metaphors that are motivational in nature. This paper explores the extent to which the use of orally-traditioned metaphors motivates students to become agents of their own learning and achieve academic success. It is a study in progress which employs a qualitative research approach by collecting the motivational metaphors from the students in a South African university of technology – the metaphors which they learned from their schools and communities, including their interpretation thereof, as well as the extent to which they elicit reflective and critical thinking which culminates in agency regarding their learning.

*Keywords: motivation, academic success, agency, critical thinking, own learning*

## The conception of teaching and learning among the Post-graduate Diploma in Higher Education participants at a university of technology

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**Theme: Professional development for the 21st century university  
teacher: What should we be focusing on?**

### Abstract

Studying towards the Post-graduate Diploma in Higher Education (PGDHE) can play a significant role in teaching and learning. However, attracting academic staff members to embark on the programme can be complicated by a lack of understanding of its benefits in relation to student learning. Further complication arises in choosing between disciplinary studies and the PGDHE. At Mangosuthu University of Technology (MUT), a total of 21 academics have embarked on and successfully completed the PGDHE from 2014 to 2016. In this study I explored the reflections from PGDHE participants who were funded through the Teaching Development Grant (TDG). The study focused on how PGDHE transformed the conception of teaching and learning of academics at MUT. A qualitative method was used to solicit reflections from 21 academics who had successfully completed the PGDHE during the said period. Questionnaires were sent electronically (e-mailed) to all 21, of which 16 responded. Participants indicated that PGDHE helped them to realise that the end goal of teaching should be to enhance learning; to raise awareness about the possible weaknesses students might have; to understand higher education teaching practice; and to expand the perspective of teaching and learning through critical reflection. Reporting or reflecting on the conceptualisation of teaching remains academically undesirable to many in this setting, but asking questions about this topic is considered broadly acceptable. Conceptualisation of teaching and learning may be an important underpinning factor for understanding teaching and learning in higher education. Therefore, the study concludes that doing the PGDHE has the potential to improve teaching and learning within various disciplines.

*Keywords: conceptualisation, higher education, Post-graduate Diploma in Higher Education, Teaching Development Grant, teaching and learning*

## On innovative and emerging techniques to enhance teaching and learning

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### **Theme: Innovations and emerging technologies for 21st century teaching & learning**

#### **Abstract**

The accelerated global competitiveness and rapidly increasing level of higher education have necessitated the implementation of novel and innovative techniques to facilitate teaching and learning in engineering education. This not only ensures better understanding and learning by the students but also saves time and effort, enhances the success rate and helps to maintain high throughput. The present paper discusses some innovative and emerging techniques such as mind mapping, flipped classroom teaching, advanced level PowerPoint presentations integrated with audio-video, problem and project based learning etc. that have improved the effectiveness of teaching and enabled students to learn more effectively and develop their skills towards professional growth. Mind mapping is a creative and effective representation of a particular topic that precisely describes it in a way which is easy to grasp, remember and revise. The paper showcases some good examples of mind maps and discusses how this technique ensured time bound learning of the students. This paper also highlights the effectiveness of flipped classroom teaching compared to the traditional approach. Effective presentation slides equipped with audio-video in teaching were found to develop a deeper understanding of the topic and strong fundamentals. Problem and project-based learning also proved to be effective techniques where it is seen that assigning the project task dramatically improves the student's understanding of the contents of the subject. These techniques were applied in different subjects and at various levels. Some of the cases on the use of the aforementioned techniques, students' responses and assessment are discussed. The paper aims to promote these innovative and emerging teaching and learning techniques, and to encourage the academic community to adopt these for the overall development of the students.

## Findings from the implementation of structured mathematics tutorials at Mangosuthu University of Technology

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**Theme: Quality teaching: does it really matter?**

### **Abstract**

Mathematics is a challenge for many students enrolling in higher education in South Africa. Such students will require academic support to progress and succeed in mathematics programmes or programmes where mathematics knowledge is required, such as engineering. Mathematics tutorials have been a traditional form of support in many institutions. This article reports on the findings after implementing a structured mathematics tutorial support system for first-year engineering diploma students at Mangosuthu University of Technology. The study began with genetic decomposition of identified threshold concepts, with a view to understanding the mental constructs a student could make in trying to understand the concepts. The study then used the APOS (Action-Process-Object-Schema) theoretical framework to investigate the students' understanding of the threshold concepts in Mathematics 1. APOS was then used to develop a supporting learning guide. The implementation of the structured tutorials was carried out using the ACE (Activities-Classroom discussion-Exercises) cycle, a pedagogical approach meant to support the construction of mental constructs that enable the students to understand mathematical constructs. The ACE cycles were repeated each semester, from semester one in 2015 to semester two in 2017. The findings were analysed over this period to understand the impact of the structured tutorials as well as the possible limitations.

*Keywords: APOS, genetic decomposition, threshold concepts, ACE*

## Factors affecting the socialisation of postgraduate students in a selected university

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### Theme: 21st century trends in higher education

#### Abstract

##### Introduction

Most South African graduate students are ill-equipped to undertake independent graduate studies, because of the gap between undergraduate and postgraduate studies. This is due to a lack of adequate facilities, experienced supervisors and attention paid to the socialisation of post-graduate students. This study investigated three core elements of socialisation, namely, knowledge acquisition, investment and involvement. The idea of knowledge acquisition refers to the student's ability to understand and acclimatise to the academic culture, to meet faculty standards, and to perform role expectations. The concept of investment is viewed as the degree of time and energy that postgraduate students put forth in meeting programme requirements. Involvement encompasses the student's attachment to the programme, the profession and the discipline.

##### Problem statement

Post-graduate students confront a number of challenges in their education in South Africa. The factors affecting postgraduate study in South Africa that lead to low numbers of postgraduate students in the country include a lack of national and international financial support for students and a lack of institutional attention and resources devoted to supporting postgraduate students. In addition, a large number of supervisors are under-experienced and overburdened with work and have a large number of students to supervise.

##### Research objectives

- To investigate how postgraduate students are socialised in a university setting.
- To determine the knowledge acquisition experiences of postgraduate students.

## Research questions

- How are postgraduate students socialised in a university setting?
- What are the knowledge acquisition experiences of postgraduate students in a university setting?
- What are the investment experiences of postgraduate students in a university setting?

## Research design

The study used quantitative methods to collect data. The study consisted of (N=25) participants, 64% (N=16) were females and 36% (N=9) were males.

## Results

### *Knowledge acquisition and learning*

The absolute majority of respondents (76%) surveyed reported that they learned best when they participate in planning the learning experiences. 12% (N=3) “strongly agreed” with the statement, 8% (N=2) were “neutral” and only 4% (N=1) “disagreed”. The majority (36%) of postgraduate students (N=9) reported “strongly agree” that if a lecturer explained something to them that they thought was incorrect in some respects, they discuss the lecturer’s explanation with the lecturer, followed by 32% (N=8) who were “neutral” and 36% (N=9) “strongly agree”.

### *The supervision and research experience of postgraduate students*

The majority 56% (N=14) of the respondents from the survey agreed the institution provides opportunities for social contact with other postgraduate students. 32% (N=8) “strongly agree” that the institution provides opportunities for social contact with other postgraduate students and 12% (N=3) were reported to be “neutral”. This indicates that during the socialisation process, the majority of postgraduates have more contact with other students.

The majority (84%) of the postgraduates (N=21) agreed that postgraduate research studies have helped them to develop a range of communication skills, and 16% (N=4) “strongly agree”. In relation to the question concerning confidence about managing a research project as a postgraduate student, the majority of the students 60% (N=15) “agree”, 28% (N=6) “strongly agree” to the question and only 16% (N=4) were “neutral”.

## Conclusion

This study showed the importance of graduate student socialisation. It also showed the importance of the three core socialisation elements, namely, knowledge acquisition, investment and involvement. Specifically, students are socialised through interaction with faculty and peers and integrated into the department’s activities and the culture of their disciplines.

*Keywords: socialisation, postgraduate students*

## **Reflecting on the experiences of first-year university students: Lessons learnt**

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### **Theme: Making the first-year experience a success**

#### **Abstract**

The purpose of this article is to reflect on the first-year experience of university students with the purpose of identifying the challenges they encounter which may have a negative impact on their success.

Research shows that students are more likely to drop out in the first year than at any other level for a number of reasons. These include being a first-generation student, being unprepared or under-prepared, coming from a poor social background and having little financial support. Focus group interviews were used to collect data from a sample of first-year university students across three faculties. The findings show that first-year students encounter diverse and very complex challenges which, if not mitigated, can have adverse effects on their chances of success.

*Keywords: first year experience*

## **The conceptual merger of 'university teaching' and 'graduate attributes' in the 21st century: Lessons learnt by a practitioner**

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**Theme: Professional development for the 21st century university teacher: What should we be focusing on?**

### **Abstract**

The higher education system in South Africa has witnessed an unprecedented level of challenges in the democratic era. From massification to free education, the system faces substantial transformational questions. Such questions resemble a conundrum that renders conventional approaches to the resolution of educational problems irrelevant. The transformation, its rationale and the associated paradigm are often in direct conflict with one another. University teaching as an idea in professional practice is thus being subjected to a significant re-conceptualisation by the practitioners. It is in this context that this research was undertaken to explore the extent to which an ideological merger of two constructs viz. 'university teaching' and 'graduate attributes in the 21st century' manifests in the experiences of practitioners.

The research followed the methodological tradition of critical reflection. The authors, belonging to two separate disciplines, used this method to critically analyse various experience-based dimensions of practice coupled with their idiosyncratic constructions of graduate attributes that foreground the idea of university teaching and learning. Personal belief systems, both inherited and subscribed to, were contrasted with progressive notions of higher education theory and practice. The research thus gave relatively greater emphasis to the philosophical aspects of a set of personal convictions that were then contrasted with the popular notions of inclusive approaches constantly applauded in the higher education transformation discourse.

The exploration revealed the extent to which professional practice is inadvertently influenced by deep-rooted convictions and the extent to which personal introspections undertaken in a professionally supportive atmosphere would yield a convincing rationale for practitioners to become agents of change as envisaged by the transformation discourse.

*Keywords: university teaching and learning, graduate attributes, transformation discourse*

## Is there a correlation between academic readiness testing and student success?

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**Theme: Student placement / profiling / diagnostic tests: are these useful?**

### Abstract

There is a growing desire in higher education to improve student success through focusing on important areas such as pre-entry testing, course completion, student retention, content mastery, learning outcomes and the overall student experience. The vast quantities of data produced by university IT systems has sparked a revolution in how we can use such data sets to understand the unique student experience as a determinant for student success. The student profiling project at Walter Sisulu University (WSU) sought to use pre-entry diagnostic data to understand the unique academic challenges faced by our first-time entering students. This would allow educators to have an understanding of their students' academic readiness for the higher education curriculum in order to provide tailor-made interventions. Data generated through this project will be used to provide a process that can be adopted by the university to (1) identify university-specific academic challenges faced by our first-time entering students, (2) determine curriculum-specific and developmental interventions required by struggling students and (3) inform curriculum delivery by educators at the university. The identification of these factors will lead to the university's ability of measuring teaching and learning efficacy and its impact on student success. An analysis of first-time entering students' mathematics, academic and quantitative literacies was performed for the 2014 to 2017 academic years in selected faculties. Student proficiencies were compared to pass rates to determine whether we are using a reliable tool to assess academic preparedness and to establish the possibility of a correlation between diagnostic testing and academic performances. The results of this project indicated that diagnostic testing alone cannot be a predictor of student success as there are a number of variables that have an effect on how our students perform in their courses. Furthermore the university needs to assess how the curriculum is structured and whether it is flexible enough to cater to the students' academic proficiencies. Are we trying to fit square pegs in round holes? Data from this project infers that the identification of enablers and barriers to student profiling at WSU is essential in implementing an evidence-based approach to academic student development.

*Keywords: student profiling, academic readiness, student success*

## **Assessing environmental literacy of pre-service early childhood educators**

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### **Theme: 21st century learning environment**

#### **Abstract**

The world faces serious environmental challenges and being an environmentally literate citizen will contribute positively to making it a better place for future generations. Pre-service educators are teachers in the making who have a responsibility to shape the education of our future generations when they qualify and become teachers. Institutions of higher learning are seen as places where pre-service educators can obtain relevant knowledge in order to become effective teachers who will lead the future generations towards addressing environmental and sustainability issues.

Pre-service Early Childhood Educators receive training in three major areas that they will have to teach when they qualify: Literacy (Languages), Life Skills and Mathematics (Numeracy). In the Foundation Phase (Grade R – 3) school curriculum, these areas are called learning programmes. The Life Skills Learning Programme is the one that has a component of environmental education called “beginning knowledge”.

The study explores the environmental literacy level of pre-service Early Childhood Educators at one institution of higher learning, their socio background, their attitudes towards the environment as well as their awareness and reaction towards environmental issues in their neighbourhood. To collect data semi-structured interviews will be used in focus groups. The sample size will consist of 16 participants. Since the B. Ed programme runs for four years, four participants will be chosen from each year level. History and Geography modules are offered in year one and the Life Skills modules are offered from year two up to year four in both semesters of each year. The choice for selecting participants from all year levels is to see what their level of environmental literacy is in each year level of study.

*Keywords: environmental literacy, pre-service early childhood educators*

## **A transformative approach to assuring the quality of teaching and learning in a multi-campus university of technology**

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### **Theme: Quality teaching: does it really matter?**

#### **Abstract**

Assuring quality of teaching in every higher education institution (HEI) continues to be both relevant and a high priority worldwide given that student learning has become the central purpose and core business of higher education (HE). As a result of massification of HE, there has been an increase in student diversity, underprepared students and large classes, resulting in the need for universities to adapt their curricula and teaching and learning practices to the needs of their students (CHE, 2004). In addition, HE is in a state of flux and experiencing increased demands from multiple stakeholders in terms of quality of education and increased efficiency in the HE system.

In this study, quality teaching is understood to involve the use of varied pedagogical approaches which are transformative to yield desired learning outcomes and are fit for purpose for 21st century students and the rapidly changing nature of HE. The University's teaching and learning strategy advocates for transformative teaching and learning approaches to ensure graduates that are employable, entrepreneurial and socially responsible in order to meet the challenges of the 21st century (TUT, 2014). This study provides a critical reflection on the role of quality in assuring transformed teaching and learning practices at Tshwane University of Technology and further provides the successes and challenges experienced in this multi-campus University in deploying quality assurance mechanisms to steer the transformation of teaching and learning. Data used in this study was collected from the author's portfolio which was compiled for a Postgraduate Diploma in HE studies. Findings reveal that quality assurance does not necessarily result in the improvement of teaching and learning; however, there is a need to balance assurance with quality enhancement to ensure transformed teaching and learning. The study concludes by identifying lessons learned and recommendations for future improvement.

*Keywords: quality, quality assurance, quality enhancement*

## **The impact of globalisation on higher education: A Marxist critique**

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### **Theme: The impact of globalisation on higher education**

#### **Abstract**

Globalisation has long been hailed as a process with immense benefits to society, social development and social systems. The globalisation process is largely credited for helping to create diversified and flexible learning systems as well as improved quality in communication systems that enhance the delivery of higher education (HE). Critics however, have accused globalisation of transforming the higher educational system from a public service to a commercial commodity that is sold for profit, with the ultimate effect that students from lower social classes struggle to access it. At the heart of this criticism is the idea that globalisation imposes values and an ethos on the HE sector that lead to increased educational inequality, social disharmony and strife. This conceptual paper uses a Marxist theoretical perspective to reflect on and analyse the impact of globalisation on HE practices and processes. It specifically explores how issues of access, equity and funding of HE, indigenous knowledge development and national culture are repressed by forces of globalisation. The methodology used involves secondary data analysis of local and international literature on globalisation. Findings reveal that globalisation, while good, has adverse consequences for the aspirations and developmental needs of less developed countries. It is therefore recommended that national and university leaders should not embrace globalisation uncritically. This is particularly so in an era where universities can no longer afford to ignore student calls for the decolonisation of HE.

*Keywords: globalisation, higher education, social class, marxist, globalisation*

## **The migration experience and cross-cultural adjustment of migrant Zimbabwean teachers in eThekweni municipality, KwaZulu-Natal**

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**Theme: The impact of globalisation on higher education**

### **Abstract**

There is paucity of research focusing on South Africa (SA) as a receiving country for migrant teachers and their adjustment to the new work environment. This study documented migration and work experiences of migrant Zimbabwean teachers in the eThekweni Municipality and ascertained how they were adjusting to their teaching craft in SA. The information gained in this study will shed light on how the current policies and working environment in South Africa are viewed by migrant Zimbabwean teachers. The data was drawn from a qualitative study that used face-to-face interviews and telephonic interviews. Snowball sampling was used for sampling since the target population was somewhat hard to reach. The sample consisted of fifteen Zimbabwean teachers and thematic analysis was used to analyse data. The push factors for migration were economic instability, political instability and unfavourable living conditions. The challenges encountered by Zimbabwean migrant teachers included unfriendly colleagues, ill-disciplined learners, difficulties in acquiring and renewing permits, lack of job security, unfamiliar teaching environment, lack of induction, difficulties in communication, and expensive accommodation. These hinder communication and deter migrant teachers from performing their job optimally and also hamper the progress of learners. They cited educational advancement as an opportunity since most of them were continuing with their education and working at the same time. This research concluded that more research on strategies that improve the adjustment of migrant teachers to the new working environment is needed. Possible strategies may include introduction of induction programmes in schools for both migrant teachers and local stakeholders and the offering of Zulu lessons to migrant teachers.

*Keywords: migrant teachers, cross-cultural adjustment, Zimbabwe*

## Constructive alignment of outcomes, assessment tasks and assessment criteria: Teaching law in the 21st century

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### Abstract: 21st century trends in higher education

#### Abstract

Debra Dawson and Michael Atkinson (2012) define a teaching philosophy statement as “a systematic and critical rationale that focuses on the important components defining effective teaching and their impact on student learning in the post-secondary setting and is sensitive to contextual factors”. Most of my teaching experience has been an interaction with the “Robert” type students as described by Biggs (1999:57-58). The majority of the students in my class were there to ‘obtain a qualification for a job’. They came to class with no questions to ask; they only wanted to put in sufficient effort to pass. These students “skated along the surface of the text” remembering disjointed facts. The “Susan” type students who were academically committed – bright and interested in their studies – were very negligible in numbers.

I have since become aware that I was not planning and conducting classroom dialogue in ways that might help students to learn. The assessment and teaching methods that I had been using were not effective in promoting good learning. My grading or marking practices tended to emphasise competition rather than personal improvement. I have noted that my assessment feedback often has a negative impact, particularly on low-achieving students, who are led to believe that they lack “ability” and so are not able to learn. I honestly trust and believe that all the things mentioned above are things of the past. The assessment and moderation paper which I will present at the 6th Teaching and Learning Colloquium will show how I have neutralised my previous and current ‘assessment antibodies’ that have been killing off good ideas and best practices in my teaching and learning and thereby hindered optimal students’ learning. I hope to share my experience with the other conference attendees.

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## Investigating the information needs and information seeking behaviour of first-time entering students: A case of University of Limpopo

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### **Theme: Teaching today's students on their terms**

#### **Abstract**

This paper reports the results of a study which investigated the information needs and information seeking behaviour of first-time entering students at the University of Limpopo. Such an investigation is vital in supporting first-time entering students to access and use information resources and services to meet their required information needs. The purpose of this study was to identify the information needs and information seeking behaviour of first-time entering students at the University of Limpopo and the challenges they faced in seeking information sources and services. The study not only identified these students' needs and behaviours, but it identified various information sources and services offered by the University of Limpopo Library to meet their information needs. It also established various information-seeking patterns used by first-time entering students when seeking information. The information needs and information seeking behaviour of first-time entering students have been chosen in an attempt to identify the pattern that these students follow when seeking information and the sources and services available to meet these needs. The study adopted a quantitative research method and a structured questionnaire was used to collect data. This data was analysed and the findings of the research showed that the respondents mostly seek information for lecture preparation, improvement of their personal competencies and current awareness. The finding of the study also revealed that students can benefit from attending information literacy training and awareness to enable them to acquire the information skills they need at university level. Based on the finding of this study, it is recommended that all first-time entering students attend the information literacy training and that electronic resources be provided for them by the library. The study contributed to the limited literature on information needs and information-seeking behaviour of first-time entering students.

## Teaching assistants as secondary facilitators in an academic support unit in a South African university

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### Theme: 21st Century trends in higher education

#### Abstract

Student learning and development is the central purpose of higher education. It is common practice that higher education institutions, globally, adopt teaching and learning systems that focus primarily on staff and student development. Teaching assistantships are common funding sources for postgraduate students that also assist departments in meeting their needs and achieving the flexibility necessary to accommodate and respond to course and module challenges. This practice aims at creating an enabling, effective and supportive learning environment which meaningfully contributes to the overall quality of learning, successful throughput and student retention. A variety of duties is performed by student assistants (TAs): they lead laboratory and teaching sessions, help with marking and entering of marks, carry out administrative duties, mentor others and so on. Noticeably, most teaching assistants receive little training before taking on their duties which often involve enormous responsibilities. It is contended that they are literally thrown into teaching environments in a sink or swim manner with no experience or training. This paper seeks to investigate the nature of TAs' experiences as secondary facilitators in an academic support unit under the guidance of academic literacy lecturers. Semi-structured interviews were used as methods to collect data. The methodology was underpinned by the constructivist approach whereby the TAs construct their conceptual and content knowledge understanding through guidance and training from experienced lecturers and faculty members of staff. This approach was used to frame and analyse this work. Findings reveal that teaching assistants need to be trained continuously on the job and that such programmes develop aspiring and future academics unintentionally. Most of them gained a great passion for teaching and expressed a wish to switch their professions. Evidently, one of these aspiring academics has enrolled for a postgraduate diploma in education.

*Keywords: teaching assistants, academic literacy, academic support, student learning and development, next generation*

## **My lived experience of mentoring and becoming a 21st century educator at a university of technology**

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**Theme: Professional development for the 21st century university teacher: What should we be focusing on?**

### **Abstract**

I have been teaching Clothing at a university of technology for many years and have received informal mentoring from colleagues. Literature reveals that many novice university educators leave the profession because of heavy workloads and a lack of guidance and support. That is the stimulus that influenced me to embark on this auto-ethnographic study. This paper explores the impact of my lived experience of mentoring in becoming a university educator. I focus on both personal and professional mentors as I answer the following questions: What has been the influence of specific mentors on my lived experience of becoming a university educator? What difference has awareness of mentors made to my development as a university educator? In responding to these questions, I use an auto-ethnographic approach, which incorporates self-narrative, to search deeply in order to understand connections between culture and narrative analysis. The strategies used to generate data about mentoring are the time line chart, metaphor drawing, and visual and textual artefacts. Findings indicate that mentors both at the professional and personal levels played important roles in my development as a university educator by imparting their values, knowledge and skills. Through the study, I have become aware of the significance of having mentors as a 21st century academic, whether it is at the personal or professional level. I have also become more conscious that, as a 21st century academic, it is my responsibility to emphasise the importance of mentoring to the young people that I teach. I also have the responsibility to mentor young people in order to contribute to the growth and development of the next generation.

*Keywords: mentoring, auto-ethnography, textual artefacts, visual images, metaphor*

## Recognising student differences: An 'open-mind' approach

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**Theme: Student identity - who are we dealing with? Who are our students in the 21st century?**

### Abstract

Students have different attitudes, different levels of motivation about teaching and learning, and also different responses to instructional practices and specific classroom environments. This paper seeks to demonstrate that an 'open-mind' approach in an engineering classroom could enhance a productive learning environment. Arguably, the more teachers understand the differences between students in their classes, the better chance they have of meeting their diverse learning needs. There are three categories of diversity that have demonstrated important implications for teaching and learning: differences in students' learning styles (characteristic ways of processing information), differences in learning approaches (surface, deep and strategic) and differences in intellectual development levels (attitudes about the nature of knowledge and how it should be acquired, processed and evaluated). This article uses the experience in an engineering classroom to review models that have been developed for each of these three categories, outline their pedagogical implications and suggest focus area for further study in the engineering discipline.

*Keywords: approaches to learning, learning styles, nature of knowledge, engineering knowledge, open mind*

## **Work-integrated education for the 21st century workforce**

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### **Theme: Work-integrated education for the 21st century workforce**

#### **Abstract**

The phenomenon of Work-integrated Learning (WIL) is broadly used in the context of universities of technology (UoTs), Technical Education and Vocational Education and Training (TVET) and Sector Education and Training Authorities (SETAs). What is common with all these entities is that they are providers of occupationally-directed training or at least somewhat career-driven education, with the result that WIL is common to them all.

This paper highlights how WIL is instrumental in equipping new graduates with the required employability skills to function effectively in the work environment. The paper further proposes that an outcomes-focused evaluation of WIL programmes will be vital in furthering skills development. The paper follows a qualitative approach, focusing on the best practices of placement and the evaluation of WIL candidates. This evaluation will be highly relevant in the coming years within the context of South African higher education.

## **A study of the metacognitive reading skills of first-year students at Walter Sisulu University's Mthatha Campus**

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### **Theme: Data analytics for student success**

#### **Abstract**

The National Benchmark Tests (NBTs) have over the last three years showed consistently that first-year students at Walter Sisulu University (WSU) lack adequate academic literacy skills to achieve success at university level. Among the skills that have not been taken seriously by the academic support services has been the development of metacognitive reading strategies. This research seeks to assess the existing metacognitive reading skills of first-year students, which can be used in supporting interventions meant to develop reading proficiency by the academic support unit in the university. An adapted version of the Metacognitive Awareness of Reading Strategies Inventory developed by Mokhtari and Reichard (2002) is used to assess the metacognitive reading skills from one hundred first years in the faculties of Educational Sciences and Commerce and Administration. The results show that students, as confirmed by the NBTs, do not have sufficient metacognitive reading skills and hence that the implementation of a comprehensive reading skills programme is essential for all first-years in the University.

*Keywords: metacognitive, reading, proficiency, academic support, inventory, NBT*

## Physical activity levels of undergraduate students at the University of Zululand

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**Theme: Student identity- who are we dealing with? Who are our students in the 21st century?**

### Abstract

**Introduction:** Regular physical activity plays a crucial role in the health and quality of life of students. Several instruments can be used to evaluate the physical activity levels (PAL) of a student, including the International Physical Activity Questionnaire (IPAQ).

**Objective:** The aim of this study was to evaluate the PAL of undergraduate students according to gender and year of study, as well as to compare the PAL of Physical Education (PE) students with others from different courses within the University of Zululand (Unizulu) living on the KwaDlangezwa campus.

**Methodology:** Three hundred students participated in the study, being 98 Physical Education students (62 women and 36 men) and 202 (116 women and 86 men) of other courses (Human Movement Science, Consumer Science, Biochemistry and Agriculture). The instrument used to measure the PAL was the IPAQ in its short version.

**Results:** Among the PE students, it was found that 92% of them were classified as active or very active; however, there was no significant difference ( $p \geq 0.05$ ) between male and female students. Concerning the other courses, it was observed that females are less physically active than their male counterparts ( $p \leq 0.05$ ). Human Movement Science students (90%) and Consumer Science (65%) were classified as more active compared with the Biochemistry (60%) and Agriculture (55%) students. However, there was no significance ( $p \geq 0.05$ ).

**Conclusion:** Generally, male students have a higher level of physical activity than female ones; the undergraduate students did not show similar patterns of PAL and this level remains constant during the PE course.

## Academic adjustment of first-time entering students: How students make sense of surprises in a university setting

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### Theme: Making the first-year experience a success

#### Abstract

##### Introduction

Many students register at universities with the purpose of obtaining educational qualifications in order to follow careers of their dreams. Some first-year students come academically and socially ill equipped, particularly students with a low financial foundation, and students who schooled in less resourced schools. The aim of the study was to investigate the academic adjustment of first-year students, and how students make sense of surprises in the university.

##### Research objectives

- To measure the academic adjustment of first-year students entering the university.
- To determine how first-time entering students make sense of surprises in the university.

##### Research design

The study used a quantitative approach utilising a repeated measures survey design. The study consisted of 72 learners, comprising of 37.5% (N=27) males and 67.5 % (N=45) females. The majority (62.7%) were under the age of 20, while 34.7% were between the ages 20-24, and 2.7% were over 29 years old.

##### Results

The results were quantitatively analysed using themes to make sense of the 'surprises'. The themes include the registration process, classwork, lecturers/professors, fellow students and senior students.

##### *The registration process*

The participants were asked about their surprise regarding the registration process. 37.5% (N=27) first entering students found the surprise "very unpleasant".

##### *Classwork*

The participants were asked if they had encountered any surprises regarding their classwork. 40.3% (N=29) students reported that the surprises they

encountered regarding their classwork were “unpleasant”, whereas 23.6% (N=17) students reported that the surprises were actually “pleasant” and 36.1% (N=26) were “neutral”. Some students were quite pleased with the surprise they encountered regarding their classwork.

#### *Lecturers or professors*

The participants were asked about what was surprising with their lecturers/professors. 65% (N=29) of the participants were pleased with their lecturers. 34.3% (N=42) first entering students were not pleased with their lecturers.

#### *Fellow students*

43.1% (N=31) first-time entering students were pleased with the surprises concerning their fellow students. 23.6% (N=17) of the participants were not pleased with their fellow students.

#### *Senior students*

51.4% (N=37) of first-time entering students were pleased with the surprises they encountered with regards to senior students in the university. 22.2% (N=16) students reported that they were not pleased with the surprises they encountered in this regard.

### **Conclusion**

The study found that when newcomers encounter a new behaviour setting, they experience a “surprise”, and they must make sense of surprising events in the setting. The study provided insight into academic adjustment, surprises and how students make sense in a university environment. The study also highlighted the need for on-line registration, programme orientation, mandatory consultation hours, and mentoring for first-time entering students. This study confirmed current thinking in socialisation research.

*Keywords: academic adjustment, surprises, socialisation*

## **The potential of using mobile devices in improving English language among first-year university students**

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### **Theme: Innovations and emerging technologies for 21st century teaching & learning**

#### **Abstract**

Information and Communication Technologies (ICTs) have a great influence on higher education in the 21st century in that they provide some interventions in current challenges faced by learners in higher education contexts. The main aim of this study was to determine and share results on the potential of using mobile devices in improving English skills (such as grammar) and increasing vocabulary among first-year university students who come from disadvantaged rural high schools and have a poor knowledge of English. The Cultural Historical Activity Theory (CHAT) has been used as a lens for this purpose. Data was collected through face-to-face interviews. Feedback obtained from participants was tabulated and summarised to correspond with each response received from participants. The overall results of the study showed that students had a positive attitude towards learning English skills through the use of mobile devices. The study recommends the shift in the lecturer's English teaching pedagogy towards an approach that supports the use of mobile devices.

## **Investigating the impact of ICT use, access in learning in primary schools of South Africa: Gender and cultural belief**

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### **Theme: Innovations and emerging technologies for 21st century teaching & learning**

#### **Abstract**

This paper investigates the different impacts of Information and Communication Technology (ICT) in education, looking at gender and cultural belief in two provinces of South Africa – the Eastern Cape and Mpumalanga. The department of education in South Africa has adopted the integration of ICT devices for teaching and learning in schools for all learners, regardless of gender and culture. Several results in the literature review of this research indicate that ICT has different impacts in education. While boys and girls both use ICT devices for school-related work or social networking, both take on different activities differently when working together. This observation is consistent in the western cultures, and most existing studies were conducted in the western context, where ICT is integrated at an early stage in learning and teaching. There is little or no research conducted on the impact of ICT in education in South African schools, especially in the Eastern Cape and Mpumalanga.

The research draws primarily on literature on ICT use, access, experience and attitudes towards ICT. These factors can influence the way learners view and use ICT in learning and teaching. The research employs a range of data collection methods including questionnaires and observation. Data is collected from grade 9 to 12 learners from marginalised rural schools, with particular focus on learners who are already using ICT as a tool of teaching and learning.

*Keywords: ICT devices, marginalised, culture, gender, access*

## Investigating IT students' perception of their technical competency after WIL

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**Theme: Work-integrated education for the 21st century workforce**

### **Abstract**

Work-integrated Learning (WIL) allows for the integration of academic learning with its application in the workplace. In some instances, the practice may be real or simulated and can occur mainly in the workplace, although it is possible at the university campus or online. The purpose of WIL is to equip students with work skills, hence it is advantageous for students to do their WIL in real work environments rather than in a simulated environment. It is imperative that proper planning goes into such programmes so as to maximise student learning. This study investigated students' perception of their technical competence after going through the WIL programme. Since universities aim to produce competent and confident graduates, it is important to investigate how students feel about their WIL experiences. The study was conducted among students studying towards a Diploma in Information Technology at Mangosuthu University of Technology in KwaZulu-Natal. Of paramount importance in the investigation was the impact of WIL on student learning. Therefore this paper aimed at establishing the learning processes experienced by IT students during the WIL programme. In carrying out this investigation, this work made use of a framework used to determine technical competence of employees, and a questionnaire was developed using this framework. The results of the questionnaire showed that as technological changes in the industry are not available in the Universities, most students struggle to adjust to the working world.

## The culture of Shared Personal Practice (SPP) amongst academic staff within a university of technology

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### Theme: 21st century trends for higher education

#### Abstract

The diversity of academic staff members' background prior to becoming lecturers in higher education presents a gap in the practice of teaching and learning. Most academics join academia from their respective fields with little or no previous exposure to the intricacies of content delivery and classroom dynamics. The absence of a platform for the exchange of ideas, knowledge and practices has potential to undermine the teaching and learning process. This disconnection is addressed by the existence of Professional Learning Communities (PLCs). PLCs endorse the sharing of experiences through the concept called Shared Personal Practice (SPP). Furthermore, the concept of SPP is embraced because it allows for collaboration, commitment towards professional improvement and the sharing of ideas and practices, thus eradicating the issue of remoteness amongst academics. Despite the popularity and benefits of SPP in the global context, not all institutions in Africa have adopted it. This paper explores the culture of Shared Personal Practices, the existence of Professional Learning Communities and knowledge sharing within a university of technology. A survey of academic staff members was conducted using qualitative methods, and focus group discussions were subsequently conducted with respondents grouped according to commonalities in their responses. The results were then thematically analysed. This study revealed a lack of knowledge and practice sharing amongst academic staff. Based on the findings, it is important that the approach used in teaching and learning be revised to incorporate activities that allow for the sharing of personal experiences by academics. The synchronisation of best practices has potential to enhance the performance of academics, consequently improving the learning experience for the students.

## Academic developers as change agents for learning and teaching in higher education

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**Theme: Professional development for the 21st century university teacher: What should we be focusing on?**

### Abstract

The current higher education setting is characterised by change as it adapts and responds to multiple agendas. With more focus on quality we are seeing greater emphasis on methods of accountability. Within this environment the professional practice of academic development is positioned as 'strategic', with one of the major roles of academic developers being 'change agents'. The question is what does this really mean in practice? As academic developers, sometimes we are the catalysts for change, but other times we are enacting change for others. As we enter into the process, it is important for us to ask questions such as whose change are we advancing and for what purpose? Where is the change coming from? What is the motivation behind the change? In this paper we review the current debate regarding the work of academic developers in higher education and their rightful 'place' in higher education, particularly with regard to notions of the discipline, research and scholarship of teaching. We describe and compare the work of discipline academics and academic developers and argue that the two are more similar to each other than different. We acknowledge the challenges and tensions that exist in the overlap between the domains of expertise of discipline academics and academic developers, and attempt to articulate sources of these tensions in a conceptual model. Ultimately we defend two propositions: (1) that academic developers are, by the nature of their work, academics; and (2) that the discipline that academic development is a part of, namely the discipline of higher education, is a legitimate academic discipline in its own right. The consequences of these two propositions are explored.

*Keywords: academic development, academic staff development, higher education, social realism*

## **A case study on out-of-choice decisions of students in career choosing in a university of technology in South Africa**

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### **Theme: 21st Century trends for higher education**

#### **Abstract**

This paper investigates one of the trends that lead to attrition among first-year students and its impact on teaching and learning in a university of technology in South Africa. While analysing test results of students in a certain department, the poor performance results of 120 first-year diploma students were chosen as a sample, to find the underlying reasons. Quantitative and qualitative research tools like open and close ended questionnaires and personal interviews of the abovementioned group, based on thematic analysis, were used for the study. Findings indicate lack of interest in the course as a factor due to the absence of career guidance or of advice in pre-matric to yield the best out of the course, and due to uninformed decisions made by the student while registering. This paper further looks into certain suggestions for academic/career advising; first-year transitioning academic interventions like early alert and support systems; university and departmental extended orientations; first year seminars; tutorial and mentorship programmes; development of First-year Experience guides and living and learning programmes.

*Keywords: retention, attrition, thematic analysis, career guidance, transitioning*

## The 21st century learning environments as electronic waste and their disposal

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### Theme: 21st century learning environments

#### **Abstract**

The proliferation of 21st century learning tools has transformed education, making it easier and more accessible everywhere. Learners of today no longer have to rely on textbooks as the ultimate source of information. They use multiple 21st century learning tools to collect and find information they need. Learners who have used such electronic tools have been found to have higher thinking skills relative to those who used traditional learning methods. But the use of such tools results in the problem of disposal once they are no longer being used. In this paper the researcher reviews the impact of electronic waste (e-waste) on the environment and human health. Electronic waste has become one of the 21st century challenges facing the world of today. The problem with electronic waste is that it contains toxic materials. When electronic waste is not managed properly it poses adverse consequences to the environment and human health. When electronic waste is in a landfill it seeps out into the environment, contaminating land, air and water. In this paper it has been found that there is a lack of awareness about the negative impacts of such waste on the environment and health. Based on the findings, it is therefore recommended that electronic waste education be part of the curriculum. Governments also need to enforce laws and regulations in this regard.

*Keywords: electronic waste, 21st century learning environments, toxic material, environment, human health, education*

## The mathematics education of engineering students: Constraint or catalyst to progression?

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### Theme: Data analytics for student success

#### Abstract

South Africa faces a critical shortage of engineering professionals in the country. National initiatives to rectify the crisis include the White Paper 3 on Higher Education Transformation, the National Development Plan and the Higher Education Act. These national initiatives led to the increased intake of engineering students at a South African Higher Education Institution (SAHEI). Despite these national initiatives, the SAHEI is not graduating engineers in sufficient numbers in relation to its intake to effectively address the critical shortage. The poor graduation rates of undergraduate engineering students has been attributed, in part, to poor pass rates in mathematics. While mathematics is a core module in engineering, it is a constraint to progression in engineering, thus raising the mathematics education of engineering students as a concern. This article reports on a qualitative study conducted at the SAHEI which sought to understand how teaching and learning is approached in the core mathematics module, Mathematics for Engineers (ME) in the engineering curriculum. The study examined the structure of pedagogy using Bernstein's concept of framing to determine the extent of control exerted by lecturers and students over the selection, sequencing and pacing of content and the evaluative criteria. Furthermore it sought to examine lecturers' and students' perceptions of how well they learned mathematics. Using a qualitative approach, internal and external languages of description were developed to link theory to data and to facilitate the collection of empirical data. A range of data were generated through document analysis, the observation of twenty-four lectures and interviews with four lecturers and fourteen students. The findings show that in the ME module, the lecturer exhibits strong framing over the selection, sequencing and pacing of content and the evaluative criteria. In addition to poor pass rates, lecturers, tutors and successful students assert that they only learned the mathematics sufficiently to pass the module. The implications are that students may not have developed the conceptual understanding of the mathematics required in subsequent engineering modules. The findings suggest the need for greater communication between mathematics and engineering lecturing staff regarding the content and pedagogy of mathematics for engineering students.

*Keywords: mathematics in engineering, engineering education, teaching and learning*

## **Enhancing problem-solving skills in entrepreneurship education of Technical Vocational Education and Training (TVET) college lecturers**

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**Theme: Professional development for the 21st century university teacher: What should we be focusing on?**

### **Abstract**

It is generally acknowledged that there is a lack of properly trained Entrepreneurship Education (EE) lecturers in the Technical Vocational Education and Training (TVET) college sector. This paper presents a case to suggest that a problem-based learning approach piloted at one TVET college in South Africa could be an effective pedagogical approach for entrepreneurship education. The study is couched in the Critical Emancipatory Research paradigm whose criteria for quality are determined on the basis of advancing the agenda for equity, social justice, freedom peace and hope. The study interrogates EE literature both locally and internationally to understand the challenges confronting EE lecturers and strategies they have employed to overcome them. The composition of participants includes among others, EE lecturers, civil society, business organisations and organs of state. Using participatory action research the participants are engaged in a series of stakeholders' forum discussions and data is generated from this series of workshops. The findings reveal that TVET College lecturers lack both content knowledge and pedagogy of EE. The conclusion is that in order for EE lecturers to succeed in teaching EE, they need proper training.

*Keywords: entrepreneurship education, Technical Vocational Education and Training College, Critical Emancipatory Research, participatory action research*

## The teaching of English language comprehension skills in a Grade One multilingual urban classroom: A case study in KwaZulu-Natal

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### Theme: Teaching today's students on their terms

#### **Abstract**

The main purpose of the study is to explore the teaching strategies used to teach English language comprehension skills in a Grade One multilingual urban classroom. Although the teaching of English comprehension skills is a critical concern for South African schools, this issue is not given attention by the Department of Basic Education (DBE) in its policy documents. The main purpose of the study is to explore the strategies teachers use to teach English comprehension skills to isiZulu home language Grade One learners. This case study uses a qualitative approach with an interpretive and purposive paradigm. The study will use BICS and CULP and schema theory. The key subjects are three teachers in a particular school in KwaZulu-Natal who are teaching English comprehension skills to Grade One learners. Data is generated through semi-structured interviews, observations and analysis of relevant documents, and is categorised according to themes derived from the theoretical framework. The study is still in progress. This study is expected to be useful for developing insights in foundation phase teaching, especially in teaching of English comprehension skills. The study is expected to have practical benefits for the community, observers and policy developers.

*Keywords: teaching, English, language, comprehension skills, Grade One, multilingual, urban, classroom*

## **Learning analytics and student success in higher education in South Africa: Rhetoric versus reality**

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### **Theme: Data analytics for student success**

#### **Abstract**

Learning analytics is one promising strategy that advocates claim has potential to improve student success in higher education, owing to the potential for resource optimisation using ICT technologies. However critics suggest that there is still limited empirical evidence of such success in higher education owing to contextual dynamics in institutions. Using the five-stage framework of learning analytics in education, this paper uses a literature-based methodology to examine why the promise of learning analytics continues to be rhetoric rather than reality when accounting for student success in South African higher education. This assertion stems from the researcher participation and engagement with projects on the use of learning analytics at three universities. The paper then provides recommendations on conditions sufficient for the shift from rhetoric to reality.

*Keywords: learning analytics, student success, ICT technologies, five-stage framework*

## Teaching with Technology: “We’ve been having it”

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### Theme: Deployment of creative technologies to enhance learning

#### Abstract

Information, Communication and Technology (ICT) is something that has become a part of our everyday life in higher education. The phrase “We’ve been having it” is borrowed from Vodacom’s popular advertisement that appeared in South African media. This has become synonymous with many academics that are surrounded by technology. Many faculty members are saying, “We’ve been having it, but I do not know how to use it”. Indeed, using technology for teaching has perplexed many academics. Moreover, ICT has transformed the teaching space and is also rapidly becoming revolutionary in the delivery of education. Classroom demographics are almost completely dominated ‘digital natives’ who thrive on engaging technology. Academics who do not transition to embrace the use of technology for teaching will soon find themselves unable to meaningfully engage these digital natives in class. Therefore, the purpose of this paper is to examine the “how to” use of technology for teaching. It also looks at some of the challenges that lecturers may face when using ICTs with their teaching. This is a qualitative study in progress using a desktop research approach in order to ascertain the current body of knowledge that exists and how it could be used to assist in providing workable solutions for the effective use of technology in teaching. The paper also focuses on how Constructivist Learning Theory (CLT), coupled with the Technology Acceptance Model (TAM), can form a framework that allows for easy implementation of and transition into the use of technology for teaching.

*Keywords: Technology Acceptance Model, Constructivist Learning Theory, teaching with technology, digital natives*

## **A comparative survey on the efficacy of orientation towards making the first-year experience a success**

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### **Theme: Making the first-year experience a success**

#### **Abstract**

South African universities are characterised by relatively low success rates (SA Green Paper for Post School Education and Training, 2012) and there is a high attrition rate in the first year (33% in 2013 according to the Council for Higher Education). Orientation of first-time entrants is one of the strategies to initiate support for first-year students in order to ensure their retention and success. If the first-year dropout rate is that high (33%) then it means even the orientation programme needs some scrutiny with a view to improving it. The study focuses on Walter Sisulu University's Mthatha Campus (Zamukulungisa site) where orientation has been attended by only 50% of first-time entering students in the last three years. This study seeks to ascertain reasons for this observation and possible solutions. In the process it is hoped that the problem of first-year attrition will be addressed insofar as orientation can play a mitigating role.

This survey seeks to establish what the students are saying about their experience of the orientation programme. It also seeks to establish if those students who did not attend the orientation programme are in any way worse off than those who attended it. The study seeks also to establish the students' views on how the orientation programme could be improved or changed to meet their perceived expectations. The reasons for attendance as well as non-attendance will be sought. Following the patterns that emerge from the survey, follow-ups will be done via in-depth interviews to achieve a deeper understanding of the emergent themes. A comparison between attendance and non-attendance will be made so as to establish some measure of efficacy of the orientation programme. It is hoped that recommendations will be made to improve the impact of the orientation experience on a successful first-year experience. This success will among others be seen in reduced attrition at first-year level while making the first-year experience a success against pre-determined expectations.

## **Investigating the prevalence of dishonesty during e-assessments: A case study of End-user Computing students in South African universities**

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### **Theme: 21st century trends in higher education**

#### **Abstract**

Academic dishonesty (cheating) is an ongoing global challenge. With the current pedagogical transformation aided by Information Technology, learning management systems (LMSs) with e-assessment capabilities have emerged, leading to a rise in academic cheating that is threatening academic integrity. The evolution in educational technology indicates that institutions of higher education will get more and more involved in e-learning and the pressure to transit from conventional assessment methods to e-assessment will also increase. In most universities in South Africa, an End-user Computing module is taken across departments in the first year of study and students write an e-exam at the end of the semester. The large number of students already taking e-assessments, coupled with the likelihood that more departments will adopt e-assessments in the near future, makes it highly imperative to investigate the incidence of e-assessment cheating and other related issues in the university. This study investigated the prevalence of cheating among End-user Computing students during e-assessment and determined students' perceptions towards and motivation for cheating. Utilising a mixed method research design, quantitative and qualitative data were gathered from end-user computing students. Results from the study will help universities as well as curriculum planners to come with adequate strategies to mitigate e-assessment dishonesty and boost the integrity of e-assessment.

## Teaching practice: Experiences of PGCE students in secondary schools in KwaZulu-Natal

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**Theme: Quality teaching: does it really matter?**

### Abstract

Teaching Practice (TP) is a crucial and critical aspect in the training of student teachers. It opens up an opportunity for student teachers to immerse into the real world of school and equips them in making an appropriate transition from apprentice to professional. Placed in different areas within the KwaZulu-Natal province of South Africa, the participants that were selected for this study taught in rural, township and urban school contexts. TP happened twice during the course of study. The purpose of this study was to explore and articulate the experiences of Postgraduate Certificate in Education (PGCE) student teachers during their second TP session. Apposite literature reviewed provided a deeper understanding of the epistemological and ontological orientation of TP. This prompted my choice for the methodological and theoretical lenses to adopt.

Guided by theories of learning and teaching, this study attempts to move away from the scary philosophical “isms” – behaviourism, idealism, experimentalism, positivism – to simple ideas that are informed by current scholarship and practice. These ideas include teaching and learning as participative, accommodating learner differences during the learning process, and learning as a social activity. Questionnaires and in-depth face-to-face interviews using the voice recorder were used to generate data.

Although TP was generally a positive experience for the majority, the findings revealed that some participants were ambivalent with procedures for maintaining discipline in their classrooms. This was because of the limited exposure that they have at schools since the entire PGCE programme is one year long. However, some participants asserted that they were able to merge theory (from the lectures) and practice (from the interaction with learners in the classroom). TP provided space for participants to utilise teaching methods and classroom management styles that suited them best.

*Keywords: teaching practice, student teachers, theories of learning and teaching, Postgraduate Certificate in Education, teaching methods*

## **Mentorship programme: Experiences of first-year students at the University of Zululand**

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**Theme: Making the first-year experience a success**

### **Abstract**

The background of this study emanates from the fact that the majority of students who are admitted at the University of Zululand come from poor socioeconomic backgrounds but choose to study there because of a variety of reasons. Some of these reasons include the desire to improve their families' standard of living, an interest in learning further, and so on. Considering the rurality of the area, some schools in the Zululand region do not have state-of-the-art facilities but manage to produce learners who meet the minimum requirements for entry into universities. This study aims to explore the experiences of first-year students who participated in the mentorship programme at the University of Zululand as a result of their enrolment in high-risk modules (modules that the majority of first year students fail). The mentorship programme was introduced with the aim of helping first-year students to be able to pass these high-risk modules. After writing the first assessments in these modules, students who score below 40% are allocated a mentor who has been trained to understand and improve the academic performance and university experience of the first-year student.

This study is qualitative and was informed by Lewin's Cycle of Adult Learning. Data were collected from second-year students who participated in the mentorship programme while they were first-year students. The findings confirmed that variables such as socioeconomic background and emotional and psychological problems impact on the overall academic performance of first-year students. A very low proportion of students who participated in the programme switched over to other courses because of their difficulty in coping with high-risk modules (as the majority of their counterparts usually do). An improved academic performance of the majority of students who participated in the programme was noted.

*Keywords: mentorship programme, high risk modules, first year students, mentors, academic performance*

## **Monitoring Work-integrated Learning in the 21st century: Opportunities and challenges presented by technological advances**

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### **Theme: Work-integrated Education for the 21st century workforce**

#### **Abstract**

The monitoring of Work-integrated Learning (WIL) to ensure that students achieve the requisite academic outcomes is a crucial element of the WIL Quality Cycle. This is, however, often challenged given the financial constraints that higher education is operating under. As such, it has become important for higher education to think creatively about how WIL monitoring can be effectively facilitated with minimum costs.

The 21st century presents opportunities in the form of various technologies. The question, however, is the extent to which these technologies facilitate effective monitoring of WIL and what opportunities and challenges they present. Using a mixed method of qualitative and quantitative research, this paper explores how various electronic platforms have been used in the communication with and monitoring of WIL students and details challenges experienced as well as opportunities for successful implementation.

*Keywords: technology, work-integrated learning, monitoring*

## The importance of building a teaching philosophy to achieve a quality learning and teaching experience in higher education

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**Theme: Professional development for the 21st century university teacher: What should we be focusing on?**

### Abstract

Transformation and decolonisation in higher education are the latest buzz words or concepts that South African institutions are espousing. This is all geared towards growing a body of scholars who possess the required research skills relevant in equipping a developed society that has the ability to address current national and global needs. This approach is due to many tensions that exist in South Africa which have created a major shift in how higher education is now shaped (such as increased access to people of colour, women, previously disadvantaged and currently disadvantaged students). All these changes have an effect on learning and teaching experiences in the classroom context. In order for institutions to achieve 'quality learning and teaching' that caters to students' needs, they might need to consider having lecturers construct a teaching philosophy. A teaching philosophy may be viewed as a personal framework that helps guide one in entering a classroom or any other teaching situation. A teaching philosophy is helpful in that it allows one to reflect on one's purposes and intent, opening one's thinking to the public for discussion and comment. Furthermore, it creates a map of the kind of student one has, one's curriculum and how knowledge is viewed in one's discipline. This map assists in understanding which learning theories will be appropriate in one's own context. Drawing from the social realist theory, the paper shows the importance of developing a teaching philosophy (which may also be known as a personal framework) through sharing the writer's own journey and experiences in a professional academic development programme over a two year cycle, and how it has contributed towards the writer's development as a scholar and the 'quality learning and teaching' experience of students.

*Keywords: transformation, teaching philosophy, higher education, learning theories, teaching and learning*

## Understanding the first-year experience in South Africa: Preliminary findings from the SANRC FYE Inventory Survey

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### Theme: Making the first-year experience a success

#### Abstract

Little is currently known about the overall national landscape of the First-Year Experience (FYE) in South Africa, i.e. how it is staffed, funded and supported; which programmatic initiatives fall under the purview of FYE and where and how the FYE is located at an institutional level. Deeper questions about the efficacy of FYE initiatives, overall sustainability and future progress of the FYE remain an ongoing area of enquiry. This is in spite of evidence of increased institutional commitment to matters of student success and retention as demonstrated by the recent advent of FYE offices and professional staff positions at South African universities. Hence it was in the best interest of the newly-established South African National Resource Centre for the First-Year Experience and Students in Transition (SANRC), an independent national centre focused on promoting FYE scholarship and practice, to initiate research into the national state of FYE and in this way, work toward providing South Africa's FYE scholars and practitioners with important baseline data about FYE with which to enrich their individual and institutional work as well as to enable a collaborative approach toward FYE for the university sector overall. This paper represents the outcome of this exploratory research. It provides an overall critical analysis of the national state of FYE. The first part of the paper presents basic descriptive data about the FYE (the architecture and design of FYE programmes and initiatives; the funding sources behind the FYE; staffing for FYE; and institutional support behind the FYE). The second part of the paper focuses on analysis and as such, presents a broad perspective of the national picture (with an eye to the differences between institutions and institutional types), assesses the progress made in the field of FYE and offers a prognosis for the future of FYE in SA.

While this survey data provides useful baseline data on the national state of FYE, it cannot be considered comprehensive or definitive. This is in some part due to the methodological complexities of accessing data from different multi-campus universities as well as to the very new state of the field of FYE. Hence this research should be considered exploratory and the work presented herein can be seen as preliminary findings about FYE in a complex and diverse higher education landscape.

## **Furthering techniques for the enhancement of students' knowledge acquisition in tertiary institutions: The experience of Durban University of Technology**

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### **Theme: Innovations and emerging technologies for 21st century teaching & learning**

#### **Abstract**

This study emanates from the researchers' experiences of tertiary education in South Africa both as students and staff in academia. Drawing out of these experiences and coupled with some systematic enquiry, the researchers interrogate the roles and preparedness of the institution of higher learning for students' holistic learning experiences. It is common knowledge that students are unremittingly confronted with various challenges (both social and personal) that affect students' ability and motivation to live up to the demands and expectations of institutions of higher learning. Existing literatures identify time management, finances and relationships as some of the leading challenges in this respect. Adopting a desktop approach to research and drawing on the experiences of the General Education Department at Durban University of Technology (DUT), the researchers interrogate the need for the development of innovative techniques that enhance learning in tertiary institutions. Within the context of this study and in relation to DUT, this paper unpacks issues of students' time management, utilisation of technology-aided academic resources and their challenges with reading and writing. Stemming from a review of DUT's archives, students' written reflections and available literature, this paper draws conclusions on DUT's contributions towards the advancement of students' holistic knowledge acquisition and success, while putting forward pertinent recommendations that could enhance its relevance to students' success.

*Keywords: tertiary institution, students, teaching pedagogy, learning techniques, student success, student challenges*

## **‘Uber’-ing Extended Curriculum Programmes into the 2020s - an integrated approach to teaching using past (since 2005) and future initiatives**

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### **Themes: Making the first-year experience a success**

#### **Abstract**

It is critical that South Africa remains relevant and ready regardless of restricted resource allocations and deteriorating capabilities due to the costs of the “Fees Must Fall” (FMF) activities over the past three years. The South African engineering theatre needs to renew itself to prepare for the challenges in 2020 and beyond, and expand in order to stay relevant – not only in the form of internal requirements, but also as far as the Engineering Council of South Africa (ECSA) and the institutional, national and international arenas are concerned. The concern about the high attrition rate of under-prepared first generation learners in engineering nationally remains a high focus. This paper explores 13 years of initiatives implemented at an Extended Curriculum Programme (ECP) in an engineering department at the Cape Peninsula University of Technology (CPUT) in Bellville, Cape Town, to determine what the force is that determines what our first-time entering learners into higher education try or fail to try to accomplish in their first year. Our experience of working with the extended first year learners shows that one of the major contributing factors is their beliefs at the start of their first year experience journey. This will be examined in addition to the ability to solve and interpret the results of engineering problems in electrical engineering, which is one of the key problem areas. Learners must be able to prove their understanding of materials learnt by showing their ability to synthesise, to think critically and analytically. These higher order skills must be developed during the formative academic activities, and especially during the first two semesters. This paper gives a brief resume of the profiles of first generation learners enrolling for the undergraduate course in Electrical Engineering and examines an experiential approach towards helping them to acquire the skills needed to be successful. Actions taken to extend first-year activities beyond the first term will be discussed, techniques used to emphasise developing technological literacy in first-year learners will be highlighted and activities to stimulate critical thinking will be outlined. Illustrative examples will be given during the session. Conclusions with lessons learnt during the last 13 years (2005 – 2018) will be shared, showing a road map of how to implement the “case study” and skill-based initiatives to be implemented in the second year of extended curriculum studies.

*Keywords: integrated first year experience, case study, shared skills, communication skills, renewal, personal belief system, group work, co-operative learning, peer help, field trips*

## Quality teaching: A critical reflection of group work for undergraduate Life Sciences Methodology students

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### **Themes: Quality teaching: does it really matter?**

#### **Abstract**

The world of work, as pointed out in the literature, values teamwork as a professional competency which involves effective productivity and problem-solving skills, social skills and personal skills. Quality teaching at higher education institutions makes critical economic and societal contributions via the adequate preparation of students for the workplace. It is short-sighted to view higher education as a vertical academic journey from entry to graduation. In this respect group work is one of the appropriate strategies to develop students for the workplace as effective team players. Using a critical reflection lens, this paper reports on an exploratory study on the group work strategy used in an undergraduate Life Sciences Methodology module at third-year level. The strategy of group work was analysed on two related levels. One involved the experiences of the students in carrying out the tasks and the other involved the students' skills in critically reflecting on their own group work experience. Critical reflection in the work place is in itself an important skill for productivity, problem-solving and competitive advantage. In total 96 responses (70 individual responses from one task and 26 group responses from another) to reflective feedback questionnaires were used for the analysis of both the process and product components of group work. Descriptive statistics and qualitative analysis show that on one level, in favour of group work, students developed social skills but also experienced challenges; and on another level students lacked critical reflection skills valuable to the workplace. This was evident in their inability to comprehensively reflect on the process and product components of the group work tasks. The study concludes that group work is valuable to prepare students for the workplace; deliberate intervention is required to develop critical reflection skills in students; and that a pedagogical critical reflection lens shows that quality teaching is worthwhile.

*Keywords: group work, quality teaching, workplace, reflection*

## **Robots talking: How you can use Chatbots**

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**Theme: Innovations and emerging technologies for 21st century  
teaching & learning**

### **Abstract**

Machine learning (ML) and artificial intelligence (AI) are set to increase in functionality in the future. These, together with the incorporation of big data, result in Chatbots. They are in fact robots that are able to think and communicate: hence the name. These advanced computer programmes are about to make life simpler for the delivery of information.

Chatbots are expected to become a fundamental tool for the registration and management of educational matters. This paper looks at examples of Chatbots as used in education. The aim is to open the minds of educators to the functional possibilities of Chatbots. This will allow the lecturer to technologically leapfrog the student by using the accessibility to relevant big data via Chatbots. The research commences with Chatbots successfully used in other fields and then those opportunities in education. There is certainly a demand for Chatbots and being computer operated, they are cost effective.

*Keywords: artificial intelligence, chatbot, AI*

## Innovative teaching and learning in a blended learning environment

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### **Theme: Innovations and emerging technologies for 21st century teaching & learning**

#### **Abstract**

Higher education is faced with a diverse student body with different learning preferences and expectations of personalised learning. The impact of learning technologies is changing the teaching and learning process. Higher education institutions are compelled to leverage innovative teaching and learning approaches. Blended learning has the propensity to provide more engaged learning experiences while recognising the potential of Information and Communication Technologies (ICTs). This paper explores the educational and pedagogical issues in blended learning. It also reflects on current teaching practice and on aligning teaching methods to syllabus outcomes. The significance of this paper lies in the purposive use of blended learning by the effective combination of different modes of delivery, methods of teaching, learning theories, learning styles and competencies that are founded on effective communication and collaboration amongst all participants of the teaching and learning process. The paper presents a framework using blended learning for innovative teaching and learning.

## **Mentorship for the 21st century student: Reflections of a Coordinator**

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**Theme: Making the first-year experience a success; 21st century learning environment**

### **Abstract**

Mentorship is not a new term that is used in higher education. It has been used for generations as a means of introducing an individual to a new environment. Through the years the style and design of mentorship programmes has adapted to the changing contexts tertiary education faces. Higher education in South Africa is currently at a transitional stage, with many challenges driving its instability. Mentorship programmes and other such student support programmes play a crucial role in creating a foundation that first-year students can use to succeed. This article focuses on a mentorship programme which was initiated at a university of technology situated in a township. The reflections and findings look at how the programme has adapted since its conception in 2014, four years ago. The programme was initiated as a pilot programme, and was run in a single department with approximately 52 students. Today the programme is run throughout the university in 14 departments and has a total number of 3190 participants. Participants were required to complete a survey at the end of every 6 months, in order to evaluate the effectiveness of the programme. Through the surveys, we identified areas that needed to be addressed such as the need for holistic support (i.e. support that included academic and social activities). By adapting to the needs of the students, the programme has been moulded into its current form, and has had a positive effect on the students.

*Keywords: first-year students, mentorship, holistic, academic support, social support*

**Pre-enrolment and registration support: Learning from first-year students' initial experiences in a university of technology in KwaZulu-Natal**

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**Theme: Making the first-year experience a success**

**Abstract**

First-year students, thrust into a new and foreign environment, struggle with adaptation. Decisions about where to go, what to study and navigating the university environment are daunting and exciting at the same time for many new students. Overtures to make applicants choose the university technology and registration support that is offered build applicants' initial expectations about the initial integration solutions available. Little is known about the first-year students' expectations and experiences in the pre-enrolment phase and during the registration period at the university of technology. This exploratory study aims to gain an understanding of undergraduate first-time entering students' expectations and experiences by surveying first-year students recently registered for a Diploma of Office Technology using a structured questionnaire. In addition, focus group interviews will be conducted with 10 purposively selected students from the same class. Thematic analysis will be used to establish themes embedded in the data set and recommendations will be made to further develop the First Year Experience programme.

*Keywords: experience, support, registration, first-year*

## **“You Belong Here”: The Unizulu orientation programme nested in a holistic approach to the first-year experience**

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### **Theme: Making the first-year experience a success**

#### **Abstract**

The Unizulu First Year Experience (FYE) Programme follows a holistic approach to incoming students, which includes all aspects of their first-year experiences. It was conceptualised as being invitational and encompassing all aspects of the first-year experience. In its aim to support and shape the transition from secondary education to tertiary education, the FYE proposed a new orientation programme which had been implemented as a pilot project. It is now widely accepted that the integration of students into the social and academic fabric of a university is key to their retention and success. This orientation programme is geared to help first-time entering students find their feet, learn to negotiate their new physical, social and academic environment, and make the necessary connections that would engender a sense of belonging. This holistic programme involves the whole student and speaks to various aspects of the transition process. It rests heavily on the availability of Peer Helpers to drive, help design, and monitor fun and helpful activities. Acknowledging the peer group as the single most important environmental influence on student development, the project identified, trained and mobilised senior students to drive the orientation programme. This presentation demonstrates the processes, phases and activities of this innovative programme. The implementation of this pilot project affirmed the notion that it is in the human resources of our student body that some of our greatest assets are to be found.

*Keywords: First Year Experience, transitions, holistic, peer group, student integration, retention and success*

## **Data analytics as a mechanism for improving student success: A review**

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### **Theme: Data Analytics for student success**

#### **Abstract**

Student success particularly in the South African higher education sector is very low in relation to the investment that is put into universities to support student education. Statistics show that there is no Return on Investment (ROI). Studies show that students who do not succeed in higher education are students from under-resourced schools who come into the sector underprepared for the rigours of higher education. The challenge for the HE sector is that innovative ways have to be sought to improve the situation. This paper explores the use of Data Analytics as a mechanism that could offer solutions to improving student success in the sector.

Guided by the connectivist paradigm, this paper reviews literature on Data Analytics in the HE sector and seeks to show that if properly used, Data Analytics could usher in beneficial new modes of delivering content and knowledge. It could provide information on student performance rates, background, time they spend on their work, problem areas they encounter and much more information that could be used to improve teaching and learning. However, not all institutions are geared or ready to take advantage of the opportunities that are offered by Data Analytics. This paper will articulate the needs, opportunities and challenges of implementing Data Analytics in the HE sector. The paper concludes with a model for the successful implementation of Data Analytics.

*Keywords: data analytics, under resourced, connectivism*

## The functionality of static versus dynamic data

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### Theme: Data analytics for student success

#### Abstract

Quality education in institutions of higher learning has always been associated with strong academic factors such as contact time, higher degrees and good teaching practices. In the recent past Information and Communication Technology (ICT) has presented institutions with the opportunity to achieve productivity and business goals by espousing educational technology. Depending on their institutional policy, organisational culture and strategic needs (goals), institutions can choose relevant programme(s) to meet institutional strategic needs. Programme(s) can be used to measure students' and staff members' behavioural patterns in different contexts and in turn institutions can gain access to valuable factual data that can improve decision-making processes in pursuit of the institutional vision. Student and staff activities are recorded through logons to Events Pronto, collated for analysis and processed for a specific purpose. Educational technology-conferred data analytics for the purposes of this study uses qualitative and quantitative techniques and processes to extract and categorise data sets accordingly. Data is identified (identifiers from static data), defined and analysed (enhancers from dynamic data) depending on specific requirements so that inferences can be made. Credible sources of data analytics (static and dynamic) can include Learning Management System (LMS), entrance surveys, and a learning resources centre that Mangosuthu University of Technology (MUT) has somewhat adopted. However there is no institutional hype about these technological milestones. For example, only a few departments are subscribed to LMS(s) and entrance surveys are not part of the mainstream institutional dialogue. The study purports to examine the institutional readiness to embrace the use of data analytics at MUT.

## Learning English with fun: Examining the role of the English Word Power programme in motivating students to learn English

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### **Abstract**

This study reports on the possible role of the English Word Power (EWP) programme in motivating the ICT Foundation students to learn English at a university of technology in Gauteng. A qualitative approach was adopted. The sample comprised 44 purposefully selected student observations ( $n=44$ ) while 5 students completed journals. The findings from the student observations indicate that students were enthusiastic about the programme and enjoyed it. The findings from the journals show that students were unsure about certain instructions in the programme. Future research should focus on what language skills can be learnt through a computer-based programme like EWP.

*Keywords: CALL, English proficiency, English Word Power, motivation, student development*

## Integration and assessment of graduate attributes into the curriculum

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### Theme: 21st century trends in higher education

#### Abstract

Universities across the world have always endeavoured to develop desirable qualities in their graduates. For many students, this has been an implicit rather than explicit consequence of their university experience since the development of graduate attributes has traditionally been considered fundamentally inherent in all teaching and learning. This paper aims to determine how graduate attributes are integrated and assessed into the curriculum to create an opportunity for the production of quality graduates. For the higher education system to produce quality graduates, curriculum development teaching and assessment practices should be of high quality as well. Teaching and assessment practices should be such that students are encouraged to produce their own knowledge. This can be achieved if teaching and assessment activities are constructively aligned to each other. By aligning assessment and teaching activities constructively, deep learning is encouraged in students and thus the quality of students is improved. Qualitative research through interviews and document analysis has been employed to explore what the current situation is regarding integration of graduate attributes. The findings of this study indicated that academics treat graduate attributes as outcomes that are disengaged from the course-specific outcomes. It was also discovered that academics saw the integration of graduate attributes as just another added responsibility on top of their overloaded job. This paper concludes by making suggestions on how the concerns of academics can be addressed in order to minimise stress in the integration of graduate attributes into the curriculum.

*Keywords: constructive alignment, graduate attributes, integration*

## The importance of information literacy in academic institutions

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**Theme: Professional development for the 21st century university teacher: What should we be focusing on?**

### **Abstract**

Information literacy is increasingly recognised as an important educational outcome for university students, graduates and even academics. While it is also recognised as a societal need and a strategic issue for universities, higher education institutions in South Africa have been slow to restructure and transform to produce information-literate graduates for the knowledge society. The information society calls for all people to become information literate, meaning they should not only be able to recognise when the information is needed but also be able to identify, locate, evaluate and effectively use information needed for decision-making. Regardless of discipline, information literacy enables users to master the content and gives them a sense of being in control of their learning (Kuvulya, 2003).

The objective of this paper is to establish to what extent South African university libraries are providing information literacy. It also looks at the information literacy concept, its application, its importance, what forms of information literacy programmes are offered and what challenges are faced by academic libraries in carrying out information literacy programmes. This paper uses Information Literacy International Standard requirements in higher education and compliance as a guide for the implementation of information literacy. It reflects on selected academic/university libraries' information literacy practice, including that of the Vaal University of Technology, to consider what is happening and what needs to happen. In this paper some experience-based perspectives on information literacy research and practice will be explored. The paper is largely informed by information literacy standards in higher education which provide a framework for assessing an information literate individual. It is also informed by a literature review of scholarly articles, books and Internet sources, along with a survey involving Library and Information schools/ departments and some academic libraries in South Africa. Results indicate that all academic libraries worldwide provide information literacy programmes. However, so far it is not a success story in the developing countries.

## **The impact of social networks on the performance of employees: The case of institutions of higher learning**

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### **Theme: Innovations and emerging technologies for 21st century teaching & learning**

#### **Abstract**

Social networking has become one of the most significant business developments of the 21st century as it has added another element to the way people communicate all over the world. Social networking is an online medium of interaction which allows people to build relationships, share ideas, communicate information and the like. Furthermore, social media depends on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content. The way to use and respond to social networks is neither a good thing, nor a bad thing, it's just a different thing. Meanwhile job performance has been a concern for organisations and researchers. Job performance refers to behaviours or actions that are relevant to the goals of the organisation in question. Successful organisational communication and knowledge management among organisational members play a key role on promoting employees' job performance. For decades, researchers have been looking for different ways to enhance employee job performance. Like other emerging technologies, social networking by employees has been controversial. This study provides explanatory insights into the capabilities of social networking and its effect on the individual job performance of employees in institutions of higher learning.

## **A comparative study of factors influencing students' career choice at Unizulu and DUT**

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**Theme: Student identity – who are we dealing with? Who are our students in the 21st century?**

### **Abstract**

Career guidance is vital for an enhanced student experience. Students are often perplexed when it comes to choosing the qualification that could help them realise their full potential. The purpose of this paper is to investigate the factors influencing learners in their choice of careers. A cross-sectional survey design was employed to conduct a study amongst first-year students of the University of Zululand and Durban University of Technology. The study revealed that first-year students from both institutions believe that parents/caregivers had the strongest influence in choosing a particular course of study in their higher education. The study further showed that admission requirements, matriculation results and culture also determined students' choice of careers. The study suggested that parents need to be more informed and enlightened about career information and to give sound counselling rather than manipulating or forcing their children to enrol for qualifications contrary to children's interests and abilities.

*Keywords: first-year students, career, career culture*

## **Effectiveness of midwifery seminars as a teaching-learning method in Midwifery among final-year midwifery students at the University of Limpopo**

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### **Theme: Teaching today's students on their terms**

#### **Abstract**

Student-led midwifery seminars are utilised as a teaching-learning method for Midwifery students. These seminars were designed to impact positively on the ability of student midwives to deliver presentations in the context of midwifery and nursing. The student midwives are assigned research project topics to research, collect and analyse data. They are also expected to provide recommendations to improve the midwifery interventions and clinical practice pertaining to pregnant women during the prepartum, antepartum, intrapartum and postpartum periods.

#### **Aim**

The study aimed at investigating the relationship between the factors that might enhance the effectiveness of midwifery seminars as a teaching-learning approach among a group of final-year student midwives in a university context.

#### **Method**

A quantitative, cross-sectional non-experimental design was adopted. Self-developed 4-point Likert scale questionnaires consisting of 40 item questions were administered to the student midwives after their midwifery seminar attendance. The questionnaires were pre-tested prior to the main study. The target population was all 66 final-year student nurses. Data were analysed and presented as descriptive and inferential statistics, in the form of tables, pie and bar graphs.

#### **Findings**

The Seminar approach of teaching and learning highlighted the differences in the student midwives' group achievements and enhanced the significance of the seminar. The significance of the Midwifery Seminars was the following:

- Readiness of the mind and learning becomes structured as the individual student midwife searches for and retrieves information, thus developing data processing skills.
- A group of student midwives interact and communicate together during the compilation of their own paper for seminar presentation.
- The student midwives develop in-depth knowledge and competence of the subject presented.
- Interactions with and interrogations of the presentations influence the team spirit and information seeking behaviour of all members of the group.

*Keywords: effectiveness, midwifery, seminar, teaching-learning method*

## **Engagement with high impact practices for holistic learning of first-year students: Sharing lived experiences of implementing General Education**

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### **Theme: Making the first-year experience a success**

#### **Abstract**

Students in tertiary education are confronted with, amongst others, social and personal challenges that impact negatively on their learning experiences. Furthermore, the demands and expectations at institutions of higher learning may not be aligned with the expectations and engagement levels of the students. Strategies to attempt the synchronisation of the expectations and thus level of engagement of the institution with those of the student include the use of high impact practices in the classroom. In this paper we use an action research approach to interrogate the need for high impact practices in the classroom in order to promote the holistic learning of students. We draw on our personal lived experiences as staff as well as those of the first-year students with whom we engage in General Education modules at the Durban University of Technology. Evidence of holistic learning will also be provided from literature, critical reflections of staff and students' written reflections. Engaging with the lived experiences of our students contributes to their holistic learning, enabling them to develop personal and social responsibility as active, empowered citizens in an ever-changing 21st century world. Through sharing our experiences, we provide insight and strategies that could be identified as being useful in tertiary education.

*Keywords: tertiary institution, General Education, high impact practice, holistic learning, lived experiences, engagement*

## Investigation of the First Year Experience in a rural university in South Africa cum Learning Experiences

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### Theme: Making the first-year experience a success

#### Abstract

This study investigated the First Year Experiences (FYE) of students in a selected university in South Africa. Survey research design was used in the study. Quantitative method was used for data collection. 1479 first year students were randomly selected. The findings reveal that first-year students in the selected university experience certain specific challenges among which are poor orientation, poor knowledge of the higher education system, poor education background of parents and lack of psychological support. The study recommends that a special office under the direct line management of the dean of students be established to observe and cater for the needs of first-year students. This office would accommodate orientation and liaise with the appropriate bodies responsible for firm offers and collaborate with appropriate offices within the institution to ensure that first-year students are properly catered for, guided and assisted in integrating properly to the university system.

*Keywords: first year experience, orientation, placement, psychological support, learning abilities.*



# *Memories of 2017 Presenters*





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