"Research and Innovation for Sustainable Development and the Transformation of Society"

02 - 04 September 2015
Venue: ICC, East London, Eastern Cape, South Africa
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"Research and Innovation for Sustainable Development and the Transformation of Society"
Walter Sisulu Research Conference Programme and Abstracts,
Mthatha, Eastern Cape, South Africa

02 - 04 September 2015
On behalf of the 1\textsuperscript{st} joint UNIVEN-WSU International Research Conference, I extend a warm welcome to all the delegates attending this 2015 conference.

The conference theme “Research and Innovation for the Sustainable development and Transformation of Society” is appropriate at the time when there is emphasis on innovative research. Researchers are highly encouraged to be innovative and also move away from basic to applied research. By so doing, they will be contributing positively to sustainable development and transformation of our societies. It is important to note that the transformation of society is crucial for any higher education institution for it to be seen as relevant to those it serves. As a result, Walter Sisulu University is a community engaged university that is attempting to be embedded to the community it serves.

This joint international conference is a highlight for both universities to showcase academic research, generation of new knowledge and the sharing of one of the most powerful contributions a university can make to the society it serves. The partnership and collaboration between the University of Venda and Walter Sisulu University is highly appreciated and has already started to bear fruit. This joint conference is evidence towards the right direction and is just the beginning of a long envisaged collaboration between these two universities that will result to other collaborative engagement.
I sincerely thank the two DVCs (Proff Crafford and Songca) for their leadership and making our dream a reality. I would also like to thank the two Directors of Research (Prof Ekosse and Dr Cishe) for their hard work in making the conference a success. We further wish to congratulate the various conference Organising Committees and the WSU Research Directorate Operating Unit for putting the conference together with such distances apart. Walter Sisulu University appreciates all your efforts.

It is then my pleasure to welcome all the delegates from different countries and higher education universities in Southern Africa to the UNIVEN-WSU joint international conference and I wish you all an enjoyable visit to the Eastern Cape, especially the East London International Convention Centre. I further wish you all an enjoyable and informative conference where new knowledge is generated and new ideas formulated for sustainable development and the transformation of our societies.

Professor K Mfenyana
Interim Vice Chancellor and Principal
Walter Sisulu University
Message from Prof SP Songca

The fast developing collaboration within the higher education sector with respect to research and innovation has given rise to many opportunities for researchers, students and the national system of innovation to expand the horizons for impact on economic development, the knowledge economy and positive impact on the livelihoods of the communities served. WSU has effected her collaboration with many universities including the University of Venda as producers of this international conference. The response was astounding and confirmed the cooperative direction taken. More than 400 contributions and more than 300 delegates from the two universities, other universities in South Africa and abroad including a large cohort of research students. The quality of the abstracts turned out to be quite impressive and the enthusiasm of delegates very encouraging. A number of accredited publishing houses are lined up to attract publications from the contributions and this will be the ultimate quality assurance for the meeting. Buffalo City is a very attractive city and I invite delegates to take time to enjoy her offerings. Walter Sisulu University is a higher education institution that prides itself as an engaged university that is scientific, responsive, technological and developmental. In line with the foregoing, it aims to promote basic and applied research and innovation that is consistent with best practice and contributes to developmental impact. It is straddled among four campuses in Mthatha, Butterworth, Buffalo City and Queenstown, accounting for more than 27,000 students, of which more than 1000 are postgraduates.

Message from Prof JE Crawford

Collaboration between WSU and Univen has a long tradition and will be elevated to new heights through this conference. Both universities share the aspiration to entrench excellence in their core business and to become leading universities. However, they also share many challenges that arise from their similar histories, geographical locations and capacity backlogs. They also share the opportunities which these challenges present. Foremost is the opportunity for our staff and students to interact, to share experiences and to exchange expertise, with the clear objective of strengthening research capacity and research outputs at both universities. While co-supervision of postgraduate students and joint research between our two institutions are already underway, co-hosting this conference must result in a tangible contribution to our respective research outputs by having the majority of the conference papers published in accredited journals. The hard work and enthusiasm for this conference by the Research Directorates of WSU and Univen are acknowledged, and the personal dedication of Dr. Cishe and Prof. Ekosse especially. I have no doubt that our collaboration will go from strength to strength under their able direction.
Conference Organizing Committees

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Professor K Mossanda
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Mr Y Mzingeli
Mr M Funani
Mr L Sogoni
Mr L Gwebele
Message from the Chairperson of the Conference Scientific Committee: Prof GE Ekosse

In the past economies of nations had depended on their natural and mineral resources. Developed countries eventually made a shift to knowledge based economies; and today some countries dwell on wisdom based economies. In South Africa, we are still grappling with dependence on natural and mineral resources, with little opening for knowledge based economy. In order to make any meaningful contribution to the economic and social advancement of our people, there is an underpinning need for universities and research institutions to produce quality graduates and generate knowledge.

Knowledge generated could thus be disseminated in several recognizable platforms of which conferences are one of them. In executing the collaborative Memorandum of Understanding (MoU) between the University of Venda and Walter Sisulu University, it was agreed that joint research conferences should be held at alternating venues of the two universities. September 2-4 2015 has been set aside for the first Joint Research Conference to take place in East London.

This conference operates under the auspices of existing collaboration of the two universities. Its theme: Research and Innovation for Sustainable Development and the Transformation of Society is a reflection for an increasing cry in using diverse forms of and findings from research and innovation in the transformation of particularly developing societies for their betterment.

The Conference subthemes are as follows:
- Research, teaching and learning in higher education
- Indigenous Knowledge Systems (IKS)
- Public Health, HIV/AIDS and opportunistic infections
- Law, security, governance and conflict resolution
- Climate change: Food, water and energy security
- Appropriate technologies and entrepreneurship
- Functional multilingualism in Southern Africa
- E-skills for rural development

During this conference, there will be 500 oral and poster presentations. One of the major objectives of the conference is to develop the publishing skills of emerging researchers and postgraduate students of the two universities. We will therefore have to transform all the presentations to manuscripts. The manuscripts will be developed into articles published in SAPSE accredited journals through conducting of writing retreats by the Directorate of Research of the two universities.

Research and innovation underlie the core business of universities and increasingly inform our engagement with partners at local (community), national, regional and international level.

Professor Georges-Ivo Ekosse
Conference Scientific Committee Chairperson
MANDLA MAKUPULA.

POLITICAL AND PROFESSIONAL EXPERIENCE

The Eastern Cape Education MEC, Mandla Makupula (Reema) brings with him years of experience, dedication of working with the people. He was born in Tsolo Township, Extension 1 Duncan Village in the then Border region in 1961.

Mr. Makupula has considerable senior and leadership level experience in development work. Throughout his career, as an educator and activist, he has been passionately motivated by his concerns for the development of the underprivileged. He has been actively involved in Rugby and Soccer and latter boxing in the former Border region. Hon. Mandla Makupula has made a contribution to the successful realization of political and democratic transformation; he remains committed to making a contribution to the emancipation of the poor and the disadvantaged of the Eastern Cape especially the poor child prioritizing access and improvement of the people’s education for people’s power.

Reema as he is affectionally known by his comrades is a graduate from the former University of Transkei now (Walter Sisulu University). He holds a BSc degree majoring in Mathematics and Science and HD in Education, as such he has taught for a number
of years before, but left teaching to join the Provincial legislature as a Member of Provincial Legislature representing the ANC in 1999.

CAREER IN BRIEF:

- His political activism started at an tender age as a student leader and latter joined the ANC in the early 80s
- Mr Makupula has served in various structures of the ANC such that at some stage he led the people of this province as an ANC PEC member;
- Also led the Communists as the Provincial Secretary General;
- After serving as an activist for a number of years, Mr Makupula was elected to serve as a parliamentarian for the ANC since 1999;
- He also served in a number of Committees in the Legislature as deployed by the ANC;
- Before joining the Education department in November 2010, as deployed by the Premier Noxolo Kiviet, Makupula was serving as a Portfolio Chairperson in the Office of the Premier
- He is happily married and has been blessed with three children
  - Juta, Mengcwa, Tlangwana, Magqagqa, Ndlangathi, Usilo sitshekile.
Dr Patrick (Madunyana) Hawkins Maduna holds MBCHB (Natal) and M Prax Med (MEDUNSA). He is the Deputy Director General: Clinical Management Services in the Eastern Cape Provincial Government.

Dr Maduna has served in the South African Military Health Service (SAMHS) (a service arm of the Department of Defence) in the Military Hospital, Thaba Tshwane, Pretoria as a Head of Department: Family Medicine and Primary Health Care (PHC), Head of Clinical Research: Project Phidisa (Department of Defence) from October 2010 to April 2014.

From 1 April 2006 to 10 September 2010 he was employed by the Gauteng Department of Health (Head Office, Johannesburg) in the following positions:

- Acting DDG: Executive Programmes Management (01/05/2006 to 30/09/2006)
- Chief Director & Chief Specialist: Family Medicine & PHC: Gauteng Province (01/04/2006 to 10/09/2011)
- Chief Director: Johannesburg / West Rand Region (01/10/2006 to 31/05/2008)
- Acting DDG: Health Services (01/06/2008 to 18/08/2009)
- Chief Director: District Health Services (19/08/2009 to 10/09/2010)

He has also held various portfolios in Health as:

1. Chief Executive Officer at Dr George Mukhari Hospital (former Ga-Rankuwa Hospital) in the Gauteng Province from June 2004 to March 2006. One of the key responsibilities was to ensure the implementation of the Gauteng Provincial Strategic Goals, in line with the National Strategic Goals.
2. Principal Specialist in Dr George Mukhari Hospital January 2004 to May 2004. At the same time he was a Senior Lecturer at the Department of Family Medicine and Primary Health Care, Medical University of Southern Africa (MEDUNSA)
3. Director and Practicing Family Physician in his own medical company (Lekazi Medical Centre Incorporated from January 1994 to June 2003.
4. Served in the Institute for a Democratic Alternative for South Africa (IDASA) from April 1992 to December 1993
5. Minister of Health and Welfare at the kaNgwane Government from October 1988 to March 1992. At the same time he was Minister of Justice and Constitutional Affairs and Minister of Home Affairs and Local Government.
Somadoda Fikeni was born at Mount Ayliff and he hails from Lugelweni village in the Eastern Cape. Educationally, he acquired his BA and BA honours from the then University of Transkei that is currently known as Walter Sisulu University. He also studied peace and political studies at McMaster University in Canada, and also obtained his MA in International Politics and Comparative Development at Queens University, also in Canada. He went on to obtain his Doctoral Studies or PhD in Comparative Politics and Public Policy Analysis at Michigan State University in USA. His areas of expertise are policy analysis, comparative politics, research methodology, international politics, political economy and heritage. He is an author, a researcher and a public speaker and commentator on a range of local and global political, social and heritage as well as economic issues. He received the most votes for the best political analyst in an SAFM organized programme hosted by a highly respected media personality, Ashraf Garda.

Professionally, he has lectured in a number of universities in SA, Namibia and Michigan State University. He also worked as a researcher at the Namibian Institute for Social and Economic Research. He held various management and leadership positions which include being the merger manager at the University of Transkei, founding COO and Heritage Manager for the National Heritage Council of South Africa (NHC). He has chaired various projects and institutions, namely, Walter Sisulu University (WSU) Council, Eastern Cape Development Corporation (ECDC), South African Heritage Resources Agency (SAHRA), South African Forestry Company Limited (SAFCOL) and the Eminent Persons Group for Sports Transformation (EPG). He is a member of the Brics Think Tank. He currently chairs the Independent Development Trust (IDT), performing arts national institution, Artscape, and has just been appointed a member of the inaugural South African Council for International Relations. He has also been appointed to serve in numerous national and international task teams and commissions of inquiry including being an election observer in East Timor in 2007. He has received numerous awards in South Africa and abroad for his academic and community work. Among these is the honorary chieftaincy bestowed by the Ghanaian coastal Kingdom of Elmina. He is currently a director of VC Special Projects and an advisor to the VC/Principal of the University of South Africa.

He has been involved in various community development initiatives and projects since his early tertiary student years and has continued with this passion as part of his calling to community service. Currently his major vehicle is the Ubuntu Charity Organization through which he mobilize and distribute resources for poor, mainly rural, communities in the eastern part of the Eastern Cape.

He has passion for community work, for technology and innovation, for photography and nature as well as travelling that expose him to new places, exotic cultures and people.

His motto is “Live your dream no matter what circumstances you may be placed in.”
Dr Yonah Seleti is currently serving the Department of Science and Technology in South Africa as Chief Director for Science Missions. He is responsible for the National Indigenous Knowledge Systems Office (NIKSO) which oversees the implementation of the IKS Policy adopted by the South African Cabinet in 2004. One of the pillars of the policy is the interfacing of IKS with other knowledge systems. He is also responsible for Marine and Polar research, Palaeosciences and Earth Systems Sciences. He steered the integration of African Traditional Medicines into the Bioeconomy Strategy one of the five Grand challenges of the "Ten Year Innovation Plan for South Africa". He has also played a key role in mainstreaming IKS in higher education and science councils as part of the research priorities. He is currently a fellow of the Institute of African Renaissance based at the University of South Africa (UNISA).

Yonah Seleti has worked for the cultural industry in different roles, including serving the Freedom Park Trust as heritage manager, a member of the inaugural board of the National Heritage Council, member of the technical teams that drafted the National Heritage Charter and the Library and Information Services Charter, was director of the University of KwaZulu-Natal's Campbell Collections. He has also taught at University of Zambia, national University of Lesotho and the University of Natal. He was visiting a professor at Tulane University in New Orleans and Roskilde University in Denmark. He has been a member of several ministerial committees i.e. on the national curriculum statement and history committee. He is chairperson of the digital Innovation of South Africa, a digital library of liberation heritage. Yonah Seleti has published widely on historical themes covering the following countries: Zambia, Angola, Mozambique and South Africa.
Prof Fred Otieno graduated with an Upper 2nd Class Honours degree in Civil Engineering from the University of Nairobi in 1979, an MSc and PhD in Civil Engineering from the University of Newcastle Upon Tyne, UK in 1981 and 1989 respectively. Further qualifications he holds are Master of Business Administration (MBA) from the Graduate School of Business, University of Durban-Westville, South Africa in 1999. He also has a Diploma in Project Management and various certificates in Performance Leadership, Selection Skills, Budgeting Processes and Control and Labour Legislation of South Africa.

He is a Professional Engineer (PrEng), a Fellow of the South African Institution of Civil Engineering (FSAICE), a Senior Fellow of the Water Institute of Southern Africa (SFWISA), a Fellow of the African Academy of Sciences (FAAS). He was the President of the Water Institute of Southern Africa (WISA) during the period 2007/2008.

Prof Otieno has, over the past 35 years, worked as a Design Engineer, Research Fellow, Professor, Executive Director, Executive Dean, Deputy Vice Chancellor at various establishments and universities in East Africa and South Africa. Since 1st December 2013, he is the Vice Chancellor of Masinde Muliro University of Science and Technology (MMUST) in Kenya. He has also worked and consulted for various local authorities, the private sector, government departments, international organizations (UNEP, UNESCO, World Bank) in his areas of expertise.

He also has a wealth of Corporate Sector Governance experience having been a Board Member, and for a while, it's Acting Chairperson of Pikitup, the largest Solid Waste Utility in South Africa (2001 to 2007); Brainworks Technology Incubator (Board Member 2002 to 2010 and Chairperson of Board 2003 to 2009); Water Research Commission of South Africa (Board Member and Vice Chair of Board (2005 to 2008); South African National Roads Agency (SANRAL) (2005 to 2012); Randwater (Board Member 2005 to date).

Prof Otieno is a rated researcher with the South African National Research Foundation (NRF) and has published over 70 journal papers and over 130 papers in conference proceedings. He has also successfully supervised many masters and doctoral students.
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The registration exercise consists of filling the form (if not done), payment or presentation of proof of payment of conference fee, signing the registration register and collection of conference package.

Students should produce student cards at the registration desk before they can register.

Primrose Gongxoza : Registration Team Leader

Penny Dawson : Allocation of Accommodation to WSU delegates
## Wednesday 2nd September 2015 (Day 1)

### Inaugural Session: Program Director: Prof SP Songca, DVC WSU

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**Chairs:** FK Kuriah and R Molapo  
**Rapporteur:** G Okuthe

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**Chairs:** M Buka and M Maluleke  
**Rapporteur:** CD Mantlana

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**Chairs:** AO Oyedeji and C Tshitereke  
**Rapporteur:** WH Moolman

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**Chairs:** M Jadezweni and D Tinarwo  
**Rapporteur:** G Ashu

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**Chairs:** CD Mantlana and LO Amusa  
**Rapporteur:** M Mammen

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**Chairs:** MDV Nakin and TG Tshitangano  
**Rapporteur:** M Kisaka-Lwayo

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### Parallel Session 1G – Law, Security, Governance and Conflict Resolution

**Chairs:** C Anyangwe and Vukor-Quarshie  
**Rapporteur:** H Foyaca-Sabiti

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**Chairs:** BN Nkeh-Chungag and GRA Mcahu  
**Rapporteur:** M Molepo

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**Parallel Session II – Appropriate Technologies and Entrepreneurship**

**Chairs: ND Jumbam and T Mashamba**

**Rapporteur: I Kariyana**

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<td>1200 - 1220</td>
<td>SNM Jonas, VO Netshandama and MJ Muduau</td>
<td>A model for the development of women in construction in the Limpopo Province of South Africa</td>
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<td>M Mbodila, MW Xazela, M Kikunga and TR Tshinakaho</td>
<td>A Proposed a Framework for Learning with Technologies in Resource-Constrained Environments: A Case of a Rural University</td>
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**Parallel Session 2A – Research, Teaching and Learning in Higher Education**

**Venue:**

**Chairs: P Jaca and AP Kutame**

**Rapporteur: T Apalata**

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<td>OA Adaramoye, AF Azeez and OE Ola-Davies</td>
<td>Ameliorative effects of chloroform fraction of methanol extract of Cocos nucifera L. husk fiber against cisplatin-induced toxicity in rats</td>
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S Kigundu, 1810-1830
Mathematics engagement by e-learning through LMS hosted tutorial

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Parallel Session 2B – Research, Teaching and Learning in Higher Education
Chairs: K Mossanda and JR Gumbo
Rapporteur: MSA Dhaffala

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Parallel Session 2C – Research, Teaching and Learning in Higher Education
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Rapporteur: T Loqo
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**Parallel Session 2D – Research, Teaching and Learning in Higher Education**  
**Chairs: PO Oluboyo and XG Mbenyane**  
**Rapporteur: N Ntoni**  

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**Parallel Session 2E – Indigenous Knowledge Systems**

**Chairs: D Gumbi and H Sewlall**

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**Parallel Session 2F – Public Health/HIV**
**Chairs: W Masamba PO Bessong Rapporteur: D Abaver**

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### Parallel Session 2G – Law, Security, Governance and Conflict Resolution
**Chairs: C Novukela and C Hagenmeier**
**Rapporteur: A Meeme**

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<td>1650 - 1710</td>
<td>LG Nkondo and J Francis</td>
<td>Key determinants of success of Asian and black African-owned businesses</td>
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<td>1710 - 1730</td>
<td>PN Makiwane</td>
<td>Killing in Circumstances of Euthanasia: A Legal Perspective</td>
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<td>1730 - 1750</td>
<td>TG Ngqondi</td>
<td>Model for Information Technology (IT) Governance to Improve IT Alignment of Multi-Campuses in South African Institutions of Higher Learning</td>
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<td>I Ekanade and R Molapo</td>
<td>Nationalism and the outsider question in South Africa</td>
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<td>1810 - 1830</td>
<td>BL Meel</td>
<td>Occupational Specific Dispensation (OSD) Scale at Walter Sisulu University (WSU): Ignorance or deliberate</td>
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### Parallel Session 2H – Climate Change, Food, Water and Energy Security
**Chairs: P Tseki and A Musyoki**
**Rapporteur: SV Vasaikar**

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<td>1400 - 1420</td>
<td>MK Soviti</td>
<td>An Estimation of the extent of land use land cover change between 2001 and 2011 in the Kat River Valley, Eastern Cape Province, South Africa</td>
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<td>1420 - 1440</td>
<td>WM Sekgota, J Dames, SH Koch</td>
<td>Arbuscular Mycorrhizal (AM) fungi as bio-indicators of soil health under agricultural management practices in Gauteng, South Africa.</td>
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<td>1440 - 1500</td>
<td>N Manari, LL Maliwichi and TK Pfumayaramba</td>
<td>Assessment of Agricultural Support to the Smallholder Producer of Lejweleputswa District, Free State Province, South Africa</td>
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<td>1500 - 1520</td>
<td>C Matasane, JO Odiyo and R Naidoo</td>
<td>Assessment of Renewable Energy Potentials in Vhembe District Municipality, Limpopo Province, South Africa Using GIS as a Decision Support System</td>
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<td>TE Rasimphi, D Tinarwo and WM Gitari</td>
<td>Assessment of the Biogas Potential in the Vhembe District of Limpopo</td>
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<td>Z Gwadiso, MDV Nakin, EE Plumstead</td>
<td>Biodiversity of ichthyofauna in the Mtakatye Estuary</td>
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<td>HI Machaba, JN Edokpayi, HS Ogombe and JO Odiyo</td>
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<td>Contamination of Soil due to Leakages of Polychlorinated Biphenyls (PCBs) at a vandalized electrical transformer site</td>
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<td>1710 - 1730</td>
<td>HV Mbhatsani, XG Mbhenyane, SHM Makuse</td>
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<td>V Mazwi, MM Nindi and S Dube</td>
<td>Development of a suitable analytical method for the determination of macrolide antibiotics in biological samples using HPLC with charged aerosol detection (CAD)</td>
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<td>Qaqamba Lumka Ndlazi</td>
<td>Ecological integrity of Mngazi and Mdumbi coastal wetlands on the east coast of South Africa</td>
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<td>P Mabai, AIO Jideani and AO Omolola</td>
<td>Effect of drying on quality and sensory attributes of lemon grass tea (Cymbopogon citratus) using response surface methodology</td>
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**Parallel Session 2I – Appropriate Technologies and Entrepreneurship**

**Chairs: A Sonn and TJ Mudau  
Rapporteur: S Adeyemi**

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<td>Padi Deborah</td>
<td>An analysis of the socio-economic impacts of Matoks complex on the residence of Botlokwa, Ga-Machaka village under Molemole municipality, Capricorn district of Limpopo province, South Africa.</td>
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<td>1440 - 1500</td>
<td>F Kutame</td>
<td>An investigation of the use of Appropriate Technology in South Africa and the entrepreneurs that supply it.</td>
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<td>1500 - 1520</td>
<td>GT Donga, K Shumba and H Ngirande</td>
<td>An investigation on the barriers to the development of small, medium, and micro sized enterprises (SMMES) in the Thulamela Municipality, Limpopo Province.</td>
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<td>T Ludidi and TG Ngqondi</td>
<td>Awareness guidelines for the Use of M-Commerce by Students at WSU</td>
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<td>1540 - 1600</td>
<td>ZG Baleni</td>
<td>Can online feedback enhance quality?</td>
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<td>1610 - 1630</td>
<td>Mpomposhe Mkhuseli Benajmin and Sookdhev Rajkaran</td>
<td>Challenges facing women entrepreneurs in Mthatha</td>
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<td>Hugh A H Laue</td>
<td>EPDIP©, a model for enhancing natural intelligence to increase probability of success in any project: Part 1 –</td>
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<td>1650 - 1710</td>
<td>Nondwe Daphne Mariana Mtshatsha</td>
<td>Factors affecting the integration of information and communication technologies in the butterworth education district (Eastern Cape Province, South Africa)</td>
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<td>1710 - 1730</td>
<td>E Oseifuah</td>
<td>Financial literacy among owner/managers of small and medium-sized enterprises in the Vhembe District.</td>
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<td>Folaranmi Yusuf, EN Cishe, ND Jumbam and NSkenjan</td>
<td>Honey to wealth: the concept of community beekeeping value-chain production in the Eastern Cape Province, South Africa</td>
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<td>Takawira Munyaradzi Ndofirepi and Patient Rambe</td>
<td>Impact of entrepreneurship education variables on students innovative entrepreneurship intentions. A case of Zimbabwean polytechnic students</td>
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**Poster Sessions**  
**Coordinators: Prof G George TA Anyasi**

### Section 1A  
**AND LEARNING**

**Authors** | **Topics** |
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M Mathew a ND Mjali | A Preliminary Study on the Identification of Alien Invasive Fresh Water Fish Species in King Sabata Dalindyebo Municipality and Selected Surroundings, Eastern Cape South Africa |
V Nomnga | An Effectiveness of Work Integrated Learning amongst Hospitality Management Students at Walter Sisulu University |
S Runeyi | An evaluation of work integrated learning experiences: A case of tourism and hospitality students at Walter Sisulu University |
Nomzi Florida Mcengwa | An Exploration of Factors Contributing to Poor Management Practices by School Managers |
Rambau Musiwa Ivy | An explorative |
LT Polasi | Application of Environmental Impact Assessment (EIA) in the landfill site of Matatiele, Eastern Cape, South Africa |

### Section 1B  
**AND LEARNING**

**Authors** | **Topics** |
---|---|
FC Sonn | An investigation into the high failure rate amongst grade 12 learners at a Senior Secondary school, Mthatha West, Eastern Cape, South Africa |
S Mabentsela | An investigation of the environmental economic potential of uMuziwalantu Municipality’s forest utilized as a green SOS response to the current crisis. |
ML Mguli | An Overview and Evaluation of Teaching and Assessment Process |
SB Valashiya, AM Buka and JM Molepo | Are Primary School Teachers’ Competent Enough to Teach English as a Second Language |
C Musituand and Z Magayiyana | An assessment of the environmental campus sustainable practices: A Case of Walter Sisulu campuses (Mthatha, Butterworth, Buffalo City and Queenstown |
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<td>N Lagenge and A Bango</td>
<td>An assessment of water governance strategies used by the Nelson Mandela Bay Municipality in the Eastern Cape Province, South Africa</td>
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<td>A Otieno and W Sinkala</td>
<td>Aspects of symmetries and conservation laws of the classical Halphen systems</td>
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<td>S Sigxashe</td>
<td>Assessing Environmental and Social Risks Related to Abandoned Borrow Pits in OR Tambo District, Mthatha, Eastern Cape, South Africa</td>
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<td>LS Poswayo</td>
<td>Assessing the Socio-Economic and Environmental Impacts of Illegal Sand Mining in the Chris Hani District Municipality, Eastern Cape, South Africa</td>
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<td>Mayekiso L</td>
<td>Assessing the state of compliance of the Kwa-Nobuhle (Uitenhage) wastewater treatment facility with regards to legislation.</td>
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<td>AM Buka and JM Molepo</td>
<td>A Psycho-pedagogic Approach for Inclusive Classes in Disadvantaged Rural Primary Schools in South Africa: Advancing teaching practices</td>
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<td>F Ball</td>
<td>Abstract the Effects of Class Size on Quality of Teacher Education in the Department of Humanities and Creative Arts Walter Sisulu University</td>
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<td>Coceka Mva-Ntsepe</td>
<td>Attitude of students towards the two types of assessment: Formative and Summative. The case of Walter Sisulu University (WSU), Chiselhurst site</td>
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<td>M Mafuna and N Marongwe</td>
<td>WSU lecturers’ acceptance levels of e-learning management system applying extended technology</td>
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<td>Khanyisile Ngodwana</td>
<td>Breaking down the walls of our Writing Centre: What we learned from a pilot study using Facebook group at Walter Sisulu University</td>
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<td>S Qashani</td>
<td>Challenges facing youth economic participation in the post-apartheid South Africa Case of King Sabatha Dalindyebo Municipality (KSD)</td>
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<td>NF Mcengwa</td>
<td>An Exploration of Factors Contributing To Poor Management Practices By School Managers.</td>
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<tr>
<td>Crystal Mokoena and Tapiwa Mhuru</td>
<td>Give a man a fish or teach him how to fish: Ubuntu in social assistance, a stumbling block to people’s empowerment?</td>
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<td>BL Meel</td>
<td>Compensation claims for ex-mineworkers in Mthatha region of South Africa: A long road to travel</td>
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<td>T Apalata</td>
<td>Cost-Benefit Analysis of Managing Healthcare Associated Infections at Mthatha Regional Hospital in Eastern Cape, South Africa</td>
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<td>E Manu and MJ Ntsaba</td>
<td>Early childhood exposure to marijuana cultivation and trading, its influence on adolescence marijuana use- a case of selected Pondoland Communities, South Africa</td>
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<td>NJ Rulumeni-Ntlombeni</td>
<td>Exploration of Attitudes, Perception and Beliefs on Cremation Practice amongst Urban and Rural Black Africans</td>
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<td>P Mambanga</td>
<td>Factors Contributing to Men’s Reluctance to Seek HIV Counseling and Testing at Primary Health Care Facilities In Vhembe District, South Africa</td>
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<td>Nokhwali O, Ekpebegh C, Awotedu A</td>
<td>Presentations and outcomes on intentional poisoning at the Nelson Mandela Academic Hospital</td>
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<td>P Malefane</td>
<td>A number of cases have given rise to the question of the extent of rights that women in a customary union enjoy.</td>
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<td>N Mapheka and MK Soviti</td>
<td>Assessing the Vulnerability of the Wetlands along the lower Mngazi River, Port St. Johns, Eastern Cape, South Africa</td>
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<td>V Nibe and T Dlaza</td>
<td>Could water quality explain the presence of invasive plant species in three dams from Port St Johns?</td>
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<td>K Shumba, GT Donga and H Ngirande</td>
<td>Attractiveness of franchising as a business model to Zimbabwe’s independent fast food entrepreneurs</td>
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<td>MSN Mamba</td>
<td>A case study to investigate the usage and usefulness of tablet computers handed to learners by the CLTD in the Butterworth Campus of Walter Sisulu University</td>
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<td>MP Mujakachi and J Mukuvaro</td>
<td>The discursive role of intertextuality in the preservation of generic integrity and hegemony in legalese: a case study of the Labour Act</td>
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<td>0900 - 0930</td>
<td>Guest speaker: Public Health, HIV/AIDS and opportunistic infections: Dr PH Maduna: Deputy Director General: Clinical Management Services</td>
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Plenary Session Program Directors: C Anyangwe and VO Netshandama

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<td>AO Daramola, RW Krause and JA Marks</td>
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<td>C Atoliyah, O Matarirano and M Panicker</td>
<td>Factors affecting success of National Diploma in Accountancy students at Walter Sisulu University, Ibika campus</td>
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<td>1040 - 1100</td>
<td>B Makena, A Coetser, JM Molepo</td>
<td>Factors Causing Decline in English Proficiency in the Junior Secondary Schools of the Qumbu Education District</td>
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<td>ZN Dlova</td>
<td>Food quality and safety amongst government primary schools in South Africa: an exploratory study on Mdantsane Township</td>
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<td>1130 - 1150</td>
<td>L Dontsa</td>
<td>Genre and Garb in African Dances: A Medium to Communicate Social Concerns</td>
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<td>1150 - 1210</td>
<td>Liberty Takudzwa Nyete</td>
<td>Harnessing Challenges and Opportunities of Multilingualism for Improved Teaching and Learning in South African Higher Education</td>
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<td>Help-seeking behavior regarding stressful events among Walter Sisulu University (Nelson Mandela Drive-Site) students</td>
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<td>VN Mugandani and D Vermeulen</td>
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Parallel Session 3A – Research, Teaching and Learning in Higher Education Chairs: EN Cishe and P Mulaudzi Rapporteur: B Okeleye

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<td>MKB Gogela, M Zita and N Twaise</td>
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<td>Impact of solid waste on the environment in the King Sabatha Dalindyebo Local Municipality, Eastern Cape.</td>
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<td>Everjoy C Makazhe</td>
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Parallel Session 3B – Research, Teaching and Learning in Higher Education Chairs: K Mossanda and WM Gitari Rapporteur: A Dhaffala

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<td>Gladys Ashu</td>
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<td>R Morrison</td>
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<td>R Mudzielwana, WM Gitari and TAM Msagati</td>
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<td>Qualitative and Quantitative phytochemical screening of Pentanisia prunelloides (Pp) rhizome</td>
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### Parallel Session 3C – Research, Teaching and Learning in Higher Education

**Chairs:** ND Jumbam and M Maluleke  
**Rapporteur:** TJ Mudau

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<td>Investigation of the effects of a plant extract on the liver of male Wistar rats on a normal diet and a high fat diet</td>
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<td>NN Mchasa, JM Molepo and AM Buka</td>
<td>Learning Support to School Children Given by Sick Parents: HIV/AIDS Perspectives in Rural South African Schools</td>
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<td>PS Jaca</td>
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### Parallel Session 3D – Research, Teaching and Learning in Higher Education

**Chairs:** P Makiwane and E Oseifuah  
**Rapporteur:** T Mashau

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<td>Mlungiseleli Jadezweni, Themba Saziwa</td>
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<td>1020 - 1040</td>
<td>EM Kuyumani</td>
<td>Mentoring engineers in higher education – a guide to mentoring</td>
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<td>KJ Molepo, GIE Ekosse, JO Odiyo and JS Ogola</td>
<td>Mining Impacts on Soil Quality related to Agriculture</td>
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<td>Exploring Curriculum Content Knowledge and Skills Bearing Acquired by Advance Certificate in Education graduates in one selected Institution of Higher Learning.</td>
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<td>Modern Technology, Indigenous Knowledge Systems, South Africa and Thulamela local Municipality</td>
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<td>YS Hosu and EN Cishe</td>
<td>Motion or movement: how have pre and post-apartheid eras of South African agricultural and food systems performed?</td>
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<td>T Chisanga</td>
<td>Negotiating the diverse HEI entities towards the transformation of teaching and learning: the TES impact on our collective practice at WSU</td>
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<td>R Sibande and H Thinyane</td>
<td>Use of Mobile technology for citizen engagement beyond Elections</td>
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Parallel Session 3E – Indigenous Knowledge Systems

Chairs: A Sonn and C Hagenmeier

Rapporteur: F Yusuf

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<td>CR Sewani-Rusike</td>
<td>Hyraceum (umchamo wemfene) improves insulin sensitivity in pregnant female rats</td>
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<td>KD Madikizela, QQ Oyedeji, I Oyemitan, AO Oyedjej, B Nkeh-Chungag</td>
<td>Anxiolytic Effects of Rauvolfia caffra (Leaf and Bark) In Mice</td>
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Parallel Session 3F – Public Health/HIV

Chairs: N Katende-Kyenda and LG Mavhandu

Rapporteur: L Netshikweta

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<td>V Mxinwa, KO Awotedu, C Sewani-Rusike, B Nkeh-Chungag</td>
<td>Comparing oxidative stress in relation to anthropometric measures on lean diabetic patients and obese diabetic patients.</td>
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<td>A L Delgado</td>
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<td>L Zongo, D Kamadyaapa, T Shauli, C Rusike, M Gondwe and E Ndebia</td>
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<td>FA Ganjifrockwala and JT Joseph and G George</td>
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<td>Tshifhiwa Tambani, PO Bessong and A Shonhai</td>
<td>Expression of a functional HIV-1 Subtype C protease</td>
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**Parallel Session 3G– Law, Security, Governance and Conflict Resolution**  
**Chairs: C Anyangwe and Vukor-Quarshie**  
**Rapporteur: F Ngmenkpieo**

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**Parallel Session 3H– Climate Change, Food, Water and Energy Security**  
**Chairs: W Masamba and JO Odiyo**  
**Rapporteur: M Payi**

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<td>1000 - 1020</td>
<td>VL Chuma, AIO Jideani and D Beswa</td>
<td>Effect of edible insects and cowpea leaves on the nutritional and sensory quality of weaning food</td>
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Effect of location on the functional properties of flour from sweet potato (Ipomoea batatas(L.) Lam) cultivars from Limpopo province, South Africa.

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Parallel Session 3I– Appropriate Technologies and Entrepreneurship

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**Parallel Session 4B – Research, Teaching and Learning in Higher Education**

**Chairs: G George and R Molapo**

**Rapporteur: AP Kutame**

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1630 - 1650 VM Dwayi Re-positioning community engagement within the normative value system of a socially responsive university

1650 - 1710 LN Rikhotso, AIO Jideani and TK Takalani Research gaps on the use of moringa leaf powder in traditional fermented food development in Limpopo province.

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Parallel Session 4C – Research, Teaching and Learning in Higher Education Chairs: B Makiwane and C Grobler Rapporteur: P Mulaudzi

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Parallel Session 4D – Research, Teaching and Learning in Higher Education Chairs: Z Zingela TG Tshitangano Rapporteur: T Mashau

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**Parallel Session 4E – Research, Teaching and Learning in Higher Education**  
**Chairs: J Alex and Takawira Munyaradzi**  
**Rapporteur: BN Muringani**

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<td>Clarah Dapira and Zibongiwe Mpongana</td>
<td>Strategies for Improving Rural Incomes and Poverty Alleviation: Some Insights from the Eastern Cape Empirical Study</td>
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<td>Students’ Perception on Service Quality at a Tertiary Institution in the Eastern Cape Province.</td>
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<td>OS Obadire, CCA Hagenmeier and N Ntakana</td>
<td>Students’ perceptions of internationalisation of higher education at the University of Venda, South Africa</td>
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<td>HT Oni and TG Tsitangano</td>
<td>Substance use among Secondary School Students in a Rural Setting in South Africa: Prevalence and Possible Contributing Factors</td>
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**Parallel Session 4G – Research, Teaching and Learning in Higher Education**

**Chairs: S Rajkaran and VO Netshandama**

**Rapporteur: ZG Baleni**

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<td>ND Jumbam, W Masamba and L Nettie</td>
<td>Synthesis of musk fixatives: 1-(6-tert-butyl-1,1-dimethyl-2,3-dihydro-1H-inden-4-yl)ethanone (Celestolide) and 1-(1,1,6,6-tetramethyldecahydro-as-indacen-4-yl)ethanone (Dimuscan)</td>
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<td>1420 - 1440</td>
<td>Mojalefa Manamela</td>
<td>Synthesis, characterization and antibacterial activity of heteroleptic nickel(II) complexes of dithiocarbamates and xanthisates</td>
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<td>1440 - 1500</td>
<td>TE Ikedinobi and M Mafuna</td>
<td>Using Learner/Learning Analytics for Student Tracking and Monitoring at WSU and the Technical Aspect</td>
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<td>A Tachie and JM Molepo</td>
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<td>T Loqo</td>
<td>Teaching practices in the Extended Biological Sciences Programme: Evidence of an innovative teaching approach</td>
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<td>1610 - 1630</td>
<td>SB Dyantyi</td>
<td>The Application of GIS in the Mangrove Distribution of Protected and Unprotected Estuaries along the Transkei Coast</td>
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<td>The Benefits of Digital Storytelling as a Learning and Teaching Tool in Foundation Provision</td>
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<td>Luleka Mkosi</td>
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**Parallel Session 4H – Indigenous Knowledge Systems**

**Chairs:** N Mtshatsha and S Maputle  
**Rapporteur:** N Marongwe

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<td>T Matuka, IA Oyemitan, RM Matewu, OO Oyedeji, SO Oluwafemi, BN Nkech-Chungag, SP Songca and AO Oyedeji</td>
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<td>1500 - 1520</td>
<td>Harry Sewlall</td>
<td>Zakes Mda’s Fiction in the Economy of Indigenous Knowledge Systems</td>
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<td>Trenance Khoza</td>
<td>Revitalising the curriculum through indigenous knowledge systems</td>
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<td>Nanga Raymond Rasekoane</td>
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**Parallel Session 4I – Public Health/HIV**

**Chairs:** W Sinkala and PO Bessong  
**Rapporteur:** EK Sibanyoni

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<td>Guidelines to minimise the defaulting rate of Multi-Drug Resistant Tuberculosis patients in Multi-Drug Resistant unit in Limpopo Province.</td>
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<td>L Tyeshani, NI Funani, L Godlimpi, B Bongsha and WW Chitha</td>
<td>Health care facility readiness for implementation of the national health insurance innovation: challenges facing health care facilities as deduced from the GP contracting study</td>
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<td>N Sharpley</td>
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<td>1540 - 1600</td>
<td>FC Bokop, DK Muballe, SD Vasaikar and T Apalata</td>
<td>Healthcare associated infections among neurosurgical patients at Nelson Mandela academic complex, Eastern Cape: incidence, risk factors and antimicrobial susceptibility patterns</td>
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**Poster Sessions**

**Coordinators: M Chirwa and JO Odiyo**

**SECTION 2A**

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<td>Nqabeni, Cenge and Tebekana</td>
<td>Knowledge and attitudes: Grade 10 pupils more likely to fall pregnant</td>
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<td>MR Krexe</td>
<td>Reducing illiteracy in the Eastern cape through provision of adult basic education and training</td>
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<td>AS Niba and I Yekwayo</td>
<td>Response of soil-surface dwelling invertebrates to alien invasive and indigenous plant cover in King Sabata Dalindyebo (KSD) Local Municipality, Eastern Cape, South Africa</td>
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<td>Simbongile Ntwasa</td>
<td>Rural Student’s reflections on the effectiveness of the Learning and Teaching Development at Walter Sisulu University, Buffalo City Campus.</td>
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<td>K Sorsa and B Stelloh</td>
<td>Strategies which the automotive component supply industry use to mitigate the impact of skills shortages in South Africa</td>
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<td>Contact with the Dragon: Investigating the Impact of Chinese Trade on the Small Micro and Medium Enterprises in the Mthatha Area</td>
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<td>VM Mbulaheni</td>
<td>Creating a sustainable teaching and learning environments in dysfunctional secondary schools in Mutale Area of Vhembe District</td>
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<td>Israel Kariyana</td>
<td>Effects of the attributes of school management teams on the management of quality education: Towards school effectiveness</td>
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<tr>
<td>Lukhanyo Stemele</td>
<td>Career advancement of tourism and hospitality management: voices of former Walter Sisulu University graduates in South Africa</td>
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<td>NO Mulaudzi</td>
<td>Challenges of Grade R Teachers in Setting Classroom Space for Teaching Mathematics</td>
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<td>JK Alex and KJ Mammen</td>
<td>Conceptual understanding in geometry: A case study on entry level mathematics education students in a South African comprehensive public university</td>
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<tr>
<td>A Raphalalani, GE Ekosse, JS Ogola and JO Odiyo</td>
<td>Elucidating on paleoenvironments of kaolinitisation</td>
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<td>Pumla Mesatywa</td>
<td>Gastric Ulcer Healing Properties and Cyto-Toxicity of Ledebouria ovatifolia</td>
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<tr>
<td>RO Masevhe</td>
<td>Mineral phase transformation of kaolin at Lwamondo and Zebediela, Limpopo Province, South Africa</td>
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<td>AE Mbasa, T Apalata, SD Vasaikar, FC Bokop, TKC Mabotja and B Longo-Mbenza</td>
<td>Modification of nugent’s method for the diagnosis of bacterial vaginosis considering a new optimal cut-off point</td>
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<td>FO Unuofin and PNS Mnkeni</td>
<td>Optimizing rock phosphate incorporation rate for efficient vermidigestion of cow dung waste paper mixture</td>
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<td>GK Pindihama, WM Gitari and JR Gumbo</td>
<td>Removal of cyanotoxins from raw dam water using the bioaccumulation potential of aquatic macrophytes</td>
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<tr>
<td>MV Phakoago, GE Ekosse, JO Odiyo</td>
<td>Health effects associated with geophagic soils from Southern Africa- a review</td>
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<td>OO Aremu, AHG Griffiths, R Matewu, AO Oyedeji, OO Oyedeji, SP Songca, and OS Oluwafemi and BN Nkeh-Chungag</td>
<td>The anti-inflammatory and anti-nociceptive properties of essential oil of chamomile in rodents</td>
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<td>BL Meel</td>
<td>Incidence of blunt traumatic deaths in the area of Mthatha, South Africa (1993-2006)</td>
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<td>Ntombophelo Sithole</td>
<td>Knowledge and attitude, accessibility and acceptance of female condoms by students in WSU Nelson Mandela Drive Campus</td>
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<td>BL Meel</td>
<td>Poisoning admissions in Accident and Emergency Department at Nelson Mandela Academic Hospital, Mthatha between 2005 and 2006</td>
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<td>AE Sunday</td>
<td>The nature of sexual behaviors among the unreach urban youth: a case study of the street youth of Mthatha</td>
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<td>Humairaa Tar Mahomed</td>
<td>Exploring the nature and prevalence of reported cases of direct unfair discrimination exploring the nature and prevalence of reported cases of direct unfair discrimination in the workplace in post-apartheid South Africa</td>
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<td>M Mpofu, P Kutam and N Mutshaeni</td>
<td>Dietary patterns of Zimbabwean college students and Implications to their Academic performance</td>
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<td>Phindile Shongwe and Absalom Manyatsi</td>
<td>Food, Water and Energy Security despite the Negative Impacts on Climate Change in the SADC Region</td>
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**Parallel Session 5A – Research, Teaching and Learning in Higher Education**

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<td>M Ndumdum, PF Tseki and Z Tshemese</td>
<td>Photochemistry of carbontetraiodide with crown ether and cyclodextrin</td>
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<td>Kholekile Hazel Ngqila</td>
<td>Pluralistic tendencies in healing: healing abantu illness in the contemporary South Africa</td>
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<td>TJ Muda</td>
<td>The contributory factors of teenage pregnancy among learners at secondary school in the Vhembe District, Limpopo Province</td>
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<td>P Nodo, NC James, MDV Nakina and A-R Childs</td>
<td>The demersal fish assemblages of the Kariega and Great Fish estuaries</td>
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<td>Luvuyo Dontsa</td>
<td>The Development of African Music and Heritage Archive at WSU</td>
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<td>P Mulaudzi and Maila Leyneth</td>
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<td>BM Arthur-Aidoo</td>
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<td>Vuyayo Tsheleza</td>
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**Parallel Session 5B – Research, Teaching and Learning in Higher Education**

**Chairs:** M Buka and E Oseiguah  
**Rapporteur:** R Morison

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<td>C Kappo-Abidemi, Chux G Iwu and COK Allen-Ile</td>
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<td>A van der Byl</td>
<td>The level at which local businesses comply with the waste management hierarchy in the central business district of Mthatha, Eastern Cape</td>
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<td>1120 - 1140</td>
<td>Rekha Manoj Panicker</td>
<td>Sequences of $(\psi, \Phi)$- weakly contractive maps and stability of fixed points</td>
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The practices and methods of contraception used amongst the black rural secondary school learners in the Limpopo Province of South Africa.

The prevalence and distribution of Candida species isolated from National Health Laboratory Services-Nelson Mandela Academic Complex from 2013-2014.

THE PROTECTION OF ENVIRONMENTAL INTERESTS THROUGH CORPORATE GOVERNANCE: A SOUTH AFRICAN COMPANY LAW PERSPECTIVE

The prevalence and distribution of Candida species isolated from National Health Laboratory Services-Nelson Mandela Academic Complex from 2013-2014.

Parallel Session 5C – Research, Teaching and Learning in Higher Education

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<td>The study of students-supervisors possible encounters and experiences in postgraduate research studies</td>
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<td>MB Khatry-Chhetry</td>
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Parallel Session 5D – Research, Teaching and Learning in Higher Education and Functional Multilingualism in Southern Africa/ E-Skills for Rural Development
Chair: P Tseki and A Nwafor
Rapporteur: V Mugandani

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Parallel Session 5E – Climate Change, Food, Water and Energy Security
Chairs: S Sk Mfusi-Campos and WM Gitari
Rapporteur: T Anyasi

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Parallel Session 5F – Public Health/HIV
Chair: KSA Mossanda and LB Khoza

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Parallel Session 5F – Public Health/HIV
Chair: KSA Mossanda and LB Khoza

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**Parallel Session 5G – PUBLIC HEALTH/HIV**

**Chairs:** P Oluboyo & T Ndlovu

**Rapporteur:** J Mvenene

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**Parallel Session 5I - Law, Security, Technologies and Entrepreneurship**

**Chairs:** D Gumbi and OS Obadire

**Governance and Conflict Resolution/Appropriate Technologies and Climate Change, Food, Water and Energy Security**

**Rapporteur:** V Dwayi

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0950 - 1010 Siyabonga Mxunyelwa and Dinesh Vallabh  
The lack of management capacity within Small Medium Tourism Enterprises (SMTEs)

1010 - 1030 MK Bilonda, Pham Khac Duy, Jules Tshishimbi Muya, Hoeil Chung and Liliana Mammino  
Theoretical Study of (-)-Epicatechin: Structural properties and Chemical Reactivity

1030 - 1050 Zingela Z, van Wyk S, Pietersen JJ & Geyer T  
Use of traditional and Alternative Healers in a cohort of Psychiatric Patients in Nelson Mandela Metropole

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1100 - 1120 Nkushubana OT, Zingela Z, van Wyk S & Longo-Mbenza B  
Substance use and comorbid psychiatric diagnosis in an acute mental health unit: one year prevalence, clinical and demographic determinants.

1120 - 1140 L Kunjana and GE Okuthe  
Histological and histochemical study of the mucosal surface of the alimentary canal of Tilapia sparrmanii following exposure sub-lethal concentrations of benzene.

1140 - 1200 TJ Nesengani, MJ Mudau and VO Netzhandama  
Impact of Food Security Projects on Poverty Alleviation in Limpopo Province of South Africa

1200 - 1220 G George, F Ganjifrockwalla, BM Gqaza, S Sidlakadla and N Mkuseli  
In vitro antioxidant potentials of selected indigenous leafy vegetables from the Eastern Cape Province of South Africa

12-20 - 1240 NT Xipu  
Investigating the effect of rural development projects on food insecurity and malnutrition: the case of Siyazama food garden project in Sakhisizwe Municipality

1240 - 1300 NS Mabapa, Motadi SA and Mailula NR  
Iodine nutritional knowledge of food handlers: a Capricorn and Waterberg district study, Limpopo Province, South Africa

1300 - 1320 Fuzeka Yola Ngcebetsha  
Lessons learnt from rangeland conservation practices: systematic analyses of practices in the Umzimvubu Catchment area

13-20 - 1340 Oversea Nabileyo  
Liability for water pollution

### Poster Sessions
**Coordinators:** M Chirwa and H Sewall

#### Section 3A
**RESEARCH, TEACHING AND LEARNING**

- **Sunday Bankole Adeyemi**  
Teachers Variables as Predictors of Academic Excellence in Nigerian Universities.

- **Mangaliso Simphiwe**  
The Perceptions Of Walter Sisulu University (WSU) Students towards the “No Vote Campaign” in South Africa

- **Ruth Nalumaga Luzuka**  
The role of internal audit in sustainability reporting

- **Shonisani Agnes Mulovhedzi and Ndileleni Paulina Mudzielwana**  
Importance of teaching Leadership Skills in the Foundation Phase

- **E Kyere and JK Alex**  
Investigation into the causes of poor performance of grade 9 learners in algebra: a case study of two schools in Mthatha District

- **Wellington Chakuzira**  
Title: Mobile and social networking technologies for teaching and learning in South African Universities

#### Section 3B  
**LEARNING**

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RESEARCH, TEACHING AND LEARNING IN HIGHER EDUCATION
Diversity and distribution of both the flora and fauna on the intertidal rock pools and emergent rock outcrop of Mkhambathi Nature Reserve.

Z. Mnyaka, T.S Dlaza, MDV Nakin

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Diversity and distribution of both the flora and fauna found on the intertidal rock pools and emergent rock outcrops of Mkhambathi Nature Reserve. Zizipho Mnyaka,a,b*, Thembinkosi Dlaza a and MDV Nakinb aDepartment of Biological and Environmental Sciences, Walter Sisulu University, Private Bag X1, Mthatha 5099, bRisk and Vulnerability Science Center, Walter Sisulu University, Private Bag X1, Mthatha 5099, Eastern Cape, Republic of South Africa. *Corresponding author: ziziphomnyaka@gmail.com Abstract The rocky intertidal region experiences vast environmental changes resulting in both biotic and abiotic induced stresses to the organisms found there. This area of the seascape is covered by marine flora and fauna, some with close marine lineages while others are more closely related to land species. Rock pools offer sanctuary to organisms that cannot tolerate harsh changes that come with inhabiting the rocky intertidal. Studies conducted on the intertidal tend to focus on either rock pools alone or on the emergent rock outcrop without comparing the two. The aim of the study was to quantify and contrast the diversity and distribution of species found on both the emergent outcrop together with those found in rock pools. A 0.4m2 quadrat was laid out using systematic random sampling inside and outside rock pools to quantify the diversity of both the flora and fauna of Mkhambathi Nature Reserve. Diversity indices were used to quantify the diversity of species found in Mkhambathi Nature Reserve. A total of 32 species were identified, including 14 seaweeds and 8 limpets. There was a 20% difference in the diversity of limpets between the habitats. Only Padina boryana was confined to rock pools while 4 seaweeds and 4 limpets were confined to outcrop. The results show that these two habitats house different organisms. However, rocky intertidal pools have less diversity than the emergent rock outcrop in Mkhambathi Nature Reserve.

Keywords: Limpets, seaweeds, wave action, microhabitat, zonation, association

Phytochemical Analyses of Arctium lappa root extracts.

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*Arctium lappa* (burdock) is a herbaceous plant from the *Asteraceae* family. *Burdock* roots are traditionally recommended for treating various ailments including sore throat, joint pains, skin disorders such as irritation, eczema, acne, boils. In the study we focused on qualitative and quantitative screening of phytochemicals for secondary metabolites present using standard methods and chemical analysis of volatile constituents in the root extracts. 300g of dried roots were subjected to hydrodistillation for extraction of volatile oil. Extracts were prepared using infusion method as generally used by traditional healers. Qualitative screening revealed the presence of tannins, saponins, glycosides, flavonoids, terpenes, phenolic compounds and sterols. Recovered quantity of alkaloids 4.6% saponins, 9.2% and flavonoids 3.7% were calculated by difference. Volatile chemical constituents was analyzed using Gas Chromatography-Mass Spectroscopy. This paper presents the results of our studies on the chemical analysis of extracts and the biological activities of the plant extracts using animal model. This results support the basis for its ethnomedicinal uses.

**Key Words:** *Arctium* lappa, secondary metabolites, screening, ethnomedicine, hydrodistillation, infusion, volatile oil

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**Phytochemical analysis and Biological activities of Echinacea.**

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The genus *Echinacea* comprises of 19 species with three that of medicinal interest namely *E. purpurea, E. Pallida* and *E. Angustifolia*. It belongs to the *Asteraceae* family. Ethnopharmacological applications of *Echinacea* reveals its application as a treatment for bacterial, viral, protozoan, and fungal infections, as an anti-inflammatory agent, and as a possible chemo preventative agent. This study is aimed at investigating the phytochemical constituents of the plant and to evaluate toxicity and anti-inflammatory activities of the aqueous extracts of *Echinacea*. Root and leaf of the plant extracts were screened for qualitative and quantitative phytochemical analysis to identify and quantify the secondary metabolites present. Acute toxicity test of the plant extract was carried out to determine its lethal dose *(LD50)* and anti-inflammatory test of the plant extracts was also evaluated.

Among the classes of compounds present in *Echinacea* were alkaloids, tannins, saponins and flavonoids. The *LD50* of the plant extracts was 5000mg/kg per oral, there was no mortality in mice. The extracts also exhibited significant anti-inflammatory activity.

Our results support the ethno-pharmacological uses of this plant by Herbal Practitioners and could provide useful data for the utilization of these extracts in pharmaceutical industries.
Investigating the effect of red wiggler worms on soil fertility, Mthatha, OR

Tambo region, Eastern Cape, South Africa.

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Globally, food shortages seem to be a problem and the growing population puts pressure on agriculture, increasing the demand for more food to be produced. Despite the increasing need for more food production the environment needs to be put into consideration, thus sustainable agriculture must be practised. Penning de Vries et al, 1995 describes sustainable agricultural practices as a manner in which the quality of the soil and the non-agricultural environment either remain constant or improve, and limited natural resources such as water and mineral fertilizer are not overexploited. This can be practical if the environment is preserved, that is expansion of agriculture into ecosystems is stopped, less inorganic fertilizer is used, and also when food waste is reduced. Therefore, the current study intends to investigate whether vermicompost from red wiggler worms (*Eisenia Foetida*) could improve soil quality for crop growth and also reduce municipal waste going into landfills as these worms have an ability to ingest and alter organic wastes into humus-like organic material. To achieve this, an experiment will be conducted where three plots (A, B and C) of spinach will be cultivated. Two of the plots will be treated with different fertilisers Plot A with vermicompost, plot B with any random organic fertiliser and plot C will be the control where no treatment will be used. Comparison will be made by measuring the stem and leave of the crop on the 3 plots respectively. Results will be summarised using tables and graphs, and where necessary analysed using t-test and ANOVA.

Key words: red wiggler worms, vermicompost, soil fertility.

An assessment of the level of knowledge about HAART and HIV-Infected patient’s waiting time at a primary healthcare centre.

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Background: The treatment of HIV/AIDS extends beyond knowledge development among HIV-infected; a partnership between them and healthcare providers with the HIV assuming the major responsibility of self-care that will result in adherence and a good clinical outcome. Aim: The study assessed the level of knowledge about HAART and HIV-infected patients waiting times at a primary healthcare centre.
Methodology: Data were collected from 86 HIV-infected during a descriptive-cross-sectional study using a standardized-questionnaire and face-to-face-exit interviews. Pill-counts technique was performed and adherence-rate of ≥95% considered acceptable. Data were analyzed using SPSS 22.0. Univariate-factors associated with poor-adherence to HAART were assessed using ANOVA and p≤0.05 considered statistically significant. Results: Of 86 HIV-infected 63(73.3%) were females and 23(26.7%) males and enrolled on HAART for 35.5(±31.8) months ranging from 1–137 months with mean age (±SD) of 35.6(±9.6) years. Of these, 27(31.40%) and 25(29.07%) were on WHO stages 2 and 3 respectively. Adherence-rate computed from 32 patients revealed 23(71.9%) having poor adherence-rate. The level of knowledge of participants about HAART in terms of tablets’ names, correct dose, when to take them had no influence on adherence. Of the 23 that were non-compliant, 10(40%) gave reasons that drugs were not available, 7(30%) ADEs, then 5(20%) said drugs were too many and 1(10%) were too busy to take them. The mean waiting times in minutes at reception was 55.9±46.9 (2–210), nurses station 44.8±39.4 (2–180), doctors 84±90.6 (3–300), laboratory 83.3±83 (30-180) and at Pharmacy 30.1±25.6(2-120). Waiting areas associated with poor adherence were at reception (p=0.028), and at the doctors with (p=0.027) while at nurses station (p=0.29) and pharmacy (p=0.43) were not. Conclusions: Providers’ characteristics, clinical settings, long waiting times, intermittent drug availability, total numbers of drugs are barriers decreasing patients’ adherence to HAART and poor clinic attendance. Knowledge about the side-effects of drugs is crucial information that has to be passed on to the patient.

Keywords: HAART, HIV/AIDs, adherence-rate, primary health care, ADEs of drugs

Group-theoretic aspects of mathematical modelling via Lie symmetry analysis.

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An integral part of mathematical modelling involves solving differential equations which arise from scientific investigations as mathematical models of various phenomena. Typically, such differential equation models are nonlinear and difficult to solve. In fact there are no general integration procedures tailored for solution of differential equations. Lie symmetry analysis represents what is arguably the most systematic approach to solving differential equations in a unified manner. At the core of the Lie-symmetry-inspired solution methods are abstract group-theoretic concepts that are not naturally associated with modelling. In this talk we show how elementary concepts from group theory and algebra are brought to bear on solutions of differential equations. We draw examples of differential equation models from diverse fields including physics, epidemiology and finance.

Keywords: Lie group, symmetry analysis, Lie algebra, group theory, differential equation, mathematical modelling
Clinical audit of diagnosis and management of patients referred with diagnosis of asthma to the Pulmonology Clinic at NMAH, Mthatha: a cause for concern.

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We undertook a clinical audit of all adult patients with diagnosis of asthma referred to the NMAH Mthatha over a 12 months period. These were both in-patients and out-patients. Information such as age, sex, patients’ presenting symptoms, medications especially usage of pressurized metered dose inhaler (pMDI) were obtained. Final diagnosis by the pulmonologist was noted. 109 patients, (64 females and 45 males) were identified, with ages ranging from 18 to 87 years (mean, 47 +/- 3.1 years).

Analysis was done to determine correctness of asthma diagnosis and causes for misdiagnosis, as well as the correctness of pMDI usage. Of 52 patients < 40 years of age, asthma was correctly diagnosed in 37 patients [71.2%] and incorrectly in 15 patients [28.8%]. The alternative diagnosis were: pulmonary TB – miliary and fibrotic disease, bronchiectasis, upper respiratory tract infection, COPD and GORD in that order. For the 57 patients > 40 years, asthma was correctly diagnosed in 31 patients [54.3%] and incorrectly in 26 [45.7%]. The five main causes for misdiagnosis were: COPD, left ventricular failure, pneumoconiosis, post TB pulmonary fibrosis and endobronchial lesions.

It is concerning that asthma was correctly diagnosed in only [62.4%] and incorrectly in 41 [37.6%]. Of greater concern was that only 18.5% of the patients were able to use the pMDI correctly. The implication of these findings for control of asthma will be discussed.

Key words: Clinical audit, asthma diagnosis and management, NMAH, Mthatha

Human myiasis in rural South Africa is under-reported.

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Myiasis is the infestation of live tissue of humans and other vertebrates by larvae of flies. Worldwide, myiasis of humans is seldom reported, although the trend is gradually changing in some countries. Reports of human myiasis in Africa are few. Several cases of myiasis were recently seen at the Mthatha Hospital Complex, Mthatha, Eastern Cape Province, South Africa (SA).

Because of a paucity of literature on myiasis from this region, surgeons and scientists from Walter Sisulu University, Mthatha, decided to document myiasis cases presenting either at Nelson Mandela Academic Hospital or Umtata General Hospital from May 2009 to April 2013. The objective was to determine the incidence, epidemiology, patient age group and gender, and fly species involved. The effect of season on incidence was also investigated.

Twenty-five cases (14 men and 11 women) were recorded in the 4-year study period. The fly species involved were Luciliasericata, L. cuprina, Chrysomyamegacephala, C. chloropyga and Sarcophaga (Liosarcophaga) nodosa, the latter being confirmed as an agent for human myiasis for the first time.
The patients were 3 - 78 years old (median 56). Cases were most numerous during spring and summer, and were associated with underlying pathologies typical of ageing. The study shows that human myiasis is still frequently encountered in SA, and there is a need to understand its epidemiology better.

**Keywords:** human myiasis, Lucilia sericata, L. cuprina, Chrysomya megacephala, C. chloropyga and Sarcophaga (Liosarcophaga) nodosa

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**Engagement as the third core function of higher education and its integration with research and teaching agendas: the Nelson Mandela Metropolitan University (NMMU) as a case study in creating an enabling environment for integrated engagement.**

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The focus in higher education is often placed, near-exclusively, on research and teaching agendas, yet engagement has globally been recognised and accepted as the third core function of higher education. It is also recognised that engagement is critically integrated and deeply imbedded in both research and teaching and that these three functions are imbricated in a social responsibility agenda which recognises the significance of higher education institutions as resources for the community. Reciprocal relationships between higher education institutions and their communities are emphasised in engagement rhetoric and praxis, as are the values and practices of mutuality, respect, bi-directional interaction and cooperation for sustainability, both global and local. At NMMU the centre for academic engagement and collaboration (caec) drives engagement as an institutional and strategic priority. Since the beginning of 2014 nmmu, through the newly created portfolio of the manager: engagement information and development (eid), has been creating processes and avenues for the consolidation of institution-wide engagement efforts, in the broadest sense of the word. The aims are to encourage and increase engagement activities at nmmu, but also to begin to track the engagement footprint of the institution locally, nationally and internationally. As part of this effort emphasis is placed on the integration of the institution’s stated three core functions and the development of a scholarship of engagement at nmmu. This presentation will be of a practical and analytical nature, highlighting the ways in which the above processes have been introduced during the course of 2013/4 and how globally-recognised challenges to engagement (such as funding, recognition, silo-thinking and cross-faculty co-operation) are incrementally being addressed at nmmu. This paper lends a specific institutional perspective to the debate of humanising pedagogies (amid the increasing challenges created by neo-liberal managerial and materialist culture in higher education) in its focus on creating an enabling environment and supportive institutional structures as a contributing gateway to the forging of responsible relationships between the university and its communities.

**Keywords:** engagement, social responsibility, outreach, communities, humanizing pedagogy

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**Undergraduate Students into Research Methods at the University Of Technology.**

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The purpose of this study is to promote the teaching of research methods to undergraduate students at the University of Technology (UoT) in order to produce critical thinkers and lifelong learners. The major problem is that university students at all levels have a negative attitude towards research methods course because they get to be introduced to this course when they do their Btech's. When they start doing it they find it very difficult and they don’t see its importance in their career paths. Because of these reasons undergraduate students at the UoT need to be introduced to research methods course and/or statistics as part of their curricula. This is crucial because undergraduate students will be exposed to research concepts and practices at an early stage of their career. This will introduce undergraduates to new concepts accompanied by mathematically based ideas. Encountering new and challenging material has a potential to trigger various responses from students such as stress, uncertainty, anxiety and negative attitude. On the other hand this course stimulates critical thinking and raises the level of thinking. Due to uncertainty caused by this course, students end up breaking research ethics rules as they plagiarise, cook data, etc. UoT’s are still at infancy when it comes to research, teaching this course to undergraduate will inculcate the research culture and passion. This will help students to grow with this culture which will enable them to conduct research at any stage of their lives. A survey will be conducted to collect data and the relevant theory will be used.

Keywords: university of technology, research methods, undergraduates, socialise, critical thinker, lifelong learners

A Psycho-Pedagogic Model for Inclusive Classes in Disadvantaged-Rural Primary Schools in South Africa.

Buka M and Molepo M

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This study was conducted in two education districts of the Eastern Cape, one of the most-disadvantaged provinces of South Africa. It focused on pedagogic processes and dilemmas faced by teachers in inclusive classes with diverse-learning barriers. It also aimed at strengthening teaching practices and learning support strategies (tplss) teachers used in inclusive classes (ics) in rural-disadvantaged primary schools. There were 19 teachers including inclusive classroom caregivers (iccs) in 13 schools (n = 19, mean age = 45, males = 2, females = 17). A qualitative mode of inquiry was used and followed a case study approach as research design. Data were thematically analyzed and revealed that learners experiencing barriers to learning (lebls) were still marginalized and minimally-supported in the classroom context while teachers used task-orientated pedagogic approach (top) which were inferior approaches and were indication of improper lesson planning. A pedagogic-inclusive approach was developed from the project and called triad pedagogic perspective (tpp) model.

Keywords: teaching practices, learning support strategies, mainstream schools, resource schools and learners experiencing barriers to learning.

Advancement of Tourism and Hospitality Management: Voices of Former Walter Sisulu University Graduates in South Africa.

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Existing research suggests that attracting and retaining suitably qualified, skilled, enthusiastic and committed workers has proved to be a daunting task for the tourism and hospitality sub sectors, especially in the developing context. This is particularly true in the case of South Africa where many graduates of these sectors ultimately seek opportunities in other unrelated sectors of the economy or even fail to enter the industry upon graduation. Consequently, the aim of this study was to unearth the perceptions of tourism and hospitality graduates on career advancement in the sector. A quantitative research design was adopted as a research blue print. The convenience sample technique was used to develop a sampling frame involving tourism and hospitality graduates from the Walter Sisulu University, who completed their qualifications between the years 2004 and 2014. The simple random sampling method was used to obtain a sample of 242 respondents out of a population of 601. The data was analysed using the statistical package for social sciences (SPSS) software version 21. The study found significant statistical similarities and differences in relation to the employment status of tourism and hospitality graduates, and perceptions of graduate employees towards a career in hospitality and tourism. The study recommends the need for tourism and hospitality stakeholders in South Africa to consider a rethink of existing employment related frameworks with a view to mitigate the current problems.

**Keywords:** perceptions, career, tourism, hospitality, graduates, advancement

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**Help-Seeking Behaviour Regarding Stressful Events among Walter Sisulu University (Nelson Mandela Drive-Site) Students.**

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The aim of the present study was to investigate the help-seeking behaviour of students regarding stressful events among WSU students. The research participants were all level two and level three bachelor of psychology students whose ages ranged between 15 and 20 to 36 years. The data was collected from 30 students both males and females, 10 from level ii and 20 from level iii students using a questionnaire with open-ended and closed-ended questions. The data was analysed using a statistical package for social sciences (SPSS), version 16.0. Research findings revealed that most of the frequent causes of stress among students were financial problems, academic related problems, and misunderstanding between parents and students. The majority of students did not seek help for their stressful events instead they coped with the situation on their own, others talked to their family members or friends. The results further revealed that the majority of students never sought for professional help in the past.

**Keywords:** help-seeking behaviour, stressful events, coping, social support

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**Evaluation by students: self- vs. institutional evaluation.**

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There is recognition of evaluation of academics by students as a means of assessing their (academics) performance. The aim of this paper is to share my experiences on an evaluation process I followed to improve my teaching philosophy and to improve effective learning. I needed to assess my performance so that I could develop professionally. By undertaking this exercise I would encourage academics to have themselves evaluated so that they can improve their competence and ensure that effective learning and teaching takes place in the classroom. This will then benefit academics, students, society, grant providers and institutional assessors. Using a quantitative methodology and a survey approach, I got information from my third year students (n=27) by means of a questionnaire designed by the institution. Two steps were followed in data collection and analysis. Firstly, I personally did the data collection and analysis. Secondly, to get an objective view, the institutional learning and teaching development (ltd) unit collected and analysed the information independently. Data was analysed manually and with a software program. The results indicate that the average scores for course evaluation, instructor evaluation, overall course evaluation and overall instructor were over 80%. Comments included: good instructor, good motivator, always punctual and very professional. Suggestions included: don't give us too much work, don't be too fast, give us a ‘scope’ for the examination, and provide notes. Such positive results must be used cautiously. It is recommended that a variety of methods be used to evaluate and assess teaching effectiveness.

**Keywords:** lecturer evaluation, quality assessment, staff development

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The study investigated the views of school management teams on self-reflection practices. The purpose of the study was to establish self-reflective practices employed by smt in performing their management functions and to suggest reflective model for the enhancement of smt performance. The study followed qualitative approach with case study research design. The population consisted of smt from primary, secondary and special schools. Purposive sampling was used to select participants from less experienced to more experience in the management positions. The study found that smt members were not aware of self-reflection practices. With regard to contribution of new knowledge, the study provided insights into the practice of self-reflection and how to become reflective practitioners. The new model was introduced to assist smt to reflect on their practice and fulfil their management functions. The model named: self-reflective pillars of school management model. The study recommended that smt be trained and orientated about management functions prior their appointments in the positions. The study further recommended that smt consider self-reflection as part of their daily activities.

**Keywords:** self-reflection, reflective practice, school management team, management functions, head of department, vice-principal, and principal, orientation, performance.

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Contemporary Perceptions Of Music Piracy In South Africa.

Thulani Zulu

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The focus of this study was to collect and critically analyse the perceptions of music piracy in South Africa, with particular focus on internet music piracy. The socio-economic framework was enlisted with empirical research approach leaning towards the qualitative research method. But because of the statistical data which seemed worthy of consideration, a minimal quantitative analysis strategy was utilized. Interviews and focus group discussions were the main modes of data gathering, with the text analysis method at the core of the study. Because of the sensitivity of the subject, ethical considerations were adhered to. Through the findings of this study, factors such as employment and illiteracy emanated as major reasons that drive people to commit music piracy. Because of the current scarcity of employment in South Africa, people are left with no options but to partake in music piracy. Illiteracy, much as it spares music piracy as a large number of people are not able to operate the internet for illegal downloading of music, a certain percentage still turn to pirating music for sustenance. Also, a substantial number of illegal immigrants, seeking jobs in South Africa, add to the statistics of music infringement.

Keywords: perceptions, cd music piracy, internet music piracy, retail music piracy, music industry, South Africa, socio-economic
Mathematics as a subject can lead to the breakthroughs in terms of solving the issue of scarce skills. Class dynamics and teacher content knowledge can be one of crucial aspects that determine learners’ mathematics interest and later performance. This paper emanates from a study conducted in one of the Eastern Cape education districts. The study examined the relationship between grade 9 mathematics teachers’ content knowledge and their learners’ knowledge acquisition for understanding linear graphs. An interpretive paradigm was selected with qualitative methods through a multiple case study research design. Purposive sampling was used to select 4 mathematics teachers and their learners’ in 4 schools in their mathematics classrooms. Data was collected through the use of classroom observations (which comprised of teachers explanations of grade 9 linear graphs content) and video conferencing (which comprised of template to explain teachers knowledge of linear graphs content) to examine the nature of mathematics teachers’ content knowledge in 4 schools. Data was analyzed through axial coding where segmentation was used to form categories. From a group of categories, themes were established which are discussed as findings. The finding revealed the incompetent nature of mathematics teachers’ content knowledge in the teaching of grade 9 mathematics linear graphs.

**Keywords:** mathematics teachers content knowledge, linear graphs, competent nature

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**The Study Of Students-Supervisors Possible Encounters And Experiences In Postgraduate Research Studies.**

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Globally, there is a general concern of quality of postgraduate education in the institutions of higher learning, length of time to complete, and the rife percentage of students’ postgraduate research studies termination (van der linde & holtzhausen, 2007; schulze & lessing, 2003; grant, 2005; abidden, 2007; lee, 2007b; rau, 2008; & okeke, 2010). Insufficient contact of research supervision sessions between students and supervisors, sour relationships amongst students, research supervisors and other researchers in the panel due to personal grudges, and administrative delays by various role players in the research process are part of the encounters and experiences in the postgraduate research studies (nealer, 2008; & okeke, 2010). Okeke (2010) asserts that there is little, if any, research attention paid to understanding the postgraduate and supervision of research experiences of students in institutions of higher learning. Bitzer (2011) contends that few studies, if any, address the epistemological and institutional contexts and their implications in which master’s and doctoral studies are conducted and supervised. Lessing and lessing (2004) and lategon (2009) argues that little is done to equip academic staff in the skills of supervising research which fast track the quality and completion of research. This paper focuses on students-supervisors possible encounters and experiences in postgraduate research studies. The study will use qualitative approach, purposive sampling method of 10 research supervisors and 10 postgraduate students as a sample. The interview schedule as data collection tool and content analysis with the using of verbatim will be considered in this study. The findings, results and discussion of this study will be presented in the paper after analysing and interpreting data.

**Keywords:** students, research, supervisors, encounters, experiences
A Comprehensive Report on Factors Affecting Students’ Academic Performance at a Rural Based University in Eastern Cape Of South Africa.

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The study was aimed at establishing factors affecting students’ academic performance against the backdrop of underperforming. The study focused on all departments in the university with the aim of helping to inform the authority about strategies that can be implemented to address the high failure rate. The study was informed by archer’s social realist theory which argues that understanding of phenomenon is only possible by examining the inextricable interplay between structure, culture and agency. It utilised a combination of quantitative and qualitative research methodologies and adopted a descriptive survey design. The study further used a stratified random sample of 800 students and purposively selected 30 lecturers to participate in the study. Data was gathered through questionnaires, face-to-face interviews, focus group interviews and observations. A pilot study was used to ensure the validity of the questionnaire and the interview schedules. Data was coded and analysed through a mixture of both descriptive and inferential statistics. Quantitative data was analysed with the aid of the SPSS statistical software package version 2.1 and presented descriptive statistics. For qualitative data, the researchers used content analysis method and presented through verbatim quotations of the participants without alterations. Thick descriptions were used for qualitative data and for quantitative data which was presented by way of descriptive statistics. Results were presented from the point of view of students, lecturers and management who participated in the study. It emerged from the study that students lacked proper writing and study skills and that course outlines and study guides were not made available. In light of the findings, the study recommended that the ctld should offer a series of lectures on writing and study skills to all students. The university should provide course outlines and study guides.

Keywords: factors, affecting, students, academic, performance, university

Mathematical modeling of the teaching and learning throughput rate of a multi-level university programme.

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Abstract in this paper a retrospective analysis using mathematical modeling is conducted to show there is direct relationship between the average departmental pass rates and the graduation rates. There are a number of factors that influence the teaching and learning throughput rate but the proposed mathematical modeling shows that the pass rates at any level of the programme determines the upper limit of the graduation rate irrespective of any combinations of factors. This model therefore indicates that if a department maintains a certain pass rate over the duration of a particular programme then the upper limit of graduation rate is predetermined. The mathematical model of the teaching and learning throughput rate of a four-year or four step programme, as an example is: [mathematical formula] where { } is the pass rate in year 1 where { } is the pass rate in year 2 where { } is the pass rate in year 3 where { } is the pass rate in year 4 it is further shown that an intervention to improve pass rates at critical levels in the programme will have a significant impact on the upper limit of the graduation rate giving any other form of intervention a great chance to contribute towards higher graduation rate.

Keywords: average pass rate, graduation rate, mathematical modelling, programme
Empirical Study of the Impotence of Mentoring Graduates Entering the Workplace: A Literature Review.
Thwala and Morena

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Mentoring is important for all graduates entering the workplace, but especially for those who are struggling to come to grips with the expectations of the workplace and its language, literacy and numeracy demands. The purpose of this paper is to study the importance of mentorship in the workplace, specifically the impact of mentorship programs for young graduates, in the construction industry and to define what mentoring is, what it entails and to report findings of a study aimed at investigating the necessity, if any, for mentoring and programmes in South African, construction industry and also to analyse the experiences, challenges and problems contributing to retention of graduates’ employees within construction companies. The study was mainly a literature review with a special focus on mentoring. The data used in the report was mainly qualitative, based on the, case studies and historical data. The review is a brief exploration into mentoring of graduates entering the workplace. The scope of this review is confined to the literature that discusses mentoring internal to the workplace which support on – and off job learning. The research revealed that there are several mentoring programmes being utilised throughout South Africa, with very positive results. However, these structured mentoring programmes are not being utilised to their full potential by the construction industry. The study revealed that graduates were very enthusiastic to participate in a structured mentoring programme; and also that, mentoring is recommended in a number of studies, particularly where the workplace’s language, literacy or numeracy may be an issue for the graduates entering the workplace, the study will recommends measures to promote their retention and participation in infrastructure development. This paper challenges the South African construction sector, construction companies in Gauteng province and various stakeholders to value their construction employees and to do more to retain them.

Keywords: retention, mentoring, workplace, graduates, youth mentoring, construction.

Attitudes towards mathematics and achievement of various groupings of pre-service accounting teachers.

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The purpose of the study was to determine the impact attitude towards mathematics have on mathematics achievement of various groupings of pre-service accounting teachers. Eight of nine fennema-sherman mathematics attitudes scales was used for this study. A cross-sectional data set containing demographic details and attitudes towards mathematics was collected and quantitative responses of 255 first, second, and third year pre-service teachers were analysed using statistical package of social sciences. The results of the study revealed that english, indian and suburban students reported more positive attitude towards success in mathematics, perception of their mother, father and teacher as sources of encouragement, support and affirmation of their efforts in mathematics, positive attitude towards effectance motivation in doing mathematics and positive overall attitudes towards mathematics than zulu, African, township and rural students. Based on the findings it was concluded that the differences in attitudes towards mathematics domains reflect a cultural racial split, english, indian and suburban students versus zulu, African and township and rural students.
Keywords: attitudes, attitudes towards mathematics, accounting, pre-service accounting teachers, achievement, mathematics achievement

Institutional challenges of WSU and UNIVEN two comprehensive universities.

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South African higher education gave birth to a new institutionally differentiated system called the comprehensive university. The system’s main aim was broadening access specifically for disadvantaged students in vocational programmes. Walter Sisulu University and the University of Venda are two of six universities classified as comprehensive universities. They are geographically situated within rural settings and are spearheading the access policy objective to ensure that their graduates would focus on improving the quality of life in the communities that surround them. Also the improvement of national development problems and projects required by firms, government and non-profit organisations. A qualitative research methodology was used where enrolment and throughput statistics over a ten year period at both these universities were analysed to establish the number of students entering and exiting the universities. The sampled statistics were taken from scarce skills programmes and industry linked offerings. The findings indicate that the two universities are moving towards becoming more degree orientated in their programme offering and this could have serious implication for the rural communities and the country’s vocational needs. A major contributing factor is that comprehensive universities are financially constrained. Furthermore, the national funding formula and institutional culture have impacted severely on the two university’s ability to deliver on their access mandate. With all these aspects to consider statistics over a ten year period indicate a decline in the diploma enrolment figures and an increase of degree orientated programmes. Future studies must focus on the purpose and mandate of comprehensive universities their policy objectives.

Keywords: access; comprehensive university; institutional differentiation; national funding formula; programme offering; institutional culture.


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In high risk subjects, perhaps some introspection is warranted regarding the art of questioning for effective measurement of learning outputs and outcomes. Literature on performance assessments indicate desire for measuring specific learning outputs (correct responses) concomitantly reflecting acquired competencies post programme delivery. Poor question design can be as much damaging to assessment results as student ill-preparedness. Thus, in setting final assessments, critically conceived questions must be set to aid effective measurement of key learning outputs and outcomes. In view of the foregoing, this study aimed at examining the questioning styles and techniques used in two key high risk subjects and providing a platform for a further research on the likely association with the quantum and quality of examination passes. Three most recent previous examination papers for each subject were purposively drawn from all papers in these subjects since the merger. A combined
quantitative-qualitative design was employed with content analysis-hermeneutics approach used to analyse questioning-styles and techniques for elicitation of appropriate responses from any average student while quantitative analysis focused on summary statistics of command words. The study picked up critical issues in examination setting with potential impact on examination results and remedial measures are recommended and could be adopted by management as part of the developmental agenda and specifically by the centre for learning and teaching development for targeted intervention. Broader research is recommended on questioning styles and techniques to include other subject areas to which results of current case study may not be generalizable.

**Keywords:** art, case study, content analysis, developmental university, hermeneutics, high risk subject, programme offering, questioning

**Collaboration of Parents, Teachers and School Managers In The Prevention Of Pregnancy Amongst Learners In Secondary Schools: A Study Of Libode District.**

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The high rate of pregnancy amongst learners in the Libode district, followed by a sudden decrease in pregnancy in 2013 made the researchers to be interested in investigating such a sharp decrease. Could it be that stakeholders started to play collaborative roles in dealing with the problem or could be that some other form of intervention was found to deal with the matter? The paper therefore investigated the role played by parents, teachers and school managers pertaining to the prevention of teenage pregnancy in the participating secondary schools. Pragmatists’ stance was adopted using mixed-methods. Data were collected in 48 secondary schools of the 4 sub-districts in the Libode district. Four categories of respondents in each secondary school took part. For quantitative data-collection and analysis, sequential, explanatory, mixed-research design was used. Data was analysed through SPSS version 22. For qualitative data two secondary schools which had provided rich and interesting responses were purposively-selected. Qualitative analyses were done manually by transcribing, coding and categorizing the participants’ responses and, finally, themes emerged. Findings of this study revealed that all parents had sessions with learners in the secondary schools. School managers were responsible for implementing decisions taken by stakeholders. Life orientation teachers have a responsibility to address all stakeholders and have a duty to make sure that learners are able to use acquired life skills. Recommendations were made based on the findings.

**Keywords:** collaboration, roles, parents, teachers, prevention

**On the art of questioning: A case study of two high risk subjects in one programme offering at a developmental comprehensive university**

*Impacts of divorce on children at Chavani Village, Limpopo Province.*

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Impact of divorce on children at Chavani village, Limpopo Province. m.makhuvele divorce is a social problem that affects the family as a whole. Parents are generally unaware of what is happening to their children when they divorce. Both parents profess love, concern and a sense of responsibility for their children. The child’s access to all family members is crucial. When parents’ divorce, the family as a
The study explored the psychological, academic, social and economic impact of divorce on children. An exploratory study was conducted. Snowball sampling was used to select the participants. Six children, aged from 13-18 years, 4 females and 2 males residing at chavani village, whose parents had been divorced for a period of three years and below were interviewed. Unstructured interviews were conducted. Data was collected by the researcher. Face to face interviews were conducted. A tape recorder was used to record the conversations. Thematic analysis was used to analyse data. Participants were consented. The study findings revealed that children suffer psychologically, academically, socially and economically due to the divorce of their parents. They felt rejected by the people they loved most and their school performance deteriorated. Divorce is a direct cause of poverty for many families. Many children felt rejected realised that their parents were leaving them and their self-esteem deteriorated.

**Keywords:** impact, divorce, and children.

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**The level at which local businesses comply with the waste management hierarchy in the central business district of Mthatha, Eastern Cape.**

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South Africa has noted that the impact of waste is a big challenge of the twenty-first century. In response to this, the national waste strategy highlighted elements of integrated waste management planning, waste information systems, general waste collection, waste minimization, recycling, waste treatment, waste disposal, capacity building, education and awareness as key intervention measures needed to promote efficient use and management of waste in Africa. This study examined the level at which local businesses comply with the recommended waste management hierarchy. The research employed observations and photographs as well as informative interviews within the municipality and interviews of randomly selected businesses around the central business district. A summative analysis of strategies put in place to ensure efficient waste management practices and challenges faced by the municipality was developed. The research had discovered that many businesses around the central business district did not conduct any activities of the waste management hierarchy as they are not aware of these steps to sustainable waste management. Many challenges are also faced by the municipality in ensuring businesses comply with these standards.

**Keywords:** reduce, re-use, recycle, recovery, minimization, awareness

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**Using Learner/Learning Analytics For Student Tracking And Monitoring At WSU And The Technical Aspects.**

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Academic exclusion is one of the factors that have an impact in the student success rate in an institution of higher learning. Rule g7 is the exclusion method used at Walter Sisulu University therefore tracking and monitoring system was put in place to intervene academically before students are excluded. The
study uses the learning analytics from the university systems such as integrator 3, heda, and wiseup to track those students. Learning analytics are then used to improve, learning within classes, student success across classes, student progress and degree completion (borden, 2014). Heda and wiseup have been used to analyse, track student performance and to intervene where necessary using different tools embedded in the systems. A pilot study has been conducted where 10 subjects from 5 departments were monitored this year using wiseup. Heda took it further by tracking all students in all departments and faculties. Four criterions have been developed to measure the performance of the students, namely: students at risk, students at the borderline, normal students and academically good students. These systems track and monitor students based on the marks uploaded on wiseup. The triggered students who meet the students at risk criteria are therefore notified by various means of communication and then referred to the academic advisors who then intervene to assist those students academically.

**Keywords:** tracking and monitoring, learning analytics, students at risk, wiseup, head

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**An assessment of water governance strategies used by the Nelson Mandela Bay Municipality in the Eastern Cape Province, South Africa.**

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South Africa’s water resources in global terms are scarce and extremely limited in extent. With each person of the 42 million people being dependent on over 1 200 kilolitres of available fresh water. The country is on the threshold of the internationally used definition of water stress. Over the last fifteen years, South Africa has completely reworked its legislative and policy framework. These changes have then been guided by the national water policy white paper of 1997. The country’s water resources are governed by the water services act of 1997 and the national water act (nwa) of 1998. In March 2010, nelson Mandela bay municipality was declared a drought area because the water volume had decreased and there was no adequate supply of water hence there is an increasing interest in efficient water resource governance, which creates a demand for information on the subject. Therefore the aim of this study is to identify water governance strategies used in the nelson Mandela bay municipality to meet its developmental goals and ensure sustainability. The study will then serve the purpose of identifying the principles and norms governing water management together with the protection and development of water resources by looking at the number of water sources that the municipality has, their capacity and the volume at which each source supplies the town; outline the integrated water resource management strategies used by the nelson Mandela bay municipality; investigate the application of water legislation and by laws in water resource governance and sustainability and look into potential challenges faced by the municipality adequate equitable water supply. The methods used were qualitative research methods using primary and secondary data. In the study a qualitative data collection method was used using primary and secondary data such conduction of interviews with the relevant departments and the Nelson Mandela bay metropolitan municipality; governmental books, journals and/ online resources. On the basis of the results of this research it can be concluded that different factors have different approaches to water governance, in this research working strategies of water resource management and governance are presented together with the main strategies of integrated water management; water governing legislations in an attempt to address and contribute to a greater understanding and perspective, interests and main concerns of the various factors in water sector. The study of water governance in different contexts allows for a greater understanding of the subject which may assist the nelson Mandela bay metropole municipality and the country at large to meet its developmental goals and ensure sustainable and efficient water supply, thereby assisting the
decision-making of managers and society in general with regard to environmental quality; ecological; human health and the provisions of section 24 and section 27 of the constitution.

**Keywords:** water resource, water governance, water management, water governing legislation

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**The challenges faced by the African National Congress (ANC) government in the eradication of economic inequality in the KSDM.**

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The purpose of this study was to investigate the challenges faced by the anc-led government in eradicating economic inequality in KSDM. During the apartheid time, the black people were discriminated against the white people. They were denied access to quality education, information, formal employment, equal distribution of economic resources, equal per-capita income and equal treatment in terms of work positions. All these circumstances have been the result of economic inequality that exists up until today. This study is informed by the qualitative research design that deals with naturalistic approaches. The target population is ksdm officials and the residents of ksd. The participants were selected using non-probability sampling whereby the population is unknown and the participants are unknown. The sample size was 25 participants. The data collection instruments that have been used in this study are interviews and questionnaire. Data has been analysed manually using sentence analysis in order to bring organised and understandable findings. The researcher found out that unemployment, poor service delivery, inadequate education and training, diseases, unequal distribution of economic resources were the main challenges hindering development towards the people of Mthatha. The recommendations amongst others included that, the municipality has to provide community agrarian projects to the citizens in order to decrease the level of unemployment and there is a need for the municipalities to provide appropriate skills and training programmes to the leaders.

**Keywords:** economic inequality, challenges, KSD and ANC

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**Setting Up Of Molecular Laboratory (Pcr) In Resource Limited Setting In WSU, Mthatha.**

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Introduction molecular diagnostics are revolutionizing the clinical practice of infectious disease. Polymerase chain reaction (pcr) is the most well developed molecular technique up to now, and has a wide range of clinical applications, including specific or broad-spectrum pathogen detection, evaluation of emerging novel infections, surveillance, and antimicrobial resistance profiling. Most molecular tests require highly skilled and well-trained staff. Aim of the study was to share experience of development of pcr laboratory, determine average cost of setting up of rpcr and cost per pcr test in Mthatha setting. Methodology: study design: observational study. Dept. Of medical microbiology, from jan 2012 to feb 2014. Rpcr assays was set up using roche light cycler 2.0 instrument. Phd research project ‘klebsiella antibiotic resistant genes study’, within the framework of the klebsiella study, a nested prospective cohort study was performed to determine the cost of singleplex rpcr. Molecular lab layout comprised of
three rooms: no template laboratory, DNA extraction room, dirty area- sample preparation, amplification. Sop were developed for DNA extraction and rPCR procedure. The calculated costs include labour and material costs (PCR assay, platform costs based on screening of 200 patients per year). Results and discussion cost of setting up PCR laboratory r 793790. RPCR single gene (blaCTX-M, blatem, blashv, blandm, blakpc) singleplex rPCR cost per patient tested (n = 685) was r 778.28. Observed average processing time- 80 minutes. Challenges: average 46 days to get reagents, limited research budget for molecular research. Benefits: increased postgraduate research with rPCR tests, collaborative research, publications. Comparative cost of PCR from SA ampath CRE detection r 780, lincr CRE screening r 692, which is comparable with our cost. Study from Amsterdam, cost per test was r 784.27 to r 971.20. Conclusion: molecular laboratory setting up in resource-limited setting (Mthatha) can be achieved although initial cost is high.

**Keywords:** PCR, rPCR, molecular technology, molecular test

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**Attitudes And Perceptions Of Employees Towards The Transformation Charter At Walter Sisulu University. Bulelwa Nguza-Mduba**

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This article addresses the attitudes and perceptions of employees towards the transformation agenda at Walter Sisulu University. The University is situated in the Eastern Cape Province. The Eastern Cape Province is one of the impoverished provinces of the country. The university was established in 2005 when the three institutions of higher learning merged to become the comprehensive university. Since then the institution has undergone major transformation changes which are trying to build the university to become the University of Choice. The aim of the empirical study is to assess the attitudes and perceptions of employees towards the transformation charter at the university. Furthermore, the study wants to determine if the university is transformed in issues like gender sensitivity, diversity management, xenophobic tendencies, presence and caring of physically challenged employees and students, women in leadership positions, curriculum reviews, etc. Research will be done using the literature study as well as the quantitative mode of inquiry whereby the descriptive method will be used. Two sets of questionnaires will be directed at the various levels of executive managers, middle managers, and heads of departments, general employees and student leadership of the university. Random sampling of 40 participants from all the levels of employees as well as 60 students will be used. Data will be analysed by using the PSS computer software program. In conclusion, it is hoped that if the institution can put its house into order it can be transformed in all respects.

**Keywords:** Walter Sisulu University, comprehensiveness, transformation charter and its categories, diversity management, xenophobia, physically challenged people, WSU policies on transformation.

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**The impact of unguided cattle husbandry on soil mechanical and hydrological elements.**

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Common property regimes are a well-known and established phenomenon in the Eastern Cape province of South Africa. Exploitation of these lands is scarcely organized, and a common practice therein is the ‘unguided cattle husbandry’ (uch) regimen. How unmanaged herds of cattle graze on the common land and what impacts they create on landscape elements is a subject of great concern. This study focused on uch as a mode of exploitation under the open access regime and investigated the effects free ranging cattle on soil as an ecosystem element. Using gis and gps identified and mapped tracks were studied.
in comparison with less disturbed but adjacent parts of the grazing land. Four soil mechanical properties (penetration resistance, bulk density, porosity and particle size distribution) as well as three soil hydrological properties (infiltration, hydraulic conductivity and water conducting macro porosity) were evaluated in pre-established quadrats. The results showed that when cattle is left to range unguided in rangelands, the hydrological and mechanical properties of the soil undergo enormous transformations negatively. This is clearly visible in the paths created on the landscape that compromise both soil structure and texture.

**Keywords:** common property regimes, unguided cattle husbandry, soil mechanical properties, soil hydrological properties

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**Challenges and opportunities of multilingualism for improved teaching and learning in South African higher education.**

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Although languages no longer define or restrict people to countries and access to employment opportunities or greener pastures, they have an impact on one’s inner-self and abilities. This reality presents a major challenge to universities because they are supposed to breed global citizens through inculcating multilingualism in their graduates. This paper explores the thoughtful models of multilingualism designed to enhance teaching and learning in tertiary institutions. The methodological difficulties faced in promoting the realization of such a concept within the realm of multilingualism out of which positive and negative imperatives are separated and explained. In this context, multilingualism refers to the incorporation of native languages into the teaching and learning structures. A large number of school leaving students, are no longer familiar with their native languages as they escape towards the global language (English). They are also not familiar enough with english, which leads to language ‘in betweenness’ called ‘language attrition’. Schimid (2011:7) described it as one’s loss of grammar and other features of any given language. This is a result of declining use or the attitude of the speakers who have either changed their linguistic environment or have attached some stigma to their native languages. This concept is pregnant with challenges and opportunities, but the fundamental question to address is: how can multilingualism be landscaped into teaching and learning in the South African higher education, given the country’s multicultural nature. Granted; there are inherent weaknesses, but i contend that it is possible to a certain extent, to use native languages as academic languages of command in universities, but this might be more fruitful through a patriotic language based learning (plbl). This concept attaches the learner to a language he/she will identify with or relate to by virtue of sharing the same ancestry, or locations. Students are likely to pay more attention. Hence the major challenge towards achieving multilingualism and can be regarded as an opportunity that language experts if any, can take advantage of. Although such experts must have the ability to zero in the complex academic contexts into native languages, mass employment opportunities will be created, but, will there be readily available experts to meet the expected requirements in South Africa to cater for South African students. Taking all this into account, will it enhance the higher education success rate and will natives be able to harness the opportunities.

**Keywords:** multilingualism, native languages, harnessing, higher education, teaching, learning

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**Importance of teaching leadership skills in the foundation phase.**

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Imparting leadership skills is the best gifts that teachers can give learners as it will make them independent, effectively communicative and responsible. Teachers look down this stage because they think it is not necessary to instil leadership skills to the learners. They thought that learners as the candidate are too young to receive these leadership skills. From childhood to grade 3 is the best time to inculcate learners how to develop leadership skills. The purpose of the study was to investigate the importance of teaching leadership skills in the foundation phase (5 to 8 years). The study was a qualitative research design. A purposive sample of four teachers participated in the study. Interviews were used as a method of generating data from the teachers. Four primary schools were selected in this study. Data was analysed through content analysis as the responses from the participants. The study findings suggested that leadership skills created a direct link between learning and performance of each learner that resulted in an effective learning of practice. The study recommended that teaching learner’s leadership skills help learners to gained confidence, enthusiasm, courage, and other skills.

**Keywords:** leadership; learning environment; leadership behaviour; leadership development; young learners, childhood.

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**Modification Of Nugent’s Method For The Diagnosis Of Bacterial Vaginosis Considering A New Optimal Cut-Off Point.**

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Bacterial vaginosis (bv) is one of the most common problems leading women to seek advice in primary health clinics. There are anecdotal reports that “nugent score”, the currently used method to diagnose bv, has limited accuracy. We aimed to assess the diagnostic performance of nugent’s method as well as to improve its accuracy. Vaginal swabs were obtained from 105 women attending nelson Mandela academic hospital from july to september 2014. Nugent method was compared with the gold standard “claey’s method”. Agreement kappa was used to determine concordance between these two methods and receiver operating characteristic (roc) curves were used to re-define the cut-off point. A total of 33 (31.4%); 27 (25.7%) and 45 (42.8%) patients were found to be positive, intermediate, and negative for bv, respectively using the nugent score. Compared with claey’s score, roc determined the optimal cut-off point of nugent as ≥5 (instead of ≥7) to diagnose bv with a sensitivity and specificity of 66.7%, ppv: 72.7 %, npv: 60%. The Pearson correlation between the two methods was r = 0.26 (p = 0.007); r2 linear = 7% (y = 5.93 + 0.23x; auc = 0.71; p < 0.0001). However, if we modify the cut-off point to ≥3.5, the sensitivity becomes 81.7%, specificity 63.3%, ppv 65.3%, and npv 63.3%, with the agreement kappa of 0.413 (p < 0.0001). Whilst the modified cut-off point has potential in improving the diagnostic accuracy, a large sample of patients is required and hormonal imbalances must be considered before drawing a conclusion.

**Keywords:** bacterial vaginosis, agreement kappa, diagnosis, nugent’s method, claey’s method.
Phenotypic Characterization And Antimicrobial Susceptibility Patterns Of Acinetobacter Species Isolated From Clinical Specimens In Mthatha, Eastern Cape.
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Acinetobacter species are ubiquitous, aerobic gram negative coccobacilli, recently emerging as important nosocomial pathogens displaying high level antimicrobial resistance. The study sought to determine phenotypic characterization and antimicrobial susceptibility patterns of acinetobacter spp. From various clinical specimens in Mthatha. A total of 100 non-duplicate clinical isolates were collected from the national health laboratory services between march 2013 and march 2014. Of 100 isolates, 89 were confirmed and subsequently identified as acinetobacter species using microscan® (walkaway 96 is system). The susceptibility patterns and minimum inhibitory concentrations (mics) of different species of acinetobacter tested against various antimicrobial agents were performed using disc diffusion method and microscan®, respectively. Isolates of acinetobacter were frequently recovered from pus (53.9%), followed by infected wound tissues (13.5%), and sputum (10.1%). The most predominant species was a. Baumannii/haemolyticus (66.3%), followed by a. Lwoffii (14.6%) and acinetobacter spp. (1.1%). The highest resistance rate was observed when isolates were tested against ceftazidime (66.29%), cefepime (65.17%), and pipericillin/tazobactam (64.04%) whilst imipenem (64.04%) and tobramycin (64.04%) were highly susceptible, followed by meropenem (56.18%). More than 47% of isolates were multidrug-resistant (resistance to at least three classes of parental antibiotics). Mics to meropenem, amikacin and tobramycin confirmed susceptible results in 61.04% (≤2µg/ml), 60.23% (≤16µg/ml) and 53.14% (≤4µg/ml) species of acinetobacter respectively. The study showed a significant increase of multidrug-resistant species of acinetobacter in our setting. While the currently recommended antimicrobial agents (carbapenems and aminoglycosides) must be used with caution, new molecules are warranted.

Keywords: acinetobacter species, multidrug resistant, and minimum inhibitory concentration

Mobile and social networking technologies for teaching and learning in South African universities.
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The increase in mobile communication technologies usage which is experienced especially in developing countries have raised hopes for fast take off in mobile learning (m- learning) and social networking technologies. However, students may demonstrate lack of enthusiasm, possibly due to lack of trust. Educational institutions respond in a variety of ways to change in technology, from avoiding it to embracing it. This study seeks to make lecturers and students understand the application and services offered by m-learning together with the use of social networking technologies in teaching and learning. Universities will be assisted on making effective strategies in adopting m-learning practices in the learning environment. Opportunities as well as barriers of using mobile and social networking technologies in teaching and learning will be clearly conversed. This will help stakeholders in conceptualizing mobile learning and social networking measures that enhance a student-oriented m-learning strategy in their universities. The mixed methodology approach involving in-depth interviews and a questionnaire survey will be used, in order to gain advantages of both methods by exploiting their complementary nature. This approach will also help achieve a balance in terms of perspectives on research about the effectiveness of online learning management systems (lms) such as blackboard. An interview guide will be used for the qualitative component and a structured self-administered
questionnaire for the quantitative phase of the study. The two phases of the study will be conducted on the same research sample of two different universities namely university of Venda and university of Limpopo.

**Keywords:** mobile learning (m-learning), social networking technologies (snt), teaching, learning, learning management systems (lms)

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**Prevalence and Characterisation of Enterobacter Species from Clinical Specimens in Mthatha, Eastern Cape, South Africa.**

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Enterobacter is a common cause of illnesses in people of all age groups. The increasing trend of antibiotic resistance is now a concern worldwide. The aim of this study was to determine the prevalence and characterization of enterobacter species obtained from patients attending nelson mandela academic hospital in Mthatha. Identification, antimicrobial susceptibility testing (ast), and extended spectrum beta-lactamase (esbl) production were carried out by vitek 2 automated system (biomerieux). A total of 98 enterobacter species were collected from october 2014 to february 2015; of which 39(39.8%) and 59(60.2%) were obtained from males and females respectively. The most prevalent species of enterobacter was e. Cloacae (60; 61.2 %), followed by e. Aerogenes (32; 32.7%), e. Asburiae, (4; 4.1%), and e. Cloacae complex (2; 2%). Out of 98 isolates, 39(39.8%) were esbl producers. The susceptibility of enterobacter spp to antimicrobial agents was as follows: amikacin (78.5%) and ciprofloxacin (86%). Species of enterobacter were however strongly (≥90%) resistant to the rest of antibiotics commonly used in our setting. The study showed an increased level of resistance to enterobacter species with the commonly used antibiotics. Due to high level esbl production, fluoroquinolones (ciprofloxacin) and aminoglycosides (amikacin) should be considered as first-line options. Continuous surveillance is warranted to monitor the current situation.

**Keywords:** beta-lactam antibiotics, bacterial resistance, enterobacter species, and esbl.

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**Anthropometric characteristics and mean arterial pressure in preeclamptic and normotensive pregnant women visiting antenatal clinics: in South Africa’s Mthatha area.**

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This paper presents results from an analysis of patients’ records of 711 pregnant women (14-40 year olds) between June 2002 and march 2012 and is a retrospective study. The study investigated anthropometric characteristics and mean arterial pressure (map) in preeclamptic and normotensive pregnant women visiting antenatal clinics in South Africa’s Mthatha area. Body mass index (bmi), waist-hip ratio (whr) and map in black African women in this area were carried out in order to fill a gap as data of association or correlation of such data on this population could not be located. The research questions were: (a) are map, bmi and whr higher in preeclamptic women than in normotensive pregnant women in South Africa’s Mthatha area? And, (b) which one of the parameters (bmi,whr and map) can be used as a strong predictor of occurrences of preeclampsia in this area? The data were statistically analysed. The main conclusions were that there were higher map, bmi and whr in preeclamptic women than those who were not. Also, the study found a high correlation of these parameters in preeclamptic
women. BMI correlated with diastolic blood pressure (DBP), MAP and WHR (r=0.43, r=0.38, r=0.44, respectively), whereas WHR correlated with BMI and DBP only (r=0.44, 0.40, respectively). Therefore, MAP, BMI and WHR may be used as predictors of preeclampsia. Between the three, BMI correlated more with both DBP and MAP. Therefore, BMI may be a better predictor than WHR. Similar to other studies, we also found that age was a risk factor for preeclampsia and that waist circumference was higher in pre-eclamptic women.

**Keywords:** anthropometric characteristics, MAP, diastolic blood pressure, waist-hip ratio, body-mass index, preeclampsia

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**The Effect Of The Treatment Victimization Of Victims Of Domestic Violence By The Criminal Justice System; A Study In Phoenix Kwa- Zulu Natal.**

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Violence against women has been described as the most reprehensible and prevalent human rights violation. In South Africa, violence and injuries are the second leading cause of death and disability-adjusted life years. The problem of domestic violence still remains an issue in South Africa. Statistics show that as the crime rate has risen over the past twenty years; the conviction rate has increasingly declined. This decline is attributed to various factors, however a substantial percentage of cases of domestic violence gets withdrawn by the victims before the cases reach prosecution stage. Research has found that legal authorities and the criminal justice system are often responsible for secondary victimization, the re-traumatization by society in response to the primary victimization. The South African government has prioritize the fight against crime, especially crimes against women and children, as a peace and security issue within the millennium development goal 3 on women’s empowerment and gender equality. This study aims to determine the link between the secondary victimization domestic violence victims when they seek help from the criminal justice system and withdrawing of charges and future help-seeking. Domestic violence, victim, secondary victimization, criminal justice system.

Keywords: domestic violence, victim, secondary victimization, criminal justice system.

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**Toward An Investigation on Students’ Learning Style Preferences: A Case of Farm Structures Students, In a Rural University.**

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The concept of learning styles describes individual student’s preferences for different type of learning and instruction. Students used different strategies to achieve learning outcomes of a specific module, this depend on diverse levels of motivation, their attitudes about teaching and learning, the classroom environments and instructional practices. It is very important for lectures to bring out a dynamic response from students by presenting problems, rather than teaching to expound information. The aim of the study was to investigate the preferred learning style amongst the students enrolled in the farm structures module in the school of agriculture of a rural university in South Africa (SA), to assist students to shift from surface learning approach to a deep learning by applying critical analysis of new knowledge, linking them to already known concepts and principles, and also to help lectures to review
their teaching methodology in order to promote student’s best learning practices. A quantitative approach was applied in the study and the results revealed that most students prefer the use of pragmatist learning style much than the other learning styles.

**Keywords:** learning style; learning approaches; student learning

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**Aspects of symmetries And Conservation Laws of the Classical Halphen Systems.**

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The classical halphen equation which describes the two monopole system arises in similarity reductions of associativity equations on a three dimensional froberius manifold. This nonlinear system of ordinary differential equations does not admit rational first integrals, and cannot be solved by the general methods for solving ordinary differential equations. In this talk, lie group analysis is applied to the system, which is found to admit a number of lie point symmetries, including several solvable lie algebras. A reduction of the system is performed using the admitted symmetries and conservation laws are determined.

**Keywords:** lie group analysis, adjoint equation, noether symmetry, lagrangian, conservation laws.

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**Breaking Down the Walls of Our Writing Centre: What We Learned From A Pilot Study Using Facebook Group At Walter Sisulu University.**

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When Walter Sisulu University opened its writing centre in 2010, its newly recruited personnel had to deal with numerous challenges including the physical location of the centre at only one site in a campus with multiple delivery sites around the city. This paper reports on an 8-week writing self-efficacy design-based study conducted by a writing centre consultant using facebook with a group of btech students. The study investigated the extent to which blending facebook with face-to-face consultations could influence the participants’ writing self-efficacy. Pre-study interviews revealed that students used facebook mainly for socialising with friends, and were apprehensive about sharing ‘their personal space’ with anyone they did not regard as ‘a friend’. They were only willing to ‘try it out’ on condition their privacy concerns were addressed. At the end of the study, having experienced how facebook was used, students felt that using a closed facebook group provided a safe space for engagement, and wall posts by others provided an opportunity for vicarious learning. Moreover, the online presence of writing consultant on facebook directly led to increased visitations to the writing centre, which in turn positively influenced the students’ writing self-efficacy.

**Keywords:** academic writing, self-efficacy, writing support, facebook
The Relationship between Leadership Style and Public Servants Professionalism In Nigeria: An Exploratory Discourse.

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The inconsistency in defining the administrative and political roles of leadership in national public service compels this study to place both political and bureaucratic leaders into one category. The social, political, and human development capacity of any country relies on the ability of its leaders to establish, promote, and maintain good governance. Facilitation of good governance will encourage professionalism among public sector employees because leaders will have good policies and their implementation will be overseen through the employees. This paper presents an exploratory theoretical analysis of the role that leadership style plays in influencing the professionalism of public servants within a country. It makes use of a meta-theoretical analysis of current academic and/or popular literature on the subject to highlight issues pertaining to employees’ professionalism. The popular media has frequently reported that the priority of majority of the political leaders in developing country is self-enrichment to the detriment of the populace. A situation that has led to large-scale looting of the national treasury and the introduction of white elephant projects to enable the embezzlement of funds. Bureaucrats, who have traditionally been close associates of the politicians, have also been similarly influenced. The outcome of this alliance is that the bureaucrats tended to neglect their professional responsibility, competency, skills, and abilities in order to satisfy their political leaders and to keep their jobs or get promoted.

Keywords: leadership, professionalism, public servants/service, service delivery

Theoretical Perspectives: Why Teachers Need To Know And Understand Learning Theories.

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Teaching learners in schools can be challenging. Teachers need to have a theoretical knowledge of how children develop and learn. This paper aims to examine developmental and learning theories. This paper provides an overview and purpose of how developmental and learning theories in teaching are explored. A number of data bases in fields such as sociology; early childhood and psychology were used to examine literature on the topic namely, piaget cognitive constructivists and vygotsky social cognitive constructivist theories along with strategies on how teachers can draw on these theories in their classroom teaching. In this paper the researchers further interrogate key considerations that should be borne in mind when implementing theories in the classrooms conclusions based on the literature, the researcher recommends that in order for teachers to be competent, there is need to be thoroughly grounded in theories related to teaching and learning. Such theory informs practice and is considered within the broad context of the purpose of foundation phase education in the given context.

Keywords: theories, classroom teaching, learning strategies, social learning, competent, context
The Demersal Fish Assemblages Of The Kariega And Great Fish Estuaries.

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Although estuaries serve as nursery areas for juvenile estuary-dependent fish, they are threatened by number of factors such as hydrological manipulation, habitat degradation, and overexploitation due to fishing activities. The kariega and great fish estuaries differ in respect of their freshwater inflow and turbidity and there is a paucity of research comparing the demersal fish species of the two estuaries. The present study aims to determine the temporal and spatial changes in demersal fish communities in response to high freshwater flow within these two systems. Fish were sampled using a beam trawl net during neap tide on a monthly basis for a period of 12 months. At each site physico-chemical parameters were measured monthly and sediment samples collected seasonally. High numbers of species and individuals were caught in kariega estuary (n=3 820). They were highly abundant in the middle and upper reaches with the fish communities of the lower reaches significantly different (r=0.75) from the rest of the estuary and that was correlated with turbidity and sediments (organic content and sand). In contrast, only 1 840 fish were caught in the great fish estuary and they were mostly found in the lower reaches and there were significant differences between the seasons (r=0.667). No strong correlations between the ichthyofauna and the physico-chemical parameters were documented, although temperature, organic content and silt (r=0.388) did show a weak correlation. The preferences for these fish were highly associated with freshwater inflow and the presence of stronger olfactory cues.

Keywords: fish communities, nursery habitats, freshwater, juvenile fish, physico-chemical factors

The role of internal auditing in sustainability reporting.

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Internal auditing, in keeping with its definition, is expected to add value to an organisation by evaluating and improving the risk management, control and governance processes. As such, it should be in the forefront of any process that is aimed at promoting sustainability. A literature review on internal auditors roles and responsibility confirmed this view. However, a desk top review of the sustainability reports of the top 40 Johannesburg stock exchange registered companies revealed the contrary. It was concluded that whereas external auditors are increasingly involved in sustainability reporting, internal auditors seem to be playing a negligible role and in some cases their role in sustainability is not even acknowledged. It was recommended that further research be carried out to establish how internal auditors can claim their position as a value adding service that promotes sustainability.

Keywords: corporate social responsibility, governance, internal auditing, risk management, sustainability,
Prevalence of academic stress at tertiary institutions.

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The purpose of the present study was to investigate the prevalence of academic stress among the Walter Sisulu University staff and students. 300 hundred academic staff members and 300 hundred students participated in the study. Participants were selected from four campuses. Two research instruments were used to collect the data for the study. For the academic staff members the questionnaires included items that tapped into the challenges they confronted while executing their duties, the availability of support, as well as the coping strategies they utilized in dealing with stressful situations. The students’ version of the questionnaire included items that related to their experiences and challenges they faced in the university. The process of data collection involved the researcher’s visits to all the four campuses – for the purpose of administering the questionnaires. Data was analysed using SPSS. The results indicated that WSU staff members experienced high levels of stress which are related to high teaching loads, job insecurity, and poor management which was partly attributed to the merger process. With respect to students, much of the stress was related to lack of accommodation and finances, poor security in the campuses, as well as a shortage of properly qualified academics. Recommendations are offered.

Keywords: stress, academic institution, academic employees and students.

Household water security and demand in the matatiele local municipality, Eastern Cape, South Africa.

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Water security is one of the crucial issues in world. South Africa is a water scarce country and it is currently facing more challenges in water provision, sanitation and supply. The aim of the study is to check if water security meets household’s water demands in the Matatiele local municipality. This will be achieved by identifying the sources of water which are mostly used, checking the accessibility and measuring water quality of those water sources. Direct observations were employed to see if people have proper water sources and they travel less than 200m from the household to the water sources as stated by South African national water act no36 of 1998. Questionnaires will be used to get the information from the people who live within the study area. Semi-standardized interviews will be conducted with the municipal authorities who are responsible for water services in Matatiele local municipality. ArcGIS will be used to map these water sources and the distances between a household and a water source.

Keywords: reliability, water use, water quality, accessibility, water sources, sustainability.
Exploring Teacher Assessment Practices In The General Education And Training Level In Junior Secondary Schools In Mthatha Education District.

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This dissertation is a report of the study that was conducted in rural and urban periphery schools of Mthatha city within Mthatha education district in the Eastern Cape, a province of South Africa. The study explored teacher-assessment practices in two selected junior secondary schools. The utmost purpose was to determine the nature of teacher-assessment practices in these junior secondary schools. This study involved mainly a quantitative research design and later supplemented by qualitative research design. The target population was made up of 63 teachers from both schools. Sampling entailed simple random sampling for quantitative approach and purposeful sampling for qualitative. Instrumentation involved questionnaires and focus group interviews to gather data for these two different research paradigms used. The data was analysed by means of SPSS for quantitative and thematically for qualitative. The results of this study from both instruments were crystallized, and indicated that teachers were grappling with difficulty in strategies and procedures of assessment due to an ever changing curriculum and overload of work. The main findings were: assessment based on content knowledge of learners, negative impact of teacher re-deployment on assessment, stress accumulated by various challenges such as overload of work and frequent curriculum changes as well as lack of data organisation and gathering. The recommendations were: workshops and training programmes on assessment to be provided to teachers; teachers should use various information sources for conducting assessment; more teachers need to be recruited for understaffing and overloading problems as well as pragmatic assessment strategies should be used for learners assessment. Teachers should be included in matters of curriculum changes and be exposed to in-service training.

Keywords: assessment, competence, skills, attitudes, values.

Evaluating an Assessment Conducted In the Faculty of Health Sciences for MBCHB II during the Musculoskeletal Block.

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Assessment is a potent strategic tool to guide and encourage students’ effective approach to study and learning. The aim of this paper was to evaluate the quality of the modified essay question (meq1) as an assessment method of second-year MBCHB students enrolled in the musculoskeletal block. Method: this evaluation determined the credibility of the assessment through an analysis and interpretation of the tool itself and of the results obtained from students’ performance on the exam. The analytical framework used to evaluate the assessment was: purpose of the assessment, congruence with learning objectives, appropriateness of instrument, content validity, depth of knowledge, difficulty index (dif i), discrimination index (di) and the reliability of the assessment. Results: the content in the meq 1 corresponded with the learning objectives of the block. The analysis of the depth of questions, according to bloom’s taxonomy, showed that the majority of questions were at level i (remember) and ii (understand) (73%), followed by level iii (apply) and iv (analyses) (26.6 %). Level v (syntheses) and vi (evaluation) were not present in the assessment. The difficulty index showed that the question with
the highest difficulty index was question one (diff i = 82%), and the question with the lowest difficulty index was question five (diff i = 34.5%). All questions had discrimination index between 0 and 1. The Pearson correlation coefficient (r) between the performance marks of the same student groups for two different, but similar assessments showed perfect correlation between the two assessments.

**Keywords:** assessment, evaluation, musculoskeletal block

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**An Overview and Evaluation of Teaching and Assessment Process.**

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On 30 March 2009 to 3 April 2009, centre for higher education research, teaching and learning wing of Rhodes University in conjunction with Walter Sisulu University conducted a training and development of academic staff on assessment and moderation. The training and development workshop was to enhance teaching, assessment and moderation capacity of lecturers. The aim of this paper is to provide an overview and evaluation of my own teaching and assessment processes, to reflect on the impact of the workshop or course. Furthermore, discuss the creativity and innovations introduced into teaching and assessment processes after the course. In pursuit of the above objectives, the paper highlighted some of the theories of assessment. In addition, the lecturer had to reflect on his or her teaching and assessment practices prior and after the teaching, assessment and moderation course. The findings were that the training and development project had a positive impact on my teaching and assessment practices and to students learning, giving them a sense of being part of evaluation of teaching and assessment. The author got certification (from Rhodes University) of clearly understanding and implementing principled assessment practices. Moreover, the author demonstrated willingness to be self-critical, so as to make changes towards more valid, reliable and transparent systems. This was done through the theoretical and practical approach to the topic. Quantitative method was used to collect data for this project. Questionnaires were administered to 65 students who were doing business administration level III, in 2009.

**Keywords:** overview and evaluation, teaching and assessment, purpose of assessment, constructive alignment, participative assessment, deep approach and surface approach and validity and reliability

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**Students’ Perception On Service Quality At A Tertiary Institution In The Eastern Cape Province.**

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Between 2002 and 2005, South Africa’s higher education sector underwent an extensive merger and incorporation process that resulted in a more equitable dispensation to meet the requirements of a fast developing nation. With the abrupt merger to a comprehensive university, came a corresponding service transformation. Along with the wider structural changes that took place after 2005, the university’s service scene was drastically altered due to the policies and frameworks that were put in place. Paradoxically, despite the many impediments to offering quality services to students, the university tried to exhibit a service oriented culture. The research aimed at investigating students’ perceptions on the quality of services at a university to understand the relationship between the service quality and customer satisfaction by using servqual analysis. The ten dimensions of servqual was tested by
questioning respondents to determine and measure the relationship with customer satisfaction. The study was conducted at one university in the Eastern Cape. The research was exploratory and quantitative in nature. 80 respondents were selected randomly. Data for the research was gathered through questionnaires. To ensure validity of the study, the questionnaire was carefully constructed and evaluated by staff in the department of business management, after which it was pre-tested on six students to test reliability of the questionnaire. The results found perception of students' towards majority of the non-educational services averaged 39.6%, whiles the use of services averaged 91%. Recommendations made included: to encourage students to report bad services, and to form quality assurance departments within service sectors.

**Keywords:** service quality, servqual, customer satisfaction, customer perception.

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**Teaching for quality in selected foundation phase classrooms.**

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The pursuit of quality education is high on the agenda in developing as well as developed countries. The opinion that the concept of quality is complex with varying definitions and that it could mean different things in different contexts is encapsulated in the conceptualisations of quality that drive this paper. However, the paper explores a selected quality education literature as a background for interrogating South Africa’s poor quality and under-performance continuum in schooling. This education failure is documented in literature worldwide with evidence that, the majority of younger South African students continue to lack basic levels of literacy and numeracy, which also fall significantly below international norms in these areas. The department of education’s (doe) many large scale system-wide intervention initiatives for promoting quality improvement across the system have so far produced few if any positive results. There is a traceable tension between access and quality in policies and their implementation, teacher education and teaching practices reflected mostly in what is taking place in the classrooms. The paper therefore, focuses on why i think teachers’ understanding of basic aspects of quality education can provide them with varying but appropriate quality teaching skills in their respective classrooms. While content of this paper embraces the context-focused teaching and learning for quality it observes critically the intersection between teachers’ conceptions and understanding of quality and teaching practices that explain whether the education itself is of quality. This paper intends to inform teacher education for ever-changing education needs in South African rural societies.

**Keywords:** quality education, quality teaching, teacher education, teaching practices, teacher conceptions, foundation phase

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**Gastric Ulcer Healing Properties And Cyto-Toxicity Of Ledebouria Ovatifolia.**

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Ledebouria ovatifolia a plant known as icubudwana in isixhosa is a member of the hyacinthaceae family widely used in the Eastern Cape for medicinal purposes, including pregnancy, diarrhoea, stomach-ache, influenza, skin irritations and wounds. This study aimed to evaluate the healing effect of L. Ovatifolia on experimental induced gastric ulcer. After pre-treatment with the plant, gastric ulcer was induced by indomethacin (50 mg/kg), absolute ethanol (2 ml/animal) and cold stress-induced ulcer in wistar rats. Ulceration lesion index was calculated, histomorphology evaluation of the stomach and cytotoxic
bioassays of the plant were made. L. Ovatifolia at the dose of 100 mg/kg decreased gastric ulcer formation by 45.5%, 12.7% and 81.57% in indomethacin, ethanol and stress-induced ulcer respectively even though they were not statistically significant. L. Ovatifolia at the dose of 200 mg/kg decreased gastric ulcer formation by 16.6 %, 3.03 % and 21.05 % in indomethacin, ethanol and stress-induced ulcer respectively even though they were also not statistically significant. Macroscopic evaluation of ulcerated stomachs of the treated groups showed a reduced area of gastric lesion, moderate disruption of gastric epithelium and mucin secretion at the lower dose. Higher dose of the extract showed eroded surface epithelium. Cytotoxic bioassays of the plant extract had lc50 of 608.88 µg/ml after 24 hours which is considered as slightly toxic. Results obtained in the study suggest that the l. Ovatifolia possesses slight anti-ulcerogenic activity at lower dose which may support evidence for its traditional use.

**Keywords:** peptic ulcer disease, gastric ulcer, indomethacin, ethanol, cold stress, l. Ovatifolia.

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**Heteronormativity and LGBTI in Higher Education: Incompatible Bedfellows?**

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There is very little work or research conducted on sexual orientation and gender identity in universities throughout South African developing countries, South Africa included. This situation is particularly alarming for South Africa considering that this country is considered to be the leading country in legalizing and safeguarding gay and lesbian rights. South Africa’s post-apartheid constitution is hailed as one of the best in the world. It is recorded amongst the first countries to prohibit all forms of discrimination including that based on sexual orientation. Furthermore, higher education South Africa (HESA), a non-profit company that represents public universities in the country, commits itself to ensuring that meaningful transformation takes place in these institutions that social cohesion prevails, discrimination does not exist and freedom of speech and association is encouraged. HESA also promises a transformed system that embraces a diverse population of students and staff, and that which allows no space for discrimination of any form. With all these measures in place, students who identify as lesbian, gay, bisexual, transgender and intersex (LGBTI) seem to continue to be subjected to negative and traumatic experiences in South African universities. This paper describes the views and experiences of LGBTI students from an academic and psycho-social point of view, and argues for the need for higher education leadership and management (helm) to broaden their understanding of the context within which LGBTI students operate, as well as heteronormativity and its implications, if universities are to achieve their objective of building diverse, socially cohesive, non-discriminatory institutions.

**Keywords:** discrimination, heteronormativity, higher education, LGBTI, students, transformation

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**A Lonely Journey to Getting a PhD: A Case Study of PhD Scholars in One Higher Education Institution in South Africa.**

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In most countries a doctorate degree, commonly referred to as a PhD is a basic requirement for a career in academia. It marks the beginning of independent research in close collaboration with a supervisor. In South Africa, the department of higher education and training (dhet) provides funding
to assist universities enrol academics for higher qualifications, especially PhD studies in various higher education institutions. Despite this initiative, there are very few academics that obtain PhD studies on record time. This study seeks to present the journey taken towards acquiring a PhD. It explores the achievements and challenges encountered in acquiring a qualification. The participants were drawn from one higher education institution in South Africa. Sixteen participants were purposively selected for the study, comprised of staff members who were currently registered for the PhD and the other eight were the recent (not more than three years) recipients of the PhD. Interpretive qualitative research paradigm informed the study. Interviews were conducted to generate data. Findings revealed that PhD is a lonely journey with both achievements and challenges which are presented in this study. One thing that was common was the hard work that goes into the PhD study. The study concludes with providing some lessons that could be learnt from the journey by those who are still involved and those willing to be involved.

**Keywords:** academia, journey, PhD, lonely, challenges, lessons.

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**Evaluating the implementation of post graduate certificate in education at a rural university: successes and challenges.**

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The study will be carried out to establish the status of the post graduate certificate in education (pgce) program by analysing the strengths, successes, weaknesses and challenges and ultimately make appropriate suggestions and recommendations to the university. The study will be guided by the theory-based evaluation that seeks to understand why a programme is succeeding or failing for the purpose of improvement and knowledge construction. The evaluative study will adopt a mixed approach of both qualitative and quantitative paradigms and a survey design will be applied. Interviews will be carried out at university campus level, a structured questionnaire will be administered to 30 pgce students randomly selected and different documents will be analysed to assess the quality of the programme. Purposeful sampling technique will be utilised since the researchers are concerned with selecting information-rich participants. The study therefore will select the head of department for the pgce, pgce lecturers and students as these were mandated to implement this programme. Qualitative data will be analysed using the thematic frames and quantitative data with the aid of the sas/stat version 17 software. The study will identify the gaps that still need to be attended to by the university and assist in ensuring that, where necessary, any intervention measure recommended is informed by an empirical study.

**Keywords:** evaluating, implementation, pgce, successes, challenges, education, rural university

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**Creating a Sustainable Teaching and Learning Environments in Dysfunctional Secondary Schools in Mutale Area of Vhembe District.**

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Poor academic performance of learners is a major problem in South African public secondary schools today. A considerable number of secondary schools are dysfunctional. There are reports that a considerable number of these schools in the Vhembe district. However, the department of education is
intervening in these schools with the aim of removing them from dysfunctionality. In schools where
turnaround strategies are being provided, such strategies have been short lived and were not
sustainable. The aim of this study will be to investigate the sustainable teaching and learning
environments in dysfunctional secondary schools. This research will follow the quantitative research
design in which questionnaires will be used to collect data. The population will consist of circuit
managers, school principals, parents (sgb members), teachers and grade 12 learners from secondary
schools. The sample of 150 participants will consist of 4 circuit managers; 8 school principals, 12 parents
from school governing body (sgb), 117 teachers and 9 grade 12 learners from sampled secondary
schools. Quantitative data will be analysed using statistical package for social sciences (SPSS: 23). It is
hoped that this study will contribute towards improving the quality of teaching and learning
environments in dysfunctional secondary schools. The model for creation of a sustainable teaching and
learning environments in dysfunctional secondary schools will be developed.

Keywords: creation, sustainability, teaching and learning, environments, dysfunctional school, secondary schools.

Strategies Which The Automotive Component Supply Industry Use To Mitigate The
Impact Of Skills Shortages In South Africa.

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The main aim of this study was to show how the automotive supplier industry, which produces high
value products, faces constant technological upgrades as well as complex logistics and relies on high
foreign direct investments, copes with a skills shortage. Extensive literature about the inadequacy of
the South African education system and of the labour market exists. However, no research as to how
the affected organisations deal with it from a strategic perspective could be found. The study was
descriptive, exploratory and qualitative. The approach used was to collect data from automotive supplier
companies which provide components directly to the automotive assemblers, by means of a likert-type
questionnaire with allowance for comments. The respondents had noticeable problems because of the
skills shortage. Their mitigation strategies were reported to focus on internal development, accessing
the local labour market and targeted poaching, as opposed to relying on expatriate skills as in the past.
It is planned to spend more money on development and on retention of critical skills. A minority
contemplated reducing business activities. Organisations should embrace internal skills development,
performance management, succession planning and retention programmes as the most efficient
solution. There is a risk of an evolving spiral of targeted poaching for skills, which can result in an
increase in costs. This study contributes to literature on how companies react to a failed education
system and skills shortage. It may encourage further research to develop a deeper understanding of
the consequences of the skills crisis and to conduct a longitudinal study into how the situation changes
over time. Key words: skills, automotive, retention, shortage, strategy, market, management, technical.

Keywords: skills, automotive, retention, shortage, strategy, market, management, technical

Attitude of students towards the two types of assessment: formative and summative. The
case of Walter Sisulu University (WSU), chiselhusrt site.

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Assessment is an important part of teaching and learning. It allows an assessor and understanding of exactly what students know and what they do not know. It also allows a student an opportunity to know where to improve as it is suggested by blooms taxonomy. This paper deliberates on the attitudes that WSU, chiselhurst site students have towards assessment and what causes such attitudes. This study focuses on only first year students, students who enrolled with WSU for the first time in 2015. WSU, chiselhurst site has got four departments, namely, information technology (it), mechanical engineering, quantity surveying and public relations (pr). The research uses 20 students, 5 students from each department, and random sampling has been used to select the students (sample). Since this is the first time a study of this nature is done at WSU, chiselhurst site the researcher has decided to use a smaller sample size. This is done to get an idea on how do new students feel about being assessed, either formative or summative. Questionnaire were distributed to the 20 students from four different departments. Lectures for the key or main subjects were interviewed. The purpose of the interviews was to find out the different types of assessment lecturers use and if they give students feedback after marking their assessment task/s. Results will be discussed in full in the paper for peer reviewing.

Keywords: WSU, assessment, assessor, formative assessment, summative assessment, random sampling.

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**Perceptions & experiences of 1st year music students on the teaching of music in their respective senior secondary schools.**

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My study was an exploratory study seeks to establish the perceptions of selected music students at Nelson Mandela metropolitan university regarding the music education they received at their respective secondary schools. The study was conducted using qualitative methods and couched under the interpretive approach. Against the background of the history of music education in South Africa and elsewhere, and an analysis of the current curricula for music education in South Africa, focus groups were conducted and the data pertaining to student perceptions was analysed using thematic analysis. The study revealed that the participants have different views regarding the offering of music as a subject in their schools. It was also evident that qualifications from external examining bodies are still a key factor in getting admission in a degree programme at university. Other observations were that informal music activities plus extra-curricular music activities in schools are paramount in equipping those students where music is not available as a subject. The participants reported that they experienced mixed attitudes towards music as a subject at their respective schools, and even in their communities and homes. The study also revealed that there continues to be a significant difference in the quality of music education received in former model c schools as opposed to other South African schools.

Keywords: perceptions music education

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**Enhancing diversity management in a higher education institution.**

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This paper reports on research that endeavoured to determine the perceptions of management and senior staff concerning factors which influence diversity at a selected higher education institution (HEI). Diversity implies acknowledging and valuing differences among people. As such, diversity viewed from a positive perspective can create significant opportunities for a university to become a multicultural institution and to obtain a competitive advantage. Respondents at management and supervisory level were surveyed at Walter Sisulu University (WSU) in South Africa, using a self-administered questionnaire. Structural equation modelling (SEM), the key statistical analysis tool, confirmed that four statistically significant relationships were found between acculturation, structural integration, informal integration, intergroup conflict and diversity. It is argued that knowledge of the factors influencing diversity could provide insights for management regarding developing strategies to capitalise on diversity for sustainability and competitive advantage within an HEI.

**Keywords:** diversity, higher education institution, multicultural institution, structural equation modelling

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**Emerging epidemic of obesity and vanishing under nutrition in black children aged three to five years in crèches of Elundini local municipality, Eastern Cape, South Africa.**

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In poor Africa, 33% of children under five years suffer from under nutrition. However, with emerging economy, westernisation and health transitions, South Africa is facing westernisation, urbanisation, eating disorders, lack of health promotion, physical inactivity, appropriate diet, long sitting in front of screens, television, and computer games, epidemic of obesity, type 2 diabetes mellitus and cardiovascular diseases (diabesity). The aim of the study was to estimate prevalence of obesity and under nutrition in black children between three and five years. This cross-sectional study was conducted in crèches from Elundini local municipality, Eastern Cape, South Africa between 13 February 2012 and 05 April, 2012. Under nutrition and obesity were defined according to world health organisation criteria. In total, 461 (216 males and 245 females) were examined with 3% of under nutrition and 6% of obesity. Girls were commoner (p<0.05) for under nutrition. Under nutrition and obesity were found to be co-existing in all children in terms of nutrition transitions. Girls are more susceptible to obesity. Programs of education about exercise and proper diet in the primordial prevention and intervention in primary prevention are urgently needed. The advocacy based on evidence based epidemic of obesity in black children and translational approach will invite policy makers in redesigning healthy legislation and community development programs.

**Keywords:** under-nutrition, obesity, children, nutrition transition, Elundini, Eastern Cape, South Africa

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**Reducing illiteracy in the Eastern Cape through provision of adult basic education and training.**

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This paper comes from one of three sub-research questions in a study aimed at assessing the effectiveness of adult basic education and training provision in the Eastern Cape Province of the republic of South Africa. The sub-research question entailed; to what extent does adult basic education and training provision contribute to reduction of illiteracy? The sub-research question aimed at getting the perceptions of educators in public adult centres, learners, past learners and officials in the adult basic
education and training section of the 23 education districts. A survey design was used in this investigation, employing both qualitative and quantitative methods. One hundred and five (105) educators, two hundred and ten (210) learners in public centres across twenty two (22) education districts and six district managers participated in this study. The participants were randomly sampled for the quantitative aspects and purposefully sampled for the qualitative aspects of the study. Data collection took place through questionnaires and interviews. The quantitative data were analysed statistically with the aid of the statistical package for social science (SPSS) and qualitative data from open questions in the questionnaires and interviews of district officials and focus group were transcribed word for word for purposes of tracing any observable themes that could be gleaned from the narratives and descriptions. It came out from the study that adult basic education and training provision has helped to reduce illiteracy in the Eastern Cape. Essentially, both teachers and learners agreed adult basic education and training provision has helped to reduce illiteracy. On the basis of the findings the researcher made recommendations as suggestions for the elimination of the weaknesses in adult basic education and training provision and consolidation of its strengths so that its effectiveness is never doubted.

**Keywords:** illiteracy, reduction, provision, education and training

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**Challenges of grade r teachers in setting classroom space for teaching mathematics.**

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The aim of the study was to investigate the challenges of grade r teachers in setting classroom space for teaching mathematics. A qualitative research methodology within an interpretive paradigm using a case study approach was suitable for collecting data of the current study. All grade r teachers in 26 primary schools of vhuronga circuit, in the Limpopo Province were legible for participation in the study. A sample of six teachers; all females was purposefully selected. Data collection was done through focus group interviews and document analysis. The thematic method was utilised for data analysis, organising, and coding data into themes and sub-themes. The findings have shown that ‘classroom space’ is a limitation that hinder grade r teachers from providing play-based learning activities which encourage active learning. Teacher development programmes for training teachers in creating conducive ‘classroom space’ in grade r for engaging learners in active learning during mathematics lessons were recommended. The study concluded that there is a need for professional in-service training on ‘classroom space’ to enable teachers set up play-based activities to improve during mathematics teaching.

**Keywords:** grade R teachers’ mathematics, grade R, classroom space, play-based activities.

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**Give a man a fish or teach him how to fish: ubuntu in social assistance, a stumbling block to people’s empowerment?**

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Section 27 of the constitution of South Africa provides for the right to social security to the people who are unable to support themselves and/or their dependents. The state is obligated to take reasonable legislative and other measures within its available resources to achieve the progressive realization of inter alia the right to social security. Even though the concept of ubuntu is not easily definable, it is
understood to carry with it the idea of humanness and solidarity. However with the escalation in unemployment rates and the need for more funds to be allocated towards social grants, the question arises whether these resources should not be diverted towards job creation? In layman’s terms: “is it not better to provide a starving man with a fishing rode and teach him to fish than to merely give him fish?” This paper will explore whether the right to social security influenced by the spirit of ubuntu impacts negatively on the people’s right to development and ultimately their empowerment and dignity. The analysis employed will be both legal and philosophical in nature as the paper will strive to reconcile a balance between allocating resources to social security grants and developmental projects that create employment. The paper will argue that job creation is essential as it gives the populace a sense of control over their welfare instead of awaiting hand-outs from the government; it will attempt to postulate how to balance social assistance with job creation by contrasting methods employed in developed countries where unemployment is significantly lower.

**Keywords:** ubuntu, social assistance, social cohesion, unemployment

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**Negotiating the diverse HEI entities towards the transformation of teaching and learning: the TES impact on our collective practice at WSU.**

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The transformation of learning and teaching at HEI’s has been of great concern for many years. In terms of throughputs, the higher education system as a whole is not doing well (scott et al 2007). The higher education quality committee has identified teaching and learning as a key criterion for evaluating the quality of higher education programmes (hecq 2005/6). A number of noteworthy elements of this criteria relating to quality have been identified and include diverse pedagogic approaches to the learning needs of students and the offering of teaching and learning that is relevant and responsive to them. Responding to this call, the transformative education/al studies (tes) project was introduced at WSU, comprising a diverse group of people representing key segments of an hei, a research group with the overarching question of: ‘how can i improve my practice as a...’. Tes has been actively engaged in teaching and learning issues with a view to improving the practice, believing that unless we individually and collectively look at our own practice, there will be no improvement anywhere unless we can all say: it begins with me. In this paper, the authors share their tes experience and how this has impacted their practice in their respective areas as players in this academic project. Using self-study as methodology, we share our experiences using reflexive narratives and artefacts that speak to how we approach our respective practices in the institution. We ask questions about how we respond to the challenges with a view to moving the academic project forward. We conclude that it is indeed possible to improve our practice if we accept our role and the fact that it does indeed begin with us, especially if our self-reflections are compounded with our ubuntu philosophy.

**Keywords:** self-study, practice, pedagogy, throughputs, reflexivity, ubuntu-philosophy

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**An evaluation of Orphans and Vulnerable Children (OVC) programme in Thulamela Municipality, Limpopo Province, South Africa.**

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Large numbers of children are growing up without adult protection, nutritional support, or financial support because of the AIDS epidemic. Most of the children are forced to act as caregivers and providers in their families. Without adequate support, these children are at risk of being affected by malnutrition and some form of sexual exploitation. The orphans and vulnerable children (OVC) programme was developed from the home-based care programme to provide children under the age of 18 years with support in core service areas such as HIV prevention education, access to anti-retroviral treatment and psychological care. The aim of this study was to evaluate the extent to which the services of the OVC programme are reaching the intended target groups, namely orphans and vulnerable children. The study employed a qualitative programme evaluation design to assess the implementation of the OVC programme. The researcher used convenience sampling to select 14 staff members serving in the OVC programme. A random sample of 30 children was selected from 6 wards in Thulamela municipality, South Africa. The study used individual interviews to capture the views of staff members, whereas focus group interviews were used to collect data from the children. The data from both individual interviews and focus group interviews were analysed through content analysis. This process entails exploring the general sense of data and identifying patterns that emerge as themes. The study found that the objectives of the OVC programme were achieved, even though the degrees of achievement differed. The services were to a large extent delivered to the target groups. However, it was found that the OVC programme does not have sufficient capacity and resources. The findings of the evaluation show that service delivery does not depend entirely on the availability of resources, but on the sacrifices and dedication of staff members as well.

**Keywords:** programme evaluation; orphans; vulnerable children; nutritional support; home-based care

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**Is The “Blue Collar, White Collar” Syndrome Still Alive In Technology Education And Mechanical Technology Education In South African Schools? Key Role Players’ Perceptions.**

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This paper reports on one part of a larger study. The research explored the current perceptions of key role players in South African schools in a selected geographical area in technology education (TE) in general and mechanical technology education (MTE) in particular on the ‘blue collar versus white collar’ syndrome. The sample consisted of 261 individuals: 246 learners from general education and training (GET) and further education and training (FET) bands and 15 others from stakeholder entities other than learners. The stakeholder entities other than learners included educators, school principals, members of school governing bodies (SGBs), non-government organisations (NGOs), and department of education (DOE) officials. There were two data collection instruments, namely, a questionnaire and an interview schedule. Both were designed by the researcher after an extensive literature review on TE and MTE. Feedback from a pilot study and from experts in TE and MTE helped to improve the instruments. Care was taken to adhere to the required ethical requirements. The quantitative and qualitative data were analysed using the statistical package SPSS and n-vivo software version 8, respectively. The SPSS analyses showed a high level of internal consistency (Cronbach alpha, \( \alpha = 0.799 \) of 46 items on the questionnaire). The n-vivo analysis gave thematic insights. The results are indicative of negative perceptions towards TE and MTE (blue collar competences) and of little effort in SA to reverse such perceptions when compared to practices employed in other countries in general and BRICS countries in particular. Unless urgent positive steps are taken, the present skills shortage in technical development and maintenance in general and mechanical technology in particular will continue to deteriorate to the
detriment of South Africa’s vision for fast-tracked infrastructural, industrial and agricultural developments.

**Keywords:** technology education; mechanical technology education; get; fet, needs of industries, curricular implementation and assessment.

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The contributory factors of teenage pregnancy among learners at secondary school in the Vhembe district, Limpopo Province.

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The purpose of this paper was to explore the contributory factors among secondary school learners in the Limpopo Province within the Vhembe district. The study sought to establish whether teenage pregnancy has an impact on school attendance and academic performance of pregnant learners as perceived by educators. The research methodology was pure qualitative in nature. Eighteen learners and six educators from six secondary schools were purposefully sampled for the study. Data was collected using in-depth interviews to allow the researcher a platform to ask open-response questions and to explore the educator’s perspectives about the contributory factors of teenage pregnancy. Data was analyzed thematically by carefully identifying and expanding significant themes that emerge from the participant's perceptions about the contributory factors of teenage pregnancy. The study revealed that teenage pregnancy has a negative impact on the school attendance, academic performance and the relationship between their peers. The study recommends that sex education should be taken seriously in secondary schools; parental involvement could be of good help in the lives of teenagers, educators should treat pregnant learners like other learners to avoid stigmatization, learners should be advised to use preventive measures and to encourage learners to delay engaging in sexual relationships.

Keywords: teenage pregnancy, learners, secondary school, school attendance, academic performance, educators

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Command responsibility as an effective tool to guard against heinous international crimes in war torn Africa: the application of the doctrine to informal civilian relationships.

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Since its application in the first international tribunal at Nuremburg, the doctrine of command responsibility, which forms part of the imposition of individual criminal responsibility, has been subject to great contention, with scholars debating its authenticity let alone its application to civilian superiors. While this debate regarding the doctrine’s applications to civilian relationships has been put to rest with the doctrine’s confirmation by the recent tribunals of Rwanda and the former Yugoslavia; the Rome statute of the International Criminal Court has unequivocally asserted its application to civilian superiors through the provision of article 28b. The prescriptions of the imposition of criminal responsibility take cognisance of the fact that both top military and civilian personnel commit heinous crimes in international law. However these prescriptions also cover individuals who fall within a category of informal civilian relationships and yet this category of individuals has not been addressed by prominent legal scholars. The atrocities committed in Rwanda during the 1994 genocide necessitated the establishment of the international criminal tribunal of Rwanda which evidences the involvement of this
category of people. While only a few of these individuals were successfully convicted for the offences under the ambit of the tribunal, this paper will identify such individuals and examine the allegations levelled against them as well as the factual findings of the different trial chambers. The paper will ferret out the lessons to be learnt from the trial and appellate proceedings.

**Keywords:** individual criminal responsibility, command responsibility and informal civilian relationships

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**Exploring factors affecting rural and remote nursing in South Africa.**

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Globally approximately one half of the population lives in rural and remote areas. Nursing practice in rural areas is often very different from practice in urban areas. Nurses in the rural areas may experience role diffusion and challenges emanating from socio-economic inequalities, professional isolation and other limited resources. Nurses in rural areas require competencies in providing emergent infectious and chronic disease management. Although South Africa is responsive to global health initiative to achieve a long and healthy life for its citizens to improve the health status of the entire population limited resources and gross limited in rural areas has negative impact on rural and remote nurses. The aim of the paper will be to provide understanding of key issues related to the challenges experienced by nurses working in rural and remote practice; identify the roles of higher education institutions and governments with respect to recruiting and retaining nurses and other health professionals for rural and remote practice and to identify the impact interdisciplinary health professional collaboration in improving primary health care services and community health.

**Keywords:** health professionals, morbidity and mortality, nurse practitioner, rural and remote practice, infectious disease, primary health care

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**Putting the human at the centre: literature, human rights and the future of literary studies in South Africa.**

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This paper argues for possibilities of revitalising and deepening the study of literature through coupling it with the concept of human rights. Informed by the belief that literature can influence social action, studying literature through the lens of human rights affords both undergraduate and postgraduate students a chance to seriously engage with the concept of the human, how definitions of the term in different epochs, depending on those in power, have cantered and decentered some groups and made the less powerful socio-economically and indeed, bodily vulnerable. This type and level of engagement should reveal how the definitions of the human have functioned to confer and deny rights to groups and individuals. It is this paper’s central argument that such approaches to the teaching and learning of literature will contribute towards dealing with problems such xenophobia, corrective rape against lesbians as well as other forms of violence fuelled by hate. The paper further contends, that such approaches point to the future of scholarship, which is trans-disciplinary.

**Keywords:** trans-disciplinary; human rights; socioeconomic
Exploring teacher knowledge for teaching genetics: a case study of experienced teachers in Vhembe district.
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This is a qualitative report on the exploration of how the pedagogical content knowledge possessed by experienced teachers influence their teaching of genetics in grade 12 in Vhembe secondary schools. The participants were purposefully selected based on their interest to further participate in the study after a survey questionnaire of core matrix was administered. Research processes and analysis were founded on the construct of pck by shulman as expressed in its five components, namely subject matter knowledge; knowledge of the instructional strategies; understanding of the learners; the curricular knowledge and the knowledge of assessment strategies. Data collection methods included the use of a core matrix questionnaire; video-recorded classroom observations and semi-structured interviews schedules for the three cases selected. Findings were that teachers lack knowledge of subject matter and also have misconceptions that they transfer to the learners, they are also not sufficiently knowledgeable of the appropriate subject specific representations for genetics. Teachers also lack the knowledge and skills for assessment for learning that expressed itself through poor questioning skills and formulation of prompt questions to solicit prior-knowledge for the learners. A model for teaching genetics, called the integrative reflective expository concept mapping (irecm) was recommended, that recognized the significance of the integrative levels of organization (biological levels of organization) in establishing prior knowledge necessary for improving the teaching and learning concepts in genetics. Keywords: teacher knowledge; pedagogical content knowledge; genetics; topic specific pedagogical content knowledge, integrative levels of organization; content representations (cores)

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Colonialism in all its forms dislodged the indigenous knowledge systems and intellectual traditions in Africa by forcing the colonised to deny and disown their own identity. Colonialism denied people an opportunity to apply their own traditional knowledge in life. This dislodgment always forced African people to start from the unknown in knowledge production. This stifled the intellectual traditions of African people which rendered African people as copycats and consumers instead of being inventors, innovators and producers of knowledge to generate solutions for their problems despite inhabiting the continent with abundant resources and minerals. This paper gives an account of the dislodgment of indigenous knowledge systems and intellectual traditions of African people and its’ impact on African people’s ability to generate knowledge for their own survival and development. The paper also highlights some of the innovations and achievements attributed to Venda indigenous knowledge systems and intellectual traditions. This is done in order to advance the argument that the Venda people were able to realise such innovations and achievements for their own adaptation and survival. The paper concludes by calling for the reconfiguration of the strategies to rekindle and ignite the African people’s self-belief, creativity and ability to generate knowledge that will sustain them and propel their development, advancement and global standing among other nations. Keywords: indigenous knowledge system, intellectual tradition, development, self-belief, validation and innovation
The Benefits Of Digital Storytelling As A Learning And Teaching Tool In Foundation Provision.

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Learning and teaching development

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One of the challenges facing universities is the issue of high enrolment figures. In an attempt to provide support to students, as well as to enhance learning the university introduced e-learning (also known as blended learning), as one of the university’s teaching and learning strategies in 2008. In line with blended learning, digital storytelling was piloted as a teaching and learning tool in foundation provision in 2014. In the pilot study and first phase of the project first year students taking lifestyle management were asked to create their own digital stories. The purpose of digital storytelling was to address gaps in the students’ academic skills, and challenges associated with high intake at the university. At the end of this phase, evaluation was conducted to assess the effectiveness of the technique. The lecturers involved learnt that although digital storytelling can be quite challenging and time consuming in the beginning, it has proven to be an exciting and empowering tool for students. It can thus be concluded that the practice is highly effective in equipping students with a multitude of digital literacies that are a prerequisite for graduates in the 21st century. In the second phase of the project and with new students in 2015, reflexive practice was applied. This paper thus seeks to: 1) report on the students’ experiences of using digital storytelling, 2) demonstrate how the practice can be utilized in advancing learning in higher education, 3) reflect on the benefits of digital storytelling as a teaching and learning tool.

Keywords: blended learning, digital storytelling, evaluation, higher education, teaching and learning, reflexive practice

Challenges faced by students with disability at black historical university, study conducted at the University of Venda, Limpopo Province.

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The aim of this study was to describe the challenges faced by students with disability at black historical university, the study was conducted at the University of Venda, Limpopo Province in South Africa. Descriptive qualitative design was used. 6 students with disability were purposively selected to participate in the study. Data were collected through unstructured interviews and analysed with phenomenological analysis. The results of the study indicated that students with disability experience a number of challenges that hinder their school performance. The study recommend the erection of new structures to accommodate students with disabilities.

Keywords: students, disability, lectures, education, challenges, performance

Students’ Perceptions Of Internationalisation Of Higher Education At The University Of Venda, South Africa.

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University Of Venda
This study investigates perceptions of internationalisation of higher education at a rural-based South African university, the University of Venda (univen). The present body of literature comprises a plethora of general theoretical studies on internationalisation, some of which specifically engage with internationalisation at South African rural-based universities. However, to date little research has been undertaken to assess student perceptions of internationalisation at such institutions of higher learning. This paper uses qualitative methodology to examine student perceptions of internationalisation, the interaction between international and South African university community members as well as the question whether students consider themselves appropriately prepared by their university for the workplace and participation in the global knowledge economy. Ten (10) respondents were involved in the study. Descriptive statistics were used to analyse the profile and distribution of the sample population and the perceptions of respondents. Atlas.ti version 7.5.2 was used to analyse the data. The majority agreed that internationalisation of higher education promotes cultural integration and interaction among students and other stakeholders. Most respondents indicated that their study at univen is preparing them for international market whereas few believed otherwise. Some acknowledged that internationalisation of higher education will improve the international recognition for the university while few respondents identified xenophobic tendencies as a risk that may defeat this effort. The majority agreed that the commitment of univen's management to internationalisation is a step in the right direction. Many respondents argued that there should be a better alignment of institutional culture with internationalisation objectives being pursued at the university.

**Keywords:** perceptions of internationalisation, interactions, local and international students, higher education, university of Venda, South Africa

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**The use of safe assign and its influence on academic writing efficacy.**

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Plagiarism by students is an accumulative problem in higher education institutions globally. The development of academic misconduct policies has done little to reduce the incidence of plagiarism. Literature indicates that many incidents of plagiarism result from ignorance, poor writing skills and inappropriate acknowledgement of sources rather than intentional misconduct. In recent years WSU adopted the blackboard learning management system (wiseup). Most staff and students have been trained on using the system. The blackboard system has a plagiarism tool called safe assign that is embedded in the system. It is a unique text matching algorithm capable of detecting exact and inexact matching between a submitted paper and source material. Safe assign is used to monitor and prevent plagiarism. The tool allows both the student and the lecturer the opportunity to review and rewrite what they have originally submitted, against the comparative results detected by the system. This paper is two-fold, it aims to report on action research where a pilot study was conducted with first year extended programme electrical engineering students. In this case, students were required to upload assignments on wiseup using safe assign to check for plagiarism. It also seeks to examine the efficacy of safe assign as a tool to improve students’ academic writing skills while managing plagiarism at WSU. There are many factors that could lead students to plagiarise, hence it is envisaged that safe assign can be a useful tool for both students and lecturers to improve academic writing skills and manage plagiarism.

**Keywords:** writing efficacy, safe assign, plagiarism and learning management system.
Learners’ Attitudes Influencing Their Performance In The Study Of Mathematics In Seven Selected Senior Secondary Schools In The Mthatha Education District.

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The constitution (1996) of the republic of South Africa forms the basis for social transformation in the country. Act 108 of the 1996 constitution and other amendments that followed paved the way for curriculum transformation and development in the country. The department of basic education introduced the curriculum known as the national curriculum statement (ncs) in 2006. Since then, some curriculum reforms have taken place and the department of basic education has recently introduced the curriculum and assessment policy statement (caps). To attain social and economic transformation, the government of South Africa has attached much importance to the teaching and learning of mathematics and the sciences in schools in the country. Even though much attention is being given to the teaching and learning of mathematics in terms of finance by the government, the majority of learners perform poorly in the subject. The low performance of learners in the study of mathematics has been a concern to the government, officials of the department of education, educators, parents and other stakeholders. This research was undertaken to study learners’ attitudes and how these influence their performance in the learning of the subject. Seven schools were selected within the Mthatha education district, with ten (10) learners selected respectively in grades 10 and 11, making a total of twenty (20) learners per school. A total of one hundred and forty (140) learners were sampled for the study. The study consisted of two types of questionnaires to collect data from the respondents. A qualitative data in the form of open-ended questionnaire to study learners understanding of concepts in algebra, number patterns, number system and exponents and a similar questionnaire to study learners’ attitudes towards the study of mathematics. The data were analyzed using the ibm statistical package for service solutions (SPSS) version 20. Findings indicated that, the majority of the learners have a positive attitude towards the study of mathematics. In other words, the majority of the learners indicated that they wanted to continue with the study of mathematics in the senior secondary/high school and even beyond. There was a steady increase in performance of the task administered to this category of learners. Learners, who exhibited a negative attitude towards the study of the subject, however, showed a decline in their performance. The overall performance of these two categories of learners, indicated that the majority of the sampled learners scored below the 50% mark. The findings also showed that learners in the urban government schools had a more positive attitude and their performance in the subject was better than their peers in the rural government and the urban private schools. The majority of the learners indicated that much encouragement from their educators, parents/guardians had kept their hopes and enthusiasm alive in the study of mathematics. The study also revealed that there was not much difference between the attitudes of male and female learners sampled for the study. Recommendations were made to enhance the teaching and learning of mathematics in the senior secondary schools. Based on these recommendations, a model called the learner attitude performance association (lapas) model was developed. Incorporating some factors as outlined in the recommendations into the teaching and learning of the subject, (shown in the models bold curved arrows) may impact positively on the learners’ attitudes and enhance their performance in the study of mathematics.

**Keywords:** learners’ attitude, influence, motivation, cognitive domain, affective domain and performance
Tracking And Monitoring At-Risk Students Using Blended Academic Advising: A Case Study Of Management And Engineering Programmes.

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Abstract academic advising is regarded as being very instrumental in the fight against student attrition (gudep, 2007). In the study conducted, academic advising aimed at assisting students to realize their academic goals by advising them based on their performance as tracked through the learning management system. This research is based on the tracking and monitoring activities of the first tasks or tests of the students to determine those who are at risk of failing the course. After the first task, the marks are uploaded on the learning management system (wiseup) which categorizes the students’ marks according to highest achieving, the normal or borderline and the lowest achieving. This paper outlines the developmental model of academic advising activities after identifying the at-risk students. This is done by employing: 1) the online tracking, 2) online communication, 3) the face to face contact with the class, as well as, 4) the utilization of short message system (sms) to perform advising for all students with emphasis on those that are at risk of failing the course or at-risk of exclusion. The blended academic advising in this case study unearthed the students’ and the lecturers’ experiences with the courses as well as the students’ learning strategies.

Keywords: academic advising, student retention, tracking and monitoring, online academic advising, blended academic advising, at-risk students.

Is There Any Justification For Use Of Eurocentric Views On Africa?

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Most perspectives utilized to explain and predict human behaviour are predominantly foreign based, that is a bulk of what we teach our children and students is based on ideas that originate from european and american pioneers. Scientists always argue that most human behaviour is universal, going to the extent of presenting laboratory and naturalistic evidence to demonstrate such. In short, the modern scientific study of human behaviour appears to be based exclusively on the empirical, mechanical, and materialistic approaches of the west. European contact with Africa through colonialism has led to difficulties to introduce African perspectives to the study of human behaviour in African institutions. However, recent developments initially made by recognized African scholars, coupled with advances in the establishment of African psychology have allowed a strong challenge to the unfortunate scenario in Africa. This presentation does not attack but instead explores the utilization of foreign-based (e.g. American and European) perspectives or theories in the understanding and explanation of human behaviour among Africans. It is argued that there is a need for liberation from dominant discourses particularly in psychology. Using African psychology as starting point, attempts must be made for the uncovering, articulation, and application of the principles of the African reality structure relative to psychological phenomena.

Keywords: perspectives, Africa, Eurocentric, psychology, human behaviour, understanding, explanation
Walter Sisulu University (WSU) is not uncommon to the tragedy that affects the entire country of low graduation rates in South African higher education institutions. South Africa’s graduation rate of 15% is one of the lowest in the world. The learning and teaching development (ltd) at WSU has embarked on a mission to improve the success and throughput rates of rural undergraduates by employing a number of services to assist students in graduating in record time. Such services include, peer assisted learning, which is the facilitation of learning done by other learners in a group method; lifestyle management, a subject designed to orientate students who are in the extended curricular on how to well adjust and integrate into tertiary; academic literacy to assist students on the different writing skills; academic advising helps to attract potential students through their career exhibitions at various rural high schools when those learners have been accepted, then works with all faculties to identify students who might fall at risk of non-compliance for the next level, prevention methods are diverted to as means of lessoning such occurrences. The e-learning specialist’s combine pedagogies to help with blended learning strategies using technological advancements to improve the levels and standards of learning and teaching. The purpose of this paper is to investigate from students of WSU bcc who come from rural backgrounds on the effectiveness of ltd in adding value towards their growth, support and development in the institution of higher learning and training.

**Keywords:** Walter Sisulu University, low graduation rates, learning and teaching development, rural undergraduates, blended learning, learning and teaching, institution of higher learning and training

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Keywords: Walter Sisulu University, low graduation rates, learning and teaching development, rural undergraduates, blended learning, learning and teaching, institution of higher learning and training

Social Realism and Quality Assurance in Higher Education: Sustainability and Transformative.

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Since the introduction of formal external quality assurance policies in the South African higher education context there has been challenges in implementing these policies, especially at institutional level. The paper shares a social research approach that avoids conflation when analyzing social problems. Margaret archer uses social realism to analyse what leads to social change or non-change. Social realism emanates from Roy bhaskar’s critical realism. The methodology used in this study is qualitative case study research. Two schools of an institution serve as cases to illustrate the constraints leading to non-implementation and enablements leading to implementation of quality assurance in higher education. Data was collected through interviewing deans of the two schools, heads and lecturers of selected departments. Norman fairclough’s critical discourse analysis was used to analyse institutional documents. Data was analysed using archer’s morphogenetic approach. The results of the study reveal that the quality assurance approach adopted at national level result in a lead parachute tendency. In additions elaboration or transformation varies in the two schools because of varying structures that govern the schools that is traditional and problem based learning approaches. Academics remain unclear where emphasis on quality should be placed when implementing quality practices, varying interpretations lead to varying cultural integration. Archer’s social realism theory has the potential to bring about sustainable way of transforming quality assurance practices in higher education to bring about genuine social change.

Keywords: social realism, quality assurance, higher education, critical discourse analysis, implementation

The Role of Faculties Of Education In The Preparation Of Pre-Service Foundation Phase Teacher For Inclusive Classrooms.

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The study will investigate the competence of faculties of education on how they prepare primary pre-service foundation phase teachers for inclusive classrooms. Inclusion in education has been defined as the process of addressing and responding to the diversity of needs of all learners through increasing participation in learning. The fundamental principle of the inclusive school is that, all children should learn together, regardless of any difficulties on the differences they may have and that a child with disability should attend the neighbourhood school, that is, the school that would be attended if the child did not have a disability. Universities are compelled to provide pre-service training for teachers who are competent to teach learners with disabilities together with their non-disabled peers in the same classrooms. Pre-service foundation phase teachers will administer a survey of attitudes towards the inclusion of learners with learning disabilities in the mainstream classes. The survey measures teachers’ knowledge, skills and dispositions on learners with learning disabilities. Key words: inclusive education, pre-service teachers, faculties of education, learners with learning disabilities, inclusive classrooms, foundation phase.
The education of migrant learners in South Africa: a human rights-based approach.

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The department of basic education has a legislative mandate to provide equal, compulsory and quality education to all learners in South African schools without unfair discrimination. To ensure its commitment, South Africa has developed a human-rights protection to children’s rights. National policies such as the national education policy act, the South African schools act and the inclusive education policy have been developed to safeguard the right to education for all learners. All these policies came into place in response to international conventions on the rights of the child, constitutional and legal imperatives relating to the education of migrant learners. This paper sought to provide a clear picture of the education of migrant learners in South African schools. It is assumed that the inclusion and integration of migrant learners in the education processes create both opportunities and challenges to the management and governance of schools. A qualitative research was conducted in tshipise-sagole district to examine how school-based managers manage schools with migrant learners. The empirical study revealed that migrant learners in South African schools are not treated differently from other learners, however their unique challenges make their journey to access education difficult.

Keywords: right to education, human rights-based approach, education for all, inclusive education, educational needs and barriers, migrant learners.

Peer Assisted Learning Programme: Supporting At-Risk Students at the Mechanical Engineering Department.

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This study was to determine how the peer-assisted learning (pal) programme supports at risk students in the mechanical engineering department. Pal programme is defined as a programme which promotes the development of knowledge and skills through active help and support among persons of equal status or matched companions. Pal supports and addresses high-risk subjects. The programme is a student-driven programme in which senior students assist junior students with their academic work. The study investigated the perceptions and experiences about (pal) of first-year students (pal students) and second- and third-year students (pal leaders) in the department of mechanical engineering at the butterworth campus. Pal employs collaborative and cooperative learning approaches during group sessions through active engagement to promote a successful learning process. In this qualitative research process, open-ended questionnaires 20 first-year students, and interviews for eight senior students, called pal leaders, to elicit their perceptions and experiences of the pal programme in (mechanical engineering). The data were analysed and four themes were identified: academic development, peer-assisted learning leaders, peer-assisted learning environment, and effectiveness of peer-assisted learning programme. Results indicated that pal students with the support of the pal leaders had positive perceptions of the effectiveness of the pal programme in the mechanical
engineering department. The pal programme enhances the knowledge and skills of individuals, which are encouraged during pal sessions. Study confirms that the pal programme creates a safe, comfortable and conducive environment for first-year students’ learning.

**Keywords:** peer learning; peer assisted learning leaders, at-risk first year students,

**Understanding teacher academic performance evaluation for professional growth from the South African perspective.**

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South African experience of in-service teacher performance assessment for professional growth especially in black schools has not been a positive one. Such assessment were faultfinding and resulted in teachers in being victimised. Teachers never benefited from these assessments as they were never aimed at improving their teaching skills. Teachers did not have an idea of extent to which their performance assessment was linked to their teaching skills in relation to improvement of student performance. The purpose of this study was to understand the academic evaluation of teachers in relation to their professional development from the South African perspective. A quantitative empirical survey using self-administered questionnaire constructed following a literature review was used to collect data for this study. Data was analysed through the the help of a computer loaded with the statistical package for social science (SPSS). The study established that through formative assessment and evaluation, strengths and weaknesses of teachers in the teaching field can be established. This enables in-service teachers to be offered opportunity for skills training for continuous development, and to empower teachers to increase their level of professionalism and competency regarding teaching and learning. Results suggest that evaluation of teachers would benefit them; their areas of development is identified make it possible for development teams to focus during training. This study is part of the project on school improvement which is ongoing. Acknowledgement: national research foundation

**Keywords:** academic performance, teacher evaluation, professionalism, competency in teaching, school improvement, whole school evaluation

**Contact with the Dragon: Investigating the Impact of Chinese Trade on the Small Micro and Medium Enterprises in the Mthatha Area.**

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This is a case study investigating the impact of Chinese trade on the small micro medium enterprises in the Mthatha area. To arrive at informed results in this study, the researcher has reviewed relevant literature. The study utilised a purposive sample of 54 respondents, to present and interpret the study data mainly through qualitative analytical processes. Data was interpreted after transcribing the interviews, reading through the interviews to identify categories of responses testing categories by classifying responses soon after the interviews, and coding and tallying responses, to be displayed in narrative text, tables, charts and figures. Conclusions were drawn from the data supplied by respondents. This study takes stock of the value of transactions resulting from trade relations between South Africa and China, assessing as it does the impact on growth levels of sectors of the local economy, as well as the effects of eroded protections of local markets in the advent of globalisation's ineluctable
tensions between free trade and fair trade. Throughout this dissertation, the impact assessment dotes on the indices of growth and protections (or lack and/or loss of these) in a specific area in Mthatha, i.e., Mthatha in the Eastern Cape, with a view to mapping a much more clearer scenario as regards trade investment challenges in a socio-economic context of development priorities. Whereas bilateral trade is shaped on the anvil of foreign direct investment as well as confidence vectors such as stability and labour flexibility, there is also a growing body of evidence suggesting a proclivity towards invidious trade practices such as influx of low-quality Chinese products and an erosion of gains made on the back of South African growth policies. This study aims to go beyond bilateral investments and, as such, determines the extent of the value of transactions—whether negative or positive in outlook—in terms of counterbalance between spin-offs and material injury to the local small micro medium enterprises sector’s development gains. In the final analysis, the study produces indices and differentials that could be used as a yardstick for investment-based and partnership-driven growth for poor communities whose municipalities steer growth through integrated development programmes (idp) as well as local economic development (led) programmes. The Chinese presence, aptly symbolised by the iconic dragon that has cultural significance, provides an opportunity rather than a crisis: it provides a test-case for sino-African trade relations at a local rather than exclusively global stage. The proverbial dragon is not up for slaying, only the rules of engagement need changing. This sober recognition of Chinese growth merits ways of leveraging partnership and possible pegging on the chart of their growth trajectory on mutual reinforcing terms.

**Keywords:** small micro medium enterprises, globalisation, fair trade

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**Risks And Vulnerabilities In The Rural Junior Secondary Schools: Implications For Teaching And Learning.**

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School governing bodies (sgbs) have a major responsibility to ensure that schools are safe, secure and conducive to teaching and learning. However, schools are continuously subjected to various risks ranging from climatic, man-made and those that are related to the physical environment of school’s infrastructure. These adversely affect teaching and learning. To address the problem, an inquiry using a qualitative approach was undertaken to ascertain the implication of these risks and vulnerabilities for teaching and learning. Data were generated through interviews from twelve sgbs chairpersons who were purposefully sampled from twelve Libode-mega district schools. Data were analysed using nvivo to identify common patterns which led to thematic analysis. Findings revealed that changing climatic conditions, among others, affected teaching and learning. The study concludes by suggesting strategies to deal with these risks and vulnerabilities.

**Keywords:** risks, vulnerability, climate, environment, implications, strategies

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**Perceptions Of The Learning Environment In Eastern Cape District Hospitals: A Student’s Perspective.**

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Integrated longitudinal clinical clerkship is a programme employed by several medical institutions that allows students to devote either a number of weeks or a year in peripheral hospitals. This study investigates student perception of the 20 week clerkship model employed by the faculty of health sciences at Walter Sisulu University in Eastern Cape district hospitals. Six hospitals which housed 72 clerkship students were selected to carry out the research. A quantitative approach was used in study, where questionnaires were distributed to 53 registered mbchb v students. The findings of the study demonstrates that 66% of the students agree that the district hospitals offer a more comfortable learning environment as compared to the previously used learning approach where students visited a tertiary hospital on a daily basis, while 53% agree that the environment has a positive influence in allowing them to concentrate better on their academic studies. 64% of the participants highlighted that the learning atmosphere in these peripheral hospitals was more relaxed. Regardless of the teething problems that all stakeholders encountered during the 20 weeks that the students spent in the district hospitals, students showed a positive and appreciating attitude to the learning environment offered by these health facilities. Additional support from the Eastern Cape department of health and walter sisulu would play a major role in improving the structure of the programme.

Keywords: ilcc, medical students perception, learning environment, medical students, district hospitals

Exploring curriculum content knowledge and skills bearing acquired by advanced certificate in education graduates in one selected institution of higher learning.

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Although the qualifications of the teaching force in South Africa (SA) have improved during the past two decades (1994-2014), most teacher competence review reports indicate that the majority of teachers have not yet been sufficiently equipped to meet the education needs of a growing democracy in the twenty-first century. Teachers in sa lack the various kinds of knowledge required in a professional setting like a school in order to impact on learning and to influence change. Different kinds of knowledge are at play for example, knowledge of the subject matter (content knowledge) and knowledge of teaching (pedagogy). This article focuses on exploring curriculum content knowledge and skills bearing acquired by advanced certificate in education (ace) graduates. A pragmatist’s stance was employed using mixed-methods. Convergent parallel design was adopted, characterised by collecting both qualitative and quantitative data concurrently. For the qualitative strand, convenience sampling/available sampling which is a universal attribute of non-probability sampling procedure was used to select 03 university faculty administrators and 03 ace programme co-ordinators. Furthermore, systematic random sampling was employed for the quantitative strand to select 133 ace students. Qualitative data analyses were done manually using natural meaning units. Quantitative data analyses were done through SPSS version 20. The overall findings indicated that the institutions providing the ace programme failed to screen prospective ace students before admission to ensure that they all registered for subjects they taught in their schools. Such institutions shifted their operation focus from producing quality teachers who could enhance school effectiveness to the focus on financial gain. A number recommendations emerged based on the findings.

Keywords: teacher education, content knowledge, pedagogy, skills

Negotiating the diverse HEI entities towards the transformation of teaching and learning: the TES impact on our collective practice at WSU.

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N Sotshangane

The transformation of learning and teaching at HEIs has been of great concern for many years. In terms of throughputs, the higher education system as a whole is not doing very well (Scott et al 2007). The Higher Education Quality committee has identified Teaching and Learning as a key criterion for evaluating the quality of Higher Education programmes (HEQC 2005/6). A number of noteworthy elements of this criteria relating to quality have been identified and include diverse pedagogic approaches to the learning needs of students and the offering of teaching and learning that is relevant and responsive to them. Responding to this need, the Transformative Education/al Studies project was introduced at WSU, comprising a diverse group of people representing key university elements of an HEI like academics, research, library and information etc. As a research group with the TES overarching question of: ‘how can I improve my practice as a…’, TES has been actively engaged in Teaching and Learning issues with a view to improving our practice, coming with the belief that unless we individually and collectively look at our own practice, there will be no improvement anywhere unless we can all say: it begins with me. In this paper, the authors share their TES experience and how this has impacted their practice in their respective areas as players in the Teaching and learning project of the University. Using aspects of the self-study methodology, we share our experiences in reflexive narratives, artefacts etc. that speak to how we approach our teaching and learning and other practices in the institution. We ask ourselves questions about how we respond to our specific challenges and even how we relate to those in our environment with respect to moving the bigger academic project forward. We conclude that it is indeed possible to improve our practice if we accept our role and the fact that it does indeed begin with us, especially if our self-reflections are compounded with our African Ubuntu philosophy.

Key terms: Practice; Ubuntu-philosophy; transformative-education; self-study; relevant-responsive – teaching-learning.

The contribution of work integrated learning towards students’ employability at Walter Sisulu University: graduates’ perspectives.

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The need to develop work ready graduates who can transfer the knowledge and skills from the lecture theatre to the workplace has become a key issue in South Africa. In this regard, there has been a growing interest in work-integrated learning (wil) and its potential impact on student development. This article will investigate the role of wil in enhancing students’ employability skills at Walter Sisulu University (WSU). More specifically the research aims to determine which employability skills are enhanced, and to what extent are these improved as a result of students completing a work placement. Wil refers to a range of activities or programs that integrate academic learning with its application in the workplace. It is incorporated into academic programs in an attempt to make students work-ready. It is essentially a three way partnership among the student, the employer and the university. According to Jackson (2013) wil in recent years has attracted considerable attention as an instrument for developing work-readiness to the standard to which industry expects. This research will focus on graduates from the faculty of business at WSU whose academic programs have a compulsory wil component. Questionnaires with open-ended and closed-ended questions and focus groups will be used to collect data.
An Exploration Of Challenges Related To Inclusion Of Students With Disabilities At A University Of Technology (Comprehensive) In South Africa.

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The present study attempted to explore the challenges related to inclusion of students with disabilities at an institution of technology in South Africa with an intention to suggest recommendations for improvements. A purposive sample of 12 students (5 females and 7 males) with disabilities participated in the study. A semi-structured interview exploring the challenges related to inclusion of students with disabilities at the university was conducted with the participants. The findings of the study revealed that the students with disabilities experienced a number of challenges related to the inclusion of students with disabilities at the university under study. The study revealed that the students with disabilities experienced challenges related to accessibility to the lecture rooms, library, halls/auditoriums, residents, administrative block and learning. The participants believed that the physical infrastructure in the university was not user-friendly for students with disabilities. Recommendations to improve the challenges related to inclusion of students with disabilities were made.

Keywords: challenges. Students with disabilities. University of technology. Higher education. Quality of life

Teachers Variables As Predictors Of Academic Excellence In Nigerian Universities.

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In recent years, the academic standard of products from the nation's universities is progressively on the downward trend. This is evident in the level of their performances both in internal and external examinations. It is as bad as products' inability to construct simple sentences devoid of errors. The graduates neither possess sound communication skills, competence in any chosen areas of study, nor acquire values cherished by the society. This situation was reported by one of the national dailies that about three (3) national youth service corps members were sent out of the orientation camp because they could not fill simple forms. This phenomena has constituted grave source of great concern for all stakeholders - parents, school authorities, government and the society in general. Pertinent to mention here that a number of factors are known to have been responsible for students' poor performances in school, some of which include: students' attributes, quality of students admitted into schools, parental attitude to their children's education, government's lack of adequate attention and support for education, the tone of the school (discipline) as set by the school authority and the teachers' variables to mention a few. Each of these factors has the potentials to affect the educational standard and level in our country in significant ways. Hence the present study examines teachers' contributions to the promotion of academic excellence in the nation's universities. In specific terms therefore, while poor academic performance permeates all the levels of the education system, this study concentrates on the teachers' variables in the university system in Nigeria.

Keywords: teachers, variables, predictors, academics, excellence and university
An inter-generational engagement with the concept of ‘African scholarship’ at the dawn of the twenty-first century.

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This study which is largely drawn on Mkandawire’s and Mwangola’s works on generation of African scholars, attempts to present the current state of African scholarship through a generational analysis, and to access its place at the dawn of the twenty-first century. African scholarship has been marked by unprecedented debates of continuities and discontinuities across the different generation of scholars since independence. Generational demarcations (even though fluid), as far as the concept of African scholarship is concerned, have been marked by major events which have characterised the post-colonial world, and which have inadvertently affected the state of Africanness in the process. The various political and economic transitions such as the cold war, the introduction of the structural adjustment programmes in Africa and now globalisation, have had different effects, not only on the economic and political situation of Africa, but on the intellectual identity of the continent. These political and economic phases have produced different generation of scholars who have continued to unpack and repackage the concept of African scholarship at the interface of these processes. As much as the concept of African scholarship is historical, it is also contextual. This paper therefor emphasises an inter-generational approach to inform African intellectuality and development on the continent.

Keywords: African scholarship, Africanness and inter-generational engagement

Mentoring engineers in higher education – a guide to mentoring.

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Many academics and researchers underestimate the impact that mentoring can have in helping them to establish and further their careers. Though it would be impossible to create a blueprint for good mentoring because ultimately it’s about human relationships and every relationship is unique, it is still possible to explore the attitudes, expectations, and activities that are worth adopting, as well as give some guidance on how to build relationships that will be mutually-beneficial. The paper will also explore the difference between mentoring, coaching and sponsoring.

Keywords: mentoring, coaching

Observation And Measurement Of The Incidence Of B-D Dyslexia In A Class Of University Chemistry Students.

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Dyslexia is defined as ‘word-blindness’ in the pocket oxford dictionary. It usually manifests itself as letter or number reversals of read or written language. Thus, the numbers 67 may be read or written as 76, and the letter’d’ may be read or written as ‘b’, and vice-versa. This is a result in the mind’s eye,
of a reflection operation in an axis, perpendicular to the b-d direction. Inversions about a point may also occur, for example, p-d, with the inversion point lying in the dash – symbol. This paper reports on the analysis of the answers to a question in a first year chemistry examination paper, which provided a simple way of observing b-d dyslexia. An estimate of the incidence rate is also given.

Grade 9 Learners’ Access To Mathematics Related-Resources In Letsema Circuit Of Maluti Education District.

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The resources in the mathematics teaching and learning are crucial in rural areas especially in letsema circuit of maluti education district in matatiele. The main study dealt with challenges faced by grade 9 mathematics learners in letsema circuit of maluti education district in matatiele. This paper examined the grade 9 learners’ access to mathematics related-resources. Despite the provision of mathematics workbooks, complementary the mathematics resources need to be supplied by the department of basic education (dbe), so that learners’ performance in mathematics is improved. In attempt to investigate learners’ opinions and understanding of issues, a qualitative approach was selected, with a quantitative approach used to a lesser extent. The research design was a case study. 124 grade 9 learners participated on study and six learners from each school were interviewed. Data collected from the instruments were analysed presented in percentages in tables using the statistical package for social sciences (SPSS) version 21. The responses from interviews were classified into categories and the themes emerged. The findings revealed a lack of mathematics related-resources both at school and at home; minimal teachers’ use of mathematics tools and learners’ dissatisfaction about group work. Recommendations were: learners should be exposed to basic mathematics resources, learners should be encouraged to study mathematics on their own

Keywords: mathematics, resources, learning, grade 9 learners, access

Personal And Collective Experiences As Change Agents: Reflection And Reflexive Practices Of A Lecturer.

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The study aims to investigate if lecturers use their experiences as individuals or as a collective to enhance quality teaching and learning in higher education institutions. More-so because teaching is affected by characteristics of the teacher, their experiences and knowledge of pedagogies and practices. The study is situated within a constructivist view of teaching and learning. It is a constructive alignment of what the lecturer does to make teaching and learning conducive. The study targets lecturers who teach the postgraduate certificate in education students. The study will solicit lecturers’ view on their teaching and student learning in terms of the theories, beliefs and values which underpin their practice. The study will also solicit lecturers to show evidence of how they identify with the dynamics of their practice. The study will further explore the lecturers’ teaching perspectives and how such perspectives enhance quality teaching. The study will use a qualitative approach. Data will be collected through interviews, observation and from the lecturers teaching and learning materials. Data analysis will employ content analysis. It is hoped that findings of the study will assist lecturers to reflect-on and reflect –in their practice in a reflexive engagement.

Keywords: personal and collective experiences, reflection, reflexive, teaching perspective, pedagogy, constructive alignment
An Inter-Generational Engagement with the Concept of ‘African Scholarship’ At The Dawn Of The Twenty-First Century.

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This study which is largely drawn on mkandawire’s and mwangola’s works on generation of African scholars, attempts to present the current state of African scholarship through a generational analysis, and to access its place at the dawn of the twenty-first century. African scholarship has been marked by unprecedented debates of continuities and discontinuities across the different generation of scholars since independence. Generational demarcations (even though fluid), as far as the concept of African scholarship is concerned, have been marked by major events which have characterised the post-colonial world, and which have inadvertently affected the state of Africanness in the process. The various political and economic transitions such as the cold war, the introduction of the structural adjustment programmes in Africa and now globalisation, have had different effects, not only on the economic and political situation of Africa, but on the intellectual identity of the continent. These political and economic phases have produced different generation of scholars who have continued to unpack and repackage the concept of African scholarship at the interface of these processes. As much as the concept of African scholarship is historical, it is also contextual. This paper therefor emphasises an inter-generational approach to inform African intellectuality and development on the continent.

Keywords: African scholarship, Africanness and inter-generational engagement

Practices In The Extended Biological Sciences Programme: Evidence Of An Innovative Teaching Approach.

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This paper will share the experiences of instruction in the extended biological sciences programme at walter Sisulu University. It documents and describes innovative teaching strategies which have been implemented over time to supplement traditional textbook teaching mechanisms. It highlights challenges, perspectives and reflections on transforming pedagogical practices and the resulting student successes. In a world that is driven by technology it has become apparent that the current teaching and learning strategies at institutions of higher learning need to be transformed in order to keep up with the calibre of students and to produce quality graduates. Data includes detailed interventions aimed at addressing specific challenges, monitoring of student performances during interventions as well as student perspectives and feedback on teaching and learning. This study is meant to open dialogue on the need to transform teaching practices with the aim of enhancing teaching and learning in the classroom and in order to produce high quality graduates that are fit to compete in today’s workplace.

Keywords: extended programme, teaching, learning, transformation
Management Strategies for Motivation of Teachers towards Improvement of Learner Performance in High Schools in the Ngqeleni Sub-District of the Eastern Cape, South Africa.

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The study investigated management strategies for motivation of teachers towards the improvement of learner performance in high schools in the Ngqeleni sub-district. The researchers used both the quantitative and qualitative methods. The study was conducted using a case study design. The population was high school teachers of the selected district. Random sampling strategies were used to select participants. The instruments used to collect the data were questionnaires and interviews. The data collected were analysed manually and interpreted within a specified time frame. The main findings of the study indicated clearly that the relationship between teacher motivation and performance of learners was perceived to reflect a strong positive relationship, thus motivating teachers is an important strategy in improving learner performance. The researcher also discovered that the issue involving motivation of educators was not new: most educators interviewed showed a deep understanding of the concept. They believed there were many management strategies which should be used, such as appreciation of teachers’ efforts, infrastructure development and further job training to mention some of the main motivators. Despite these management strategies being simple and clear, they are however not being used.

Keywords: motivation strategies; teacher; school leadership, learner performance;

Exploration Of A Model To Measure The Impact Of Community Involvement To Improve The Governance And Support The Management Of Schools: The Case Of Libode-Mega District Of The Eastern Cape Province, South Africa.

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School governance is a major feature of school leadership in South Africa. There is a dearth of research that had examined dynamics in how communities navigate their way through the process of school governance. This study seeks to explore a model to measure the impact of community involvement to improve the governance and support the management of schools in the selected schools in the Libode-mega district. The researcher will use triangulation approach for the investigation of the dynamics of school governance. The sample population will comprise of parents and teachers of communities in the selected schools in the Libode mega-district. Random and purposeful sampling will be the sampling methods to be used. Questionnaires were administered for the collection of the primary data and interviews will be conducted.

Keywords: school governance; school leadership; community involvement; school management;
Employing Cami As An Intervention And Support Mechanism For Mathematics And Language Development In The Extended Curricular Programme At Walter Sisulu University.

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The poor state of mathematics in South Africa is well known. South Africa scored the lowest on the trends in international mathematics and science study (TIMSS) tests among middle-income countries in 2011. According to the world economic forum’s global information report (2012), South Africa has the worst standard of mathematics and science education out of 184 countries, with a marginally better ranking of 146th for overall education. In the 5th financial development report (2012), the world economic forum ranked South Africa 62nd out of 62 countries. The mathematics department has over the years observed that first year students lack the necessary knowledge and skills they require to fair well academically. Furthermore, these students have poor language skills. It is for this reason that a collaborative project on mathematics and language development is being implemented on the buffalo city campus. Central to this pilot project is the use of cami, a software that provides remediation, addresses misconceptions and fills any gaps students may have on mathematics. Developed in South Africa in 1984, cami can also be used as a tool to equip students with language and writing skills. There are numerous benefits associated with it. This paper reports on progress made this far.

Keywords: cami, extended curricular programme, first year students, language development, mathematics, South Africa

Improving my practice as a lecturer in assessing students’ essays. Gladys ashu
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This paper addresses an area of professional and personal concern where my values were being denied in my practice (Whitehead, 1993). I had been using the academic method of lecturing and assessing the learning of my students which is somehow problematic especially for the majority of the students from the previously disadvantaged schools. I became concerned about the shortfalls of such an academic method. Using a self-study action research approach i was able to put myself in the “hot seat”, reflected on my own practice and found out where i went wrong. The consequential question became “how do i improve my practice?” (Whitehead, 1989). I used the kind of action research advocated by Mcniff and Whitehead (2003) which deals with the self-study practitioner enquiry, necessary for transformation of both my practice and students. This paper does not only deals with issues relating to essays but it touches on the different assessment tasks i provided to my students and the improvement in my own thinking in the course of implementing my concern. The theoretical underpinning of Whitehead and McNiff’s (2006) ‘living theory’ guided this study. The data used included my reflexive journal, students’ essays, lecture notes, students’ evaluation, interviews and critical friends’ comments. I think i can declare that my concern has translated to increased knowledge for myself and my students and an improvement in learning and teaching in my classroom.

Keywords: essay, concern, self-study action research, my students, transformation
An eclectic theoretical reflection on the conceptualization and implementation of post-independence education reforms and their implications for social justice in university education.

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At independence in 1980, Zimbabwe inherited an education system deeply anchored in colonial injustice and inequality. Expectedly, addressing these colonial iniquities was a major policy thrust of the new black majority government; particularly in the context of its socialist ideological orientation. Pursuant to this, a battery of education policies were immediately passed and implemented soon after independence. However, over thirty years later, it seems no serious audit has as yet been carried out to establish how far Zimbabwe has gone in addressing issues of social justice in education on the basis of the policies. Employing an eclectic theoretical lens, this article reflects on the conceptualization and implementation of the education policies, and their implications for social justice in university education in Zimbabwe. This potentially informs further ameliorative engagement with social justice issues in higher education.

Keywords: equality, higher education, justice, lens, post-independence, reforms, Zimbabwe

The Implications of the African Music Archive’s Computer Laboratory to the Academic Development of Students.

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The computer music laboratory is an advanced facility within the archives that will add value to the teaching and learning of music modules. A music laboratory is a system of class intercommunication which provides individual channels between a teacher and any student of the class. With such big classes in the department lecturers are unable to give individual attention to students as is ideal for a music classroom. The laboratory will give the best opportunity for students to explore their talents abundantly. This paper focuses on the significance of auralia 4 for ear training and musition 4 for music theory within music modules. The software allows the teacher to modify the syllabus to suit the students’ pedagogical requirements. Auralia 4 and musition 4 both include simple yet sophisticated tools for classroom management, student assessment and record-keeping, and networking, making them the ideal software tools for one’s music classroom. Students are able to work through the materials on auralia 4 and musition 4 on their own or the lecturer may select for them. The use of the software will stimulate the desire to achieve more and the urge to proceed to an advanced level within students. The quality of education will also be improved because students will not depend on a lecturer to study.

Keywords: music laboratory, auralia 4, musition 4, software

The Challenge For Walter Sisulu University To Increase Its Throughput Rate Of Postgraduate Students. R.A. Sonn
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There is a shift in emphasis in higher education from producing bachelor’s degrees en masse to an increase in the production of graduates with post-graduate qualifications. In recent times more and more universities in South Africa place emphasis in recruiting students doing post-graduate degrees and encourage them to complete their research component of their studies in the stipulated time in order to increase the subsidy received from the department of higher education and training (DHE and T) and the research output of students and staff. For WSU, this issue is relatively crucial, given its low throughput rate of post-graduate students. This paper in particular draws from a research study conducted with b ed (hons) and m ed students at WSU ibika site to establish the challenges they experienced in doing their research projects and dissertations. The students usually finish their course work in record time, but find it very difficult to complete the research component of the programme. The result is that there are a number of students in the system, so much so that at one stage the faculty of education took a decision not to take in any new students in the m ed and d ed programmes for 2014. This qualitative study explored the challenges faced by these students in completing the research component of their respective programmes. A purposive sample of 20 students were selected to participate in the study. Interviews were conducted to collect the data. Ethical considerations such as honesty, trustworthiness, anonymity, and confidentiality were employed to ensure that the data provided would not be used against them, but would merely be used for the purpose of the research study. Content analysis of the data indicated that some of the challenges experienced by the participants included: problems experienced in identifying the problem statement; the complexity of proposal writing; a lack of professional writing skills; the language problem; research methods are not clearly understood; the analysis of data is a challenged due to a lack of resources; a skewed relationship between student and supervisor. Based on the findings of the research, the following recommendations were provided: the research methodology must be strengthened in the undergraduate level; writing skills need to be improved; resources should be improved; the relationship between student and supervisor need to be addressed; the language problem need to be addressed; more supervisors need to be appointed; and serious attention should be given in paying external examiners/assessors.

Keywords: subsidy; throughput rate; post-graduate studies; problem statement; proposal writing; supervisor; ethical considerations.

The effects of class size on quality of teacher education in the department of humanities and creative arts Walter Sisulu University.

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The focus of this paper is on the effects of class size on quality of teacher education in the department of humanities and creative arts Walter Sisulu University, one of the reasons why I wrote this paper is some of the challenges I experienced as a student, a pal leader and a student assistant. The aims of this research were to explore the effects of lecture student ratio in the department. The research looks closely at the work load of the staff members, and the connection of the number of lecturers versus the number of students in a class and their resultant performance. A qualitative research method was used. The data was collected by the use of unstructured interviews that were conducted with both the lecturers and the students. The data was collected from a sample of 5 respondents using a simple random technique. The findings of the study show that the effects of lecturer student ratio affect achievement and performance. They show that when the class is big there is poor performance of students and the work load of lectures is high. Having fewer learners in a class reduces the level of distractions in the room and gives the teacher more time to devote to the need of each individual learner.

Keywords: lecturer student ratio, ratio, class size, quality, teacher education and performance.
A Quantitative Investigation Into The Relationship Between A Positive Self-Concept And Attitudes And Mathematical Achievement Amongst Undergraduates.

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This paper reports on the testing of the hypothesis that problem – solving activities caused positive changes in students’ self – concepts and attitudes towards mathematics. A pilot test, tested possible questions that indicate change of attitudes. The findings indicate that the course affected students’ attitudes to mathematics in a positive manner. The main study collected data from 44 students. A pre – test, post – test and a delayed post – test (three months later) were administered, which included interviews with selected students and staff. To establish what might be considered a positive change, the staff at the mathematics department were asked what attitudes they would expect students have as a result of the mathematics teaching at the university, and then specify the attitudes they would prefer students to have. The direction of change between the two responses were considered to be positive, and this is defined as the "desired direction of change". The results show that the problem – solving course affected students’ attitudes such that the change, identified as the difference between pre – test and post – test results, was largely in the desired direction of change. However, when students return to normal mathematics lectures many of the indicators reverted in the opposite direction; away from what the staff preferred.

Keywords: self – concept, attitudes, problem – solving, desired direction of change, indicators, activities.

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The Role Of Faculties Of Education In The Preparation Of Pre-Service Foundation Phase Teacher For Inclusive Classrooms. Peter Mulaudzi
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The study will investigate the competence of faculties of education on how they prepare primary pre- service foundation phase teachers for inclusive classrooms. Inclusion in education has been defined as the process of addressing and responding to the diversity of needs of all learners through increasing participation in learning. The fundamental principle of the inclusive school is that, all children should learn together, regardless of any difficulties on the differences they may have and that a child with disability should attend the neighbourhood school, that is, the school that would be attended if the child did not have a disability. Universities are compelled to provide pre-service training for teachers who are competent to teach learners with disabilities together with their non-disabled peers in the same classrooms. Pre-service foundation phase teachers will administer a survey of attitudes towards the inclusion of learners with learning disabilities in the mainstream classes. The survey measures teachers’ knowledge, skills and dispositions on learners with learning disabilities.

Keywords: inclusive education, pre-service teachers, faculties of education, learners with learning disabilities, inclusive classrooms, foundation phase.

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Identity politics: an investigation of the relationship between South Africans and foreign nationals.

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Post-colonial South Africa has witnessed a series of protests throughout the country and these are linked to service delivery issues. Some of the factors that are contributing to the protest consistency are related to unemployment and weaker South African economy. During the apartheid regime, South Africa had few foreign migrants working mainly in the mining sector of the economy. After 1994, her borders opened to SADC, African nationals and people from other parts of the world. South Africa thus became a haven for foreigners who were mainly economic migrants fleeing their countries due to wars, famine, and other natural disasters. In 1998, there were reported incidences of xenophobic attacks on foreigners and it assumed a frightening dimension in 2008 resulting into 62 deaths, looting of shops, and wanton destruction of properties which spread across the length and breadth of South Africa. Early this year (2015), it happened again in Gauteng and Kwa-Zulu Natal provinces and this issue caused South Africa a lot embarrassment in the international community. Qualitative research methodology will be used through conducting interviews with people, to get the views of people concerned. The paper suggests integration of foreign nationals as part of African migration patterns.

**Keywords:** porous borders, economic migrants, xenophobic violence, identity politics, service delivery, South Africa

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**Proposed Conceptual Framework for Curriculum Review of Walter Sisulu University (WSU) Fashion Programme.**

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This paper is based on the researcher’s five years lecturing experience at Walter Sisulu University (WSU) fashion department, now called the visual arts department. Its inability to review curriculum to close teaching, learning and entrepreneurship challenges affecting its quality of graduates inspired this paper. As a result, this paper proposes a modified conceptual framework based on the four main pillars surrounding the core function of universities (teaching, learning and research). These pillars are student, department, curricula and resources. The researcher has applied the modified conceptual framework to the fashion programme to highlight current challenges and propose solutions thus putting the framework at work. Internal WSU documents and relevant literature review have been used as the secondary source of data aiding the quality of the paper. The recommendations of this paper will provide WSU fashion programme with a conceptual framework on which to better review curriculum taking into consideration its mission and vision statements. This framework plays a critical role in aligning WSU’s supporting departments, curriculum review policies, university resources and departmental mission and vision statements for a more skilled and quality graduate. The proposed framework also has the potential to reduce unemployment for WSU fashion graduates.

**Keywords:** fashion department, curriculum review framework, entrepreneurship, graduate employability, Walter Sisulu University and skills shortage.

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**Conceptual Understanding in Geometry: A Case Study on Entry Level Mathematics Education Students in A South African Comprehensive Public University.**

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This paper provides a brief overview of research on the conceptual understanding on basic geometrical terminology of a group of South African first year university bachelor of education (mathematics education) cohort of 133 students. The theoretical framework rests on theories on conceptual understanding. A questionnaire consisting of a 60 item multiple-choice objective test (30 verbal terminology items and 30 visual terminology items) provided the data for the study. The data were analysed using Microsoft Excel 2013. An overall percentage mean score of 64% obtained in the test indicated that the students in this study had a limited knowledge of basic geometric terminology. The original study further aimed to determine the students’ ability in verbal geometry terminology items. The students obtained a percentage mean score of 59% on verbal terminology items against a percentage mean score of 68% on visual terminology items. The findings led the authors to conclude that the lower performance in the verbal terminology could have been associated to the students’ lack of exposure in relevant geometric vocabulary. The recommendation is that the acquisition of correct terminology is important for the students’ success in geometry and effective teaching measures can be used as a tool to enhance the preparation of future teachers of the country.

**Keywords:** geometry terminology, conceptual understanding, verbal terminology, effective teaching measures

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**Investigating Factors Affecting the Performance Of Grade11 Learners In Euclidean Geometry At Two Senior Secondary Schools In Mthatha District.**

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Performance in mathematics is a major concern for the country as it is in demand in almost every field, but it is also a challenge. Euclidean geometry is deemed as one of the sections in mathematics that is performed poorly. The aim of the research is to investigate the factors affecting the performance of grade 11 learners in euclidean geometry. 132 learners from two conveniently selected senior secondary schools in Mthatha district formed the sample for the study. The performance of the learners was assessed using a questionnaire in euclidean geometry. It was pertinent to investigate whether the attitude of the learners was also contributing to the poor performance of learners in euclidean geometry. The researchers deemed it proper to investigate the attitude of teachers also towards euclidean geometry. A few teachers were interviewed to gather information as to where do they attribute the problem from. The data were analyzed using Microsoft Excel 2013. The study confirmed that there is poor performance of grade 11 learners in euclidean geometry. Moreover, the attitude of the learners affects their performance. Also, the teachers’ attitude affects the performance of the learners. Based on these results some recommendations are suggested.

**Keywords:** euclidean geometry, attitude, poor performance

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**Enhancement Of Learners’ Performance In Geometry At Secondary Schools In The Vhembe District Limpopo Province.**

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Learning geometry has been identified as an area of mathematics that poses various problems for many secondary school students. Many of the students fail to develop an adequate understanding of
geometrical concepts, and to demonstrate good reasoning and problem solving skills. Poor performance of students in euclidian geometry has been a concern to mathematics teachers, parents and government. The purpose of this study is to enhance learner’s performance in euclidian geometry as a branch of mathematics at the fet band of secondary schools. The research question is: what factors facilitate enhancement of learners’ performance in euclidian geometry as a branch of mathematics at the fet band of secondary schools? This study will adopt the mixed methods design. The population will comprise of all the fet band learners who choose mathematics as a field of study at secondary schools in nzhelele east circuit. Purposive sampling will be used to select participants who will contribute to qualitative data. For quantitative data, clusters, stratified and random sampling methods will be used to select learners who will participate in the study. The sample will consist of 9 school principals, 9 heads of department and 9 teachers who will participate in the interviews. Questionnaires will be administered to 675 learners of which 75 will be randomly selected from each school and 25 learners will be randomly selected from each grade level. Permission to conduct the study will be sought from the Vhembe district office. Participants of the study will remain anonymous. Atlas-ti will be used to analyse qualitative data and SPSS version 22 will be employed to analyse quantitative data. Trustworthiness seeks to establish the credibility of the research. This study will use multi-methods of both qualitative (interviews) and quantitative (questionnaires). Data presented will indicate the causes of poor performance in geometry at grades 10-12. The result of this study will describe how learners at grades 10-12 can improve their performance in geometry. 

**Keywords:** mathematics, geometry, teaching, learning, learner performance

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**The Challenges And Coping Strategies Of Child–Headed Households At Mkhuhlu. In Mpumalanga**

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Child-headed households, challenges, support, coping strategies. This qualitative study explored the challenges and coping strategies of child headed households at mkhuhlu in mpumalanga. There are many challenges that are facing children that are residing in child headed households such as financial distress and poverty. These children are also vulnerable to all forms of exploitations such as prostitution and criminal activities in order to support their siblings. Some of these children turn to crime because they lack support from their relatives and the community. The study aimed to finding out the challenges that are faced by children living in child headed households regarding the support and services that that they receive from the community, social workers, relatives and the government. Ten participants were purposefully selected for participation in the study. Semi-structured interviews were used wherein an interview guide was used to collect data. Data were analysed by means of thematic content analysis. The results indicated that children who live in child headed households do not receive enough support as a result, they turn to domestic work, crime and prostitution in order to support themselves.

**Keywords:** n/a

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**Measuring Metacognitive Levels Of Walter Sisulu University Students, South Africa.**

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Metacognitive skills are an important role player in teaching and learning as they help both the teacher/lecturer and student to regulate themselves with regards to the role they perform. The purpose of this study was to assess the metacognitive skills of Walter Sisulu University (WSU) students and to draw implications for learning and teaching in the university. The researchers employed quantitative
research methods. A survey design was used and the population was Walter Sisulu University students. Data was collected by making use of survey metacognitive awareness inventory (mai) questionnaires which were administered to the first year students who were gathered in a lecture hall. Data is being analysed statistically to determine variations of metacognitive items relating to individual respondent. Results, findings and conclusions will be available and ready for presentation before the conference date (2 september 2015). **Keywords:** learning-teaching; metacognition; metacognitive knowledge; cognition; control of cognition; self-awareness; self-regulation; planning; monitoring;

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**Lack of Parental Involvement and Its Effects on the Learner’s Academic Achievement of Grade 12 Learners in one of the Senior Secondary Schools, In the Mqanduli Education District.**

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This study investigated lack of parental involvement and its effects on the learner’s academic achievement of grade 12 learners in one of the senior secondary schools, in the mqanduli education district. The subjects in the study included a group of five grade 12 learners, five parents and five teachers, all selected randomly, using systematic sampling. Despite the government’s pressure to involve all stakeholders in the education system towards the attainment of quality education, there is still a challenge of parents not playing an active role in the education of their children. Action research was employed in order to interact very closely with the subjects studied, for the purpose of getting to understand their perceptions, feelings, thoughts and interpretations of the situation under study. Semi –structured interviews were used to extend data gathered through participant observation and from the analysis of documents. The results obtained indicated that the school and the parents were not living in the same world. Neither the parents knew what happened inside the school classroom, nor did the teachers understand how conditions were at their learner’s homes. There was a clear indication from the parents on the lack of communication from the school and minimal involvement in school activities and planning. The school could not afford parents equal responsibility in their children’s education and as such, parents were not aware of their own right to be informed about their children’s learning activities and progress. The teachers, on the other hand, were not aware that it remains their responsibility to create opportunities that would promote parental involvement in the school. Teachers felt that there was nothing designed by the government to promote parental involvement in both the school activities and in the learning activities. The findings further revealed that most of the learners were staying by themselves, thus, faced with challenges of being “adults”. Some of them were parents themselves, having their own children who stayed with their grandparents while the parent (learner) was at school. In such cases, the grandparents found it difficult to avail themselves when required by the school. Some learners reflected that they had estranged relations with their parents because of the social child grant that they were receiving, which made them thought they did not need their parents support at times. These estranged relations extended to their school life as well.

**Keywords:** n/a

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**Pedagogical Content Knowledge (PCK) As Fundamental Aspect In The Teaching Of Reading In Grade 1 Classrooms.**

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Walter Sisulu University  
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This contextual paper emerges from the larger study focusing on investigating isiXhosa reading teaching practices in grade 1 classrooms. It attempts to present an extensive understanding of pedagogical content knowledge (pck) that foundation phase teachers are expected to be acquainted with in order to teach reading effectively, through reviewing literature. The aforesaid teachers are expected to acquire the reading teaching skills during their training in higher education institutions. During data collection, the researcher observed that teachers are not teaching reading in a satiating manner. Teachers might be mystified with what is expected of them when teaching reading especially in fp classrooms. A number of authors assert that weaknesses in teachers’ pck and classroom practice do limit the learners’ progress. Pck according to cochrans, king and deruiter (1991:6) is the “form of knowledge that makes teachers teachers”. Reading competence is regarded as one of the most vital competencies for individual and society at large therefore it requires a knowledgeable one who will teach it effectively. However, reading is currently considered as the biggest challenge facing South African learners. Out of the different language groups that were tested in previous years internationally and nationally, isiXhosa-speaking learners achieved the lowest levels in reading. A variety of contributory factors for this challenging state of affairs have been identified by various researchers. Lack of pck is amongst the most contributing factors that have been identified. This paper therefore will escalate teachers’ knowledge skills appropriate to the teaching of reading and their role to play in the improvement of reading skills in the fp classrooms.

**Keywords:** literacy, reading, teaching reading, pck, reading teaching approaches, higher education institutions, foundation phase.

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**Factors Causing Decline in English Proficiency in the Junior Secondary Schools of the Qumbu Education District.**

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The purpose of this study was to find out whether factors such as the learners’ learning styles, their cultural backgrounds, instructional approaches and strategies used by teachers and the lack of exposure to relevant resources had an influence on the declining English proficiency among learners. The researcher had a concern about the learners’ declining performance in English. The idea of carrying out this study became necessary as English is a compulsory first additional language used to teach most of the subjects offered. One therefore, has to master the use of English to a certain extent so as to be a successful scholar. The sample consisted of 20 English senior phase teachers who were randomly selected from schools around the Qumbu education district. Data were collected through the use of questionnaires focusing on learners’ learning styles, cultural backgrounds, instructional approaches and strategies used by teachers and also the lack of exposure to relevant literature. The data were analyzed and interpreted statistically. The findings revealed that geographical locations of the selected schools for the research study, limited exposure to English-related resources, teaching and learning approaches, and knowledge acquisition strategies employed by teachers and learners contribute to the decline in English proficiency. If these could be attended to effectively, English proficiency could improve. In conclusion, recommendations have been made, both for action and possible further research.

**Keywords:** English proficiency, instructional approaches, learning styles, declining performance, strategies, resources.

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The Impact of Teacher Absenteeism on Learner Performance in the Qumbu Education District.
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The purpose of this study was to investigate the impact of teacher absenteeism on learner performance in selected primary schools in the qumbu education district. This study used qualitative approach with a case study design. The population of the study comprised all 223 public primary schools in the district. Purposeful sampling strategy was used to select 3 school management team members, 3 teachers who regularly attended school and 3 teachers who did not attend school regularly. Findings revealed the following: there is evidence of teacher absenteeism in schools, teacher absenteeism has an impact on learner performance and finally there are collaborative strategies used by teachers and the school management teams in reducing the impact of teacher absenteeism. The researcher made some recommendations, inter alia: the department of basic education must implement an efficient biometric system to monitor teacher absenteeism in schools as part of ensuring accountability in the system. School management teams also need to make the school environment conducive for teachers. Teachers must also be encouraged to make personal contact with their principals to report absences. School management teams should encourage teachers to design lesson plans at the beginning of the year that review basic grade-appropriate material which can be carried out by any substitute teacher. Keywords: teacher absenteeism, learner performance, conducive environment, impact accountability, collaborative strategies.

The influence of biographical characteristics on the role of academic middle managers in curriculum change in private higher education in Botswana.
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This study examined the influence of biographic characteristics on the role of academic middle managers (AMMS) in the planning and implementation of curriculum change in private higher education (phe) in Botswana. Past and current studies on the influence of biographic characteristics show conflicting findings on how biographic characteristics affect a manager’s role during the period of change. One group of authorities shows that biographic characteristics have no influence on AMM role during a change process while another group also shows that they have a significant influence on AMM role. Results of the study showed that overall, biographic characteristics which include level of education, years of experience and gender have an influence on the way AMMS enact their roles during the planning and implementation of curriculum change while age and size of the department have no influence.

Keywords: biographic characteristics, curriculum change, academic middle manager, role, age, gender, experience, department size, educational level.

The development of African music and heritage archIVe at WSU.
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The study focuses on the collection of the sound recordings of the African popular artists and choral music composers before they are all lost. Acknowledging the abundance of their sound recordings and their worthlessness in various homes and in broadcast stations, the project undertook the initiative to digitize and capture audio sound recordings from lps (33 rpm), singles (45 rpm) and 78 rpm into digital audio tape disks and cds respectively. The article concentrates on how the project was conducted and its challenges. It also looks into potential beneficiaries and possible growth into a functioning repository and computer music laboratory

**Keywords:** audio sound, digitize, rpm, digital audio tape disks, repository

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**Genre and garb in African dances: a medium to communicate social concerns.**

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Outfit and the style of performance often convey messages from the opposite sex without verbal expression. This study is intended to advance arguments behind the dance genre for adult women, with their backs-facing-audience technique and their attire full of decorations on their backs. Outcomes in this research emanate from the field work conducted amongst African women of the ama-xhosa people living in the rural areas in the Eastern Cape, South Africa. The qualitative methodology applied included a stratified random sampling approach.

**Keywords:** genre, medium, backs-facing audience technique

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**Prospects and constrains of integrating e-learning at a rural based university.**

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E-learning is one of the most recently developed forms of technological innovations to education in south and beyond. This often involves both out-of-classroom and in-classroom learning using modern technology namely computer-based training (cbt), internet-based training (ibt) or web-based training (wbt). Against this background, content is delivered via the internet, intranet/extranet, audio or video tape, satellite tv, and cd-rom; which might range from self-paced or instructor-led. This paper therefore, explores prospects and constrains of integrating e-learning in the rural based institutions of higher learning, using university of Venda as a test case. The overall position for this study is that the university of Venda despite its location in the rural sphere needs to upscale and integrate e-learning as part of its teaching and learning strategy. This is based on the position that most universities in South Africa are integrating e-learning as part of teaching pedagogy. Theoretically, the study utilises insights from connectivism theory of learning that advances the position that knowledge is collaboratively constructed and that connectivity is the medium of knowledge transfer. Methodologically, the study utilises interviews for data gathering and an inductive qualitative analysis for data processing. It is the argument of this study that the university of Venda should put in place structures and mechanisms to support e-learning, if ever the university is to be a regional hub for knowledge production and dissemination.

**Keywords:** e-learning, internet-based learning, teaching and learning and university of Venda.

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Response Of Soil-Surface Dwelling Invertebrates To Alien Invasive And Indigenous Plant Cover In King Sabata Dalindyebo (Ksd) Local Municipality, Eastern Cape, South Africa.

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The soil-surface dwelling invertebrate assemblage of four sites (habitat patches) in luchaba nature reserve was assessed using pitfall traps. A total of 335 specimens in three phyla (arthropoda, annelida and mollusca) were sampled. Of the nine arthropod orders recorded, four were identified to seven families and ten species while five orders and two phyla (annelida and mollusca) were separated into 15 morpho-species. The eucalypt site supported fewer taxa compared to indigenous acacia and grassland patches while the mixed alien patch attracted the highest numbers of invertebrate families, species and individuals. Although species composition across sites was not significantly different (p>0.05), specimen counts showed significant differences (p

Keywords: n/a

The Extent Of Learner Performance As A Measure Of Leadership Ability: A Case Study.

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A case study was conducted to investigate the extent of learner performance as a measure of leadership ability in selected independent senior secondary schools in Mthatha district in the Eastern Cape province of South Africa. The relationship between learners’ performance and leadership ability has been debated for a long time in organisations. It is widely believed that good educational leaders are those found in high performing schools and weak ones are found in low performing schools. The researcher, therefore, sought to establish the extent of learner performance as a measure of leadership ability. This study explored the question: to what extent is learner performance a measure of leadership ability? Both qualitative and quantitative modes of enquiry, also referred to as the mixed model approach were used. Questionnaires were administered to 50 learners and 25 teachers and 10 interviews were conducted with 5 principals and 5 board members of both high and low performing schools. The study findings were indicative of the fact that the failure of some principals to plan together with learners could be responsible for learners’ poor performance as the principals were not willing to adopt or embrace learners' suggestions. Some principals’ insistence on using the punishment and reward system produced required results as the learners who were not intrinsically motivated to learn did so because of the employment of some undesirable measures which compelled learners to work so as to avoid the punishment. The move was implemented to ensure that quality passes are produced by the learners. Through the close control of teachers by the principals in ensuring that they covered the syllabi before final exams were written close supervision of subordinates to ensure that learners passed was carried out. The production of good results can be linked to the thorough monitoring of learners by principals therefore, learner performance, can, to a larger extent, be said to be a measure of leadership ability. It is recommended that principals liaise with learners on issues that directly affect them, for example, subject choices as this will bring about their ownership of the programme. Communication and building a strong relationship with learners are some of the components where learner performance becomes a measure of leadership ability. It is recommended that principals foster working together with learners to produce conducive environment which enables learners to produce quality passes since the cooperation gives them the desire to continuously improve their performance.
An Effectiveness Of Work Integrated Learning Amongst Hospitality Management Students At Walter Sisulu University.

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Work integrated learning (wil) is a co-operative education learning model that consists of an academic and experiential learning component. The concept of work integrated learning is based on the application of theory and knowledge obtained in the classroom and apply it in the work environment. Work integrated learning formally recognized as an education strategy and academic program that is part of the integrated curriculum in hospitality at WSU. The primary aim of wil is to prepare a student for a particular vocation or profession and is based on a positive relationship between a learning institution, employer or industry and student. Experiential learning is a component of work integrated learning or co-operative education and consists of interactions such as formal training module, vocational learning and development of attitudes such as responsible citizenship and professional ethics. The background of the academic curriculum provide a learning experience adequate to meet demands specified in learning outcomes of teaching programmes and qualifications. The purpose of this paper is to assess an effectiveness of wil amongst hospitality management students in WSU.

Keywords: work integrated learning, hospitality, institution, employer, curriculum, teaching and programmes

Challenges Faced By Teachers in Applying Reading Strategies When Teaching Reading in The Foundation Phase In The Mthatha District.

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This paper sought to investigate challenges faced by teachers in applying reading strategies when teaching reading in the foundation phase in the Mthatha district in South Africa. This study was conducted at gaduka, dikishe, gobizizwe and ngangenyathi junior secondary schools. The method used in this study involved a qualitative approach. The study addressed the following research questions: what strategies are used by you in the foundation phase? What type of challenges are faced by teachers? To what extent are educators trained to teach reading in the foundation phase?, does lack of resources affect the performance of learners?, to what extent does the use of a second language affect the performance of foundation phase learners? Do you receive enough support from the department of education to teach reading? The study is a multiple-case study and data were collected through individual interviews and focus group interviews (sixteen teachers were interviewed).Content analysis guided the data analysis through themes derived from the subsidiary questions. A pilot study was conducted in two junior secondary schools for the purpose of validity and reliability. The study’s findings revealed that: different reading strategies are used by teachers in the foundation phase, reading challenges such as teacher training in the teaching of reading needs intervention by the department of education, insufficient allocation of time, multilingualism, teacher competence, lack of motivation and parental involvement in relation to learner performance in reading would go a long way to solving some problems, lack of resources hinders the reading ability of learners, the use of home language as a medium of instruction in teaching reading and support by the department of education to foundation phase teachers to teach reading. The researcher has recommended that teachers should urge to teach reading strategies to the learners in a way that would benefit learners. The use of reading
strategies need more attention. Libraries should be built in these schools to enable learners to develop a culture of reading. Education development officers, subject advisors, lead teachers and parents should work together to improve the reading ability of foundation phase learners.

Keywords: reading strategies, strategies, reading, reading challenges

Are Primary School Teachers’ Competent Enough To Teach English as a Second Language.

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The present study was designed to investigate the teacher competency in teaching English as a second language in primary schools in the district of Libode mega in the Eastern Cape province of South Africa. The literature review showed that the teaching style of teachers might affect the learner performance. In the Eastern Cape province learners in primary schools continue due to lack of communication skills as a result the Libode mega district is amongst the districts that are underperforming; more especially in annual national assessment. Therefore it was important for the researcher to identify the teacher competency and how it affects the learner performance. The study employed qualitative research methodology in which three (3) primary schools were selected; three (3) learners were randomly selected from each school which makes the total of eighteen (18) learners and 12 educators were selected. Data was collected through the use of questionnaire. Some people are on the opinion that poor performance of learners in the general education training band (get) might be the reason for the poor results in grade 12 especially in esl. During management meetings and workshops high school teachers complain about poor performance of learners from the get. Such complaints dwell more in reading and writing skills. It is that complaint of teachers from the further education and training band (fet) about the poor performance of learners from the get band that prompted me to embark on this study. Despite numerous workshops that have been conducted to empower teachers, teacher competency and tck in esl remain a problem. To answer and understand the issues or questions raised in the statement of the problem and in the background above, the following main research question was posed: what is the competency of primary school teachers in teaching of English as second language in Libode district of education? Introduction this study sort to establish teacher competency in teaching English as a second language in the general education and training (get) band in the Libode district of education. The significance of teacher content knowledge cannot be over emphasised in any subject, hence it determines the teacher competency during teaching and learning processes. This chapter will discuss the following: introduction, background, statement of the problem, theoretical, conceptual framework, main and subsidiary research questions, rationale, significance, delimitations, limitations, acronyms that have been used in the study report and the chapters outline for the entire study. The Eastern Cape is also one of the provinces that performed poorly in the matriculation examinations especially in the 2008 national curriculum statement examination (minister of education report, 2008). Since the study focused on English as a second language (esl) teacher competency with an overview on the teacher’s content knowledge (tck), teaching skills for esl was significant as perrott (1987, p. 7) states: in acquiring teaching skills is to obtain knowledge of results, which involves evaluation. Teaching skills are not acquired without study and diligent practice.

Keywords: content. Knowledge. Competancy. Performance. Primary school.

Efficacy of Teacher Development Programmes: A Scrutiny of the Advanced Certificate in Education.

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Although the qualifications of the teaching force in South Africa (SA) have improved during the past two decades (1994-2014), most teacher competence review reports indicate that the majority of teachers have not yet been sufficiently equipped to meet the education needs of a growing democracy in the twenty-first century. Teachers in SA lack the various kinds of knowledge required in a professional setting like a school in order to impact on learning and to influence change. Different kinds of knowledge are at play for example, knowledge of the subject matter (content knowledge) and knowledge of teaching (pedagogy). Despite the fact that the government took numerous efforts to ensure greater reskilling and upskilling of teachers over some years via policy interventions such as norms and standards for educators (2000), there are still deep-seated challenges that hamper interventions from working effectively. Therefore, the qualitative case study has used one institution of higher learning as the research site to explore the efficacy of teacher development programmes. Convenience sampling/available sampling which is a universal attribute of non-probability sampling procedure was used to select 03 university faculty administrators. I collected data using face-to-face interviews. Data were analysed using natural meaning units which represented specific thoughts, feelings or perceptions as expressed by the participants. The overall findings indicated that the institutions providing the ace programme failed to screen prospective ace students before admission to ensure that they all registered for subjects they taught in their schools. The paper suggests that institutions of higher learning must scrutinise prospective ace students to ensure that they register for the subjects they teach. This exercise could improve the quality of teacher development programs and learner attainment eventually.

**Keywords:** teacher development program, teacher education, content knowledge, pedagogy, skills.

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### The Transformation Of Knowledge Through Self-Learning.

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**Background:** self-directed learning: the process of learning in which the learner assumes primary responsibility for planning, implementing and evaluating a learning project. The learner chooses what to learn, how to learn and also decides when to continue and when to end the learning project.1 there are several important methodological issues related to evaluating students’ understanding (and evaluating any type of learning) 2. Howard gardner states that students possess different kinds of minds and therefore learn, remember, perform, and understand in different ways,” (howard gardner, 1991).3. Lecturing should be the mostly used tool to transfer the knowledge in the world. However this tradition may have change these days. Self-learning is one them. Due to the availability of resources and technology self-directed learning are welcomed by many learners. It actually provide more opportunity for those who could not attend the classes physically or want to pursue their carrier as a distance learner. Athenatuition.wordpress.com aim: to study the effectiveness of self-learning in knowledge transformation prior to a training course. Method: pre-test-post-test design, a quasi-experimental design (pre and post course test questionnaires). Results: in march 2015 a total number of 36 final year undergraduate students from bachelor of medical clinical practice, degree clinical associate program in faculty of health sciences at Walter Sisulu University were included for the study purpose. The student was given a neonatal resuscitation guide book to study one week before the classwork. At the day of the first class they were asked to write a pre-test of multiple choice questions. After the test a three hours lecture with 10 minutes break in every hour, was given using power point presentation about the neonatal resuscitation course. Next day a hand to hand training of resuscitation skill was organised to the student. It was done by a family physician, who was a qualified trainer of the neonatal resuscitation training course. After the course student wrote the post course test of multiple choice questions again. An osce (objectively structured clinical examination) was organised to test the skill at the end of the classwork. The feedback of two test and osce was presented to the students.  

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Compensation Claims Of Ex-Mineworkers In Mthatha Region Of South Africa: A Long Way To Travel.

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Background the benefit examination clinic was opened in 1996 for compensation claims for ex-mineworkers of the former republic of Transkei. The author on his own started this, after feeling the need of the ex-mineworkers’ community in this region. Objective to highlight the problem of compensation of former mineworkers in the Mthatha region of South Africa. Method this is a record review descriptive study from 1997 to 2000. All the ex-mineworkers were recorded in the register who presented for compensation at benefit examination clinic. Results table 1: showing the statistics of ex-mineworkers with their compensation claims from 1997 to august 2000. Years examined re-examined compensated rip* 1997 601 ------ 9 (1.5%) 2 1998 1181 11 17 (1.4%) 2 1999 165 99 18 (11%) 3 2000 80 62 7 (9%) 0 total 2027 172 51 (2.5%) 7 *rip= rest in peace are the subjects who awarded compensation but dead before their claim was made. Conclusion it is a grossly inadequate compensation of ex-mineworkers. An average of 5.7% ex-mineworkers were only compensated over a period of 4-years. It is a matter of serious concern.

An Exploration of Factors Contributing To Poor Management Practices By School Managers.

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This study was conducted in the qumbu education district of the Eastern Cape in South Africa. It sought to explore factors contributing to poor management practices by school managers. Good management practices are crucial for effective schools and quality education. The mixed-methods research was used. For quantitative approach a sample of 200 respondents from 40 selected schools was randomly selected which included and consisted of school managers, chairpersons of school governing body and teachers. For qualitative approach 15 (10 for document analysis and 5 for interviews) schools participated which were purposively selected from 40 schools used in quantitative approach. Pragmatic paradigm was used in line with the mixed-methods which was a selected research design. Quantitative data were analyzed through SPSS and qualitative data analyzed thematically. The study revealed that poor school management practices encompass both teachers’ and learners’ performance. One of the recommendations is promotion of a newly developed leadership approach which the researcher called quad-lateral leadership approach mcengwa (qula-mcengwa). Qula-mcengwa is a developmental.
An Exploration Of Factors Contributing To Poor Management Practices By School Managers.

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This study was conducted in the qumbu education district of the Eastern Cape in South Africa. It sought to explore factors contributing to poor management practices by school managers. Good management practices are crucial for effective schools and quality education. The mixed-methods research was used. For quantitative approach a sample of 200 respondents from 40 selected schools was randomly selected which included and consisted of school managers, chairpersons of school governing body and teachers. For qualitative approach 15 (10 for document analysis and 5 for interviews) schools participated which were purposively selected from 40 schools used in quantitative approach. Pragmatic paradigm was used in line with the mixed-methods which was a selected research design. Quantitative data were analyzed through SPSS and qualitative data analyzed thematically. The study revealed that poor school management practices encompass both teachers’ and learners’ performance. One of the recommendations is promotion of a newly developed leadership approach which the researcher called quad-lateral leadership approach mcengwa (qula-mcengwa). Qula-mcengwa is a developmental approach which has four basic pillars, namely, the teachers, learners and district-based structures with the school manager and sgb in the centre.

Keywords: absenteeism, punctuality, nepotism, discipline, support

An assessment of the environmental campus sustainable practices: a case of Walter Sisulu campuses (Mthatha, butter worth, buffalo city and Queenstown.

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Environmental sustainability has become increasingly important as we witness more extreme weather changes, global warming and environmental degradation. Universities are the learning grounds for current and future leaders and for that reason they need to play a leading role on issues concerning sustainability. They have the potential to offer innovative solutions to some of our challenges through research activities (cole, l 2003). An assessment of walter Sisulu University’s sustainable practices is an attempt to discover how this institute of higher learning in the Eastern Cape is doing in order to maintain a sustainable campus so that it can be one of the champions of sustainable practices together with more than 400 other universities in over 50 countries worldwide which signed the talloures declaration in 1990 with the aim of committing their campuses to sustainability. The following sustainable assessment tools are used; sustainable assessment questionnaire (saq), auditing instrument for sustainability in higher education (aishe) and the graphical assessment for sustainability in higher education (gasu).the unit based sustainable assessment tool (usat) which focuses on African universities is also applied.

Keywords: sustainability, sustainable campus, talloures declaration, saq, aishe, gasu, usat

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South African policies that regulate teaching practice have been consistently reviewed, aimed at improving the quality of teaching practice at higher education institutions and to assist student teachers in their exciting journey of professional development. Policy development as a focus for this paper spans the visionary policy document known as “norms and standards for educators of 2000” which was replaced by the “minimum requirements for teacher education qualifications”. In keeping with the changing South African landscape and international trends on teacher education, policies on teaching practice in first and third world countries offer important perspectives on practices in these countries. These examples are used to evoke comparisons that will provide theoretical frameworks to ensure a minimum level of standardization with the design and implementation of learning programmes for teaching practice in South Africa. This paper thus examines teaching practice policies in both South Africa and other countries, towards the aim of a providing input into a theoretical framework towards best practice in teaching practice. Teaching practice policy and its implementation is considered in two west African countries (cameroon and nigeria), finland and the united states of america.

**Keywords:** teaching practice, policy, South Africa, nigeria, cameroon, finland, united states of america

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Investigation into the causes of Poor Performance of Grade 9 Learners in Algebra: A Case Study of Two Schools in Mthatha District.

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Performance in mathematics is a major concern for the country since it is very important in our daily life as it deals with a real life situation in our daily activities. Algebra is one of the topics that learners perform poorly. The aim of this research is to investigate the factors that cause grade 9 learners to perform poorly in algebra. 40 learners selected from two junior secondary schools in Mthatha district formed the sample of the study. The performance of the learners in the annual national assessment (ana) was assessed. It was pertinent to investigate whether the attitude, peer influence, socio-economic background, teacher motivation, study environment or gender of the learner can contribute to the performance in algebra. A few teachers were also interviewed. The data were analysed using microsoft excel 2013 and the result was interpreted using graphs. The study revealed that, only gender of the learner which does not contribute to a learner’s performance in algebra. Moreover, the attitude, peer influence, study environment, teacher encouragement and socio-economic background of the learners can all contribute the performance in algebra. Based on this results, some recommendations are made.

**Keywords:** ana, performance in algebra, factors contributing to performance

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Teachers’ Understanding Of Creative Writing As Dictated By Policy Documents Governing The Teaching Of English In South African Schools

**Rebecca Manning**

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Creative writing is one of the key aspects that can be considered for effective education. For a people to transcend to its educational ideology, creative writing is fundamental. This is because, as a course, it provides opportunities for students to refine their creative writing skills and thinking abilities beyond those developed in the required English language arts courses. Yet, many South African schools seem to pay less attention in this vital area of study in their educational curriculum. From a study conducted in the Eastern Cape province of South Africa, the paper investigates teachers’ understanding of creative writing in high schools as dictated by policy documents governing the teaching of English as a subject. Using the inductive and deductive methods as well as the thematic approach for analyzing data, the paper argues that the difficulty in effectively implementing policy document with regards to creative writing and many of the problems facing educators in schools are because they do not have sufficient understanding of educational concepts. As a result, education policy only becomes a reality when it is implemented at the classroom level and educators are the key players in the implementation process. The paper concludes by suggesting that it is important for educators to have an understanding of creative writing as dictated by policy documents governing its teaching in schools. Writing in English is important; the ability to read and write is a “status symbol”. Furthermore, the paper also found that educators should play an active role in the interpretation and understanding of creative writing as dictated by policy documents as well as selecting and filtering it.

Keywords: creative writing; teachers; policy document; english; South Africa.

Exploring The Support Provided To School Principals By Circuit Managers In The Ngcobo District In The Eastern Cape, South Africa.

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The new education dispensation brought about the 1994 democratic dispensation has brought about radical and sometimes terrible changes in management and leadership. Functioning of schools and support to principals have become a necessity to capacitate principals in the day to day running of schools to improve learner attainment. Indeed these radical changes have compelled the department of basic education to introduce comprehensive management programmes that aim at improving management of schools. However, very little has been done explore the support provided to principals. The purpose of this study is to explore the support provided to principals of schools by circuit managers (edos) in the Ngcobo education district in the Eastern Cape, South Africa. This study has explored the nature and extent of the support. This also briefly looked at challenges of principals in Ngcobo and their perceptions of the extent to which the circuit manager support them and whether such support meets of fail their needs. The point of departure is that professional support and capacity building and development is not only crucial but critical for principals who are at the centre of service delivery given the new conditions which exist in South Africa post 1994. Such condition include the fact that principals post 1994 are responsible for school nutrition, scholar transport and as well as HIV and aids which were not there prior to 1994. In effect the ideal situation would be for every a principal to be properly trained to equip him/her with management and leadership skills to enable him/her to deal with change that is part of the new South Africa the study is guided by the following main research question: what type of support do circuit managers provide to principals in the Ngcobo education district? The following related sub research questions are addressed namely; • what role do circuit managers play in schools to support principals? • Which styles of leadership do circuit managers portray to in principals under their supervision? • To what extent do circuit managers apply the batho pele principles in their dealing with principals? • What legislative prescripts govern the work of the circuit managers to support principals? • What is the outcome, if any, of circuit manager’s support to principals? Working in a post positivist research tradition, with both qualitative and quantitative research design empirical data were collected by means of interviews, document analysis, participant observation and questionnaire. Through
purposive sampling, this study involved the following participants: a one on one interview was conducted on seven circuit managers and ten selected principals while a questionnaire was administered to 90 principals. The researcher observed two meetings of circuit managers and analyses a couple of documents pertaining to the functioning of schools. Data analysis followed tech’s steps for open coding in as far as qualitative data. In quantitative data reports were generated using the statistical package for social sciences (SPSS) software, version 18. This is one of the user-friendly and convenient soft-wares for both beginners and experienced users as programmes are in built and the user only picks the analysis instructions from the window. One of the main findings of this study is that circuit managers have no clear job description. Most principals regard the support they receive from circuit managers as insufficient and they regard that as having a negative impact on the culture of teaching and learning. The other finding is that circuit managers perform their duties in an environment characterised by challenges like the scarcity of resources, shortage of staff and the vastness of the area in which the operate and that there was lack of coordination of district programmes. It was also found that although circuit managers support principals they still used traditional supervision norms like inspection, supervision and control to the total neglect of developmental aspects aligned to support. Given the findings and conclusions of this study; it is recommended that: • there is a need for the basic department of education to establish an institution to train current and aspiring principals to equip them with leadership and management skills. • South Africa needs a principal support policy that is genuinely developmental, taking into account both the professional development needs of its principals and the socio-economic context in which they operate to ensure that they develop holistically. • there is a need for the basic department of education to consider to have stringent requirements for promotion to circuit management and one such requirement should be at least two years as a principal.

Against The Odds: Quality and Academic Excellence of Mbilwi, Thengwe, Tshivhase and Epp Mhinga High Schools in the Limpopo Province of South Africa.
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There is national consensus that performance of South Africa’s education system is retrogressive, poor, weak and “lags far behind even much poorer countries.” Through the national development plan (2011), the South African government not only acknowledges the problem of poor education performance, but also presents corrective measures and a vision of South Africa’s education outlook by the year 2030. In the increasingly competitive global market economy, it is through excellence in school performance, particularly in key subjects such as mathematics, science, English and accounting that a country can hope to insure sustainability of its economic growth and development trajectory. As such, a country’s progressive improvements of school education performance have become a subject of national pride. While it is true that South Africa’s national education performance is below average by international comparisons, there are examples of alternative quality and academic excellence against the odds. This paper presents findings of systematic analysis of at least four of some of the best-performing schools in the Vhembe district of the Limpopo Province.

Factors Contributing To Stress among Primary School Teachers: A Case Study of 2 Circuits in Ngcobo District of Education.
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The survey design limited was employed in this study. A sample of 100 post level 1 teachers was involved in the study, 50 teachers for each circuit was selected. The teacher responded to questionnaires that were based on teachers stress. The findings of this study revealed that factors contributed to stress among primary school teachers are lack of learners discipline, lack of resources and lack of support from learner’s parents. It is recommended that school must develop code of conduct for learners and the department of education must provide schools with enough resources. Parents must be encouraged to be more involve in their education of their learners. When teachers experience stress, the researcher suggests self-help strategies like knowing about the phenomenon and the signs of stress in the early time, schools must form committees that deal with teachers stress, schools must invite psychologist to workshop teachers about stress, schools must encourage teachers to communicate openly about everything that has to do with their work.

**Keywords:** stress, anxiety, burnout, alarm, frustration and strain.
Institutional policy-making in large complex organizations, such as universities comes with a number of challenges. Some of these challenges emanate from the manner in universities are managed as institutions and the involvement of diverse stakeholders with varying interests. This paper sought to understand the challenges faced by a university in South Africa in formulating an institutional e-learning policy. A qualitative post-structuralist research methodology associated with case study research was used to gather data from 14 interviews held with e-learning policy makers. Findings from this case revealed that the process of formulating an e-learning policy was fraught with many challenges. The challenges varied from competing priorities at institutional level, a lack of political will and interest, personal perceptions and attitudes, policy inconsistency, conceptual imprecision, conceptual blurring and institutional turf arising from institutional mergers. This case revealed that the innovative uses of technologies in teaching have been reduced to theory rather than practice. Creating an environment that promotes the innovative uses of technology requires the commitment of multidisciplinary stakeholders in the university to ensure the alignment of policy with practice.

**Keywords:** e-learning, governance, policy, management, administration

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**Knowledge and Attitudes: Grade 10 Pupils More Likely To Fall Pregnant.**

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This paper focuses on knowledge and attitudes of grade 10 pupils about HIV/AIDS and opportunistic diseases. Worldwide people including school children are infected with HIV/AIDS and suffering from HIV/AIDS related diseases for instance, pneumonia, tuberculosis and diarrhoea. HIV/AIDS affects regret school children and their intellectual ability which may lead to, pregnancy, poor performance in their studies and dropout (HEAIDS, 2008). Therefore, it is vital that everyone including school children know about the disease. In particular, people need to know what it is, how it is transmitted, how to protect themselves from it, and how to relate to people with the disease. According to the national policy for HIV/AIDS, schools are key settings for educating children about HIV/AIDS and for halting further spread of the infection. It has been noticeable that grade 10 pupils in the rural areas around Mthatha district are particularly at risk of getting HIV. The focus is often more on grade 11 and 12 pupils, so female grade 10 pupils look for boys for attention. This resulted for the female pupils to fall pregnant. The fact that some of them are falling pregnant means they are also more vulnerable to contracting HIV. This shows little information is available for them and this paper is contributing to that body of knowledge. Prevention therefore is the most effective strategy to combat pregnancy and against the spread of HIV/AIDS in schools. Measures should be taken to remove the social, cultural and political barriers that might block access to HIV/AIDS services and programmes. The results are intended to assist pupils to develop knowledge, skills, values and positive attitudes about HIV/AIDS, to help grade 10 learners to find out more about HIV/AIDS and to attempt to bring about change in behavioural patterns of teachers and parents. The research was guided by a qualitative approach as views and feelings of pupils were important to discover. We chose purposively participants from one senior secondary school in Mthatha district. The pupils participated voluntarily with being granted by their parents. Two techniques were used to collect data for instance focus group discussions, unstructured interviews and open-ended questionnaires for in-depth understanding. The data was analysed, themes were made and categories were formed. The results showed that while some grade 10 pupils are aware of HIV/AIDS, there are others who said it does not exist. It has also been highlighted that the phenomenon of pupils having unprotected sex with older men for money, as well as pupils saying they did not have time to use condoms. It is therefore recommended that pupils need to have role models, people they can look up to. In the absence of parents, it should be teachers’ responsibility to advise the pupils and inform them about stis and HIV/AIDS in schools.

**Keywords:** HIV/AIDS, knowledge, attitude, pregnant, diseases, opportunistic diseases

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Literacy practices children experience at home: a study of two families in a rural community of the Eastern Cape Province.

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This paper explores Bourdieu’s theory of practice with its interrelated concepts; field and habitus to understand children’s everyday literacy practices as constituted by their social processes in their social space or field (home and school). Bourdieu suggests that we get socialised into a practice through habitus which is acquired informally through the experiences of social interaction by processes of imitation, repetition, role-play, and game participation. Through this process, the individuals generate action that reflect the original socialisation experiences. The use of Bourdieu’s concepts of habitus and field allows in the explanation of the literacy practices in the home field and identify the home literacy habitus and explain how this positions children in the school environment. Before children go to school, they acquire different behaviours through interactions within their social space which come to impact upon their lives and give rise to habitus. Much of what is already known about early literacy practices refers to English language learning in relatively print rich and middle class environments, and as Heath points out, ignores the value of rich oral home and community environments of some inner city and rural children. This paper focuses on preliminary insights into the literacy practices of two families in a rural isixhosa community where there is little or no print, and where orality is dominant in the home and non-school community. Through data elicited from observations of family and school literacy practices, as well as interviews with family members in two families, I examine their home literacy practices and asked how these literacy practices intersect with schooled literacy. I conclude that children engage in a variety of literacy practices at home and in the community than assumed. I recommend that schools should know more about the literacy practices that children are engaged in at home and in the community.

Keywords: early literacy, literacy practices, habitus, field

The Managerial Leadership Styles of The School Principal For School Effectiveness: A Study Of Six Secondary Schools Of The Dutywa Education District; Eastern Cape, South Africa.

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This study investigates the management roles and leadership styles of school principals for school effectiveness of the dutywa education district. The researchers observed that many secondary school principals did not involve their subordinates in their daily routine administrative duties as a result they do most duties. The researchers used qualitative research method in collecting and analysing data. The case study design and purposive sampling method were used to select (6) secondary school principals. An open ended interview-schedule was used for face-to-face in-depth interviews. Some of the findings were: democratic and participatory leadership styles were used by the school principals to achieve maximum co-operation from both experienced and beginning teachers. Laissez fair and autocratic styles of leadership appeared to be undesirable. For school principals’ effective management, they need to do proper planning, organising and scheduling of activities, assigning duties to teachers and delegating
some of their work to competent teachers. Contributing factors resulting in barriers to principals’ ineffectiveness were: failure to give proper instructions to teachers and learners, failure to effectively use of available funds in the school, failure to implement all educational programmes, lack of experience, lack of support from both the department of education and the parents, lack of resources, high staff turnover, favouritism and failure to hold teachers accountable for poor work done. Mechanisms deemed to overcome the factors leading to barriers were: making the effort to be knowledgeable about educational policies, timely responses to problems in the school, regular consultation with stakeholders, employment of sgb teachers, taking direct supervision of instructions in classrooms and endeavouring to have good relations and gaining support from the sgb and the parents. This research study has identified a number of managerial leadership styles and management roles of school principals that have contributed to school effectiveness at six secondary schools selected in the dutywa district.

**Keywords:** management roles, leadership styles, school principals, school effectiveness.

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**An evaluation of work integrated learning experiences: a case of tourism and hospitality students at Walter Sisulu University.**

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Universities can embrace work-integrated learning (wil) as an effective educational tool in preparing students for employment, however the success of such an exercise depends entirely on the full involvement of employers including government. In the context of South Africa, the adopting of wil over the last decade has received increased attention in academic circles, conversely, there is limited information that documents the successes and challenges of such a programme and gauge it with its predefined objectives. Therefore, the aim of this study was to gain a better understanding of graduate’s wil experiences. Both the qualitative and quantitative data collection techniques will be adopted for the study. Statistical tests, excel and thematic discussions was used in the analyses of data and provision of results. The main purpose of wil is to benefit the student. However major benefit from wil is to secure a job upon graduation. Previous researchers have identified students are attracted to work-integrated learning opportunities for financial and employment benefits. The main objective is to determine the coordinators role in terms of student preparedness for wil before placement. It is hoped that a better understanding of their experiences, would provide insight about how to improve possible gaps so that the intended aims of wil is met.

**Keywords:** work integrated learning, internship, co-operation education, service-learning, field experience, apprenticeship, mandatory professional practice, in-service training.

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**Disability units for prioritising support services to students with disabilities in a university setting. Nonzwakazi Beauty Makiwane**

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Although higher education institutions worldwide are gradually improving in absorbing students with disabilities in their environments, there is still a cry of lack of accessibility and availability of support services required by such students specifically in South Africa. Emphasise on the role of disability units
as the main entrance in any university to accommodate students with disabilities, for example Walter Sisulu University would enhance quality of support services and uplift standard of academic performance of such students. But firstly it is vital to explore and reveal the unhealthy conditions emanated from non-existence or poor functioning of disability units in some of the universities, for instance unclear or no relationship and interaction between the university, communities and students with disabilities. At the end students with disabilities become low-achievers and drop-outs. 20 students with disabilities in four campuses of Walter Sisulu University participated where questionnaires were administered to collect data followed by focus group interviews to fill in gaps. The study employed qualitative and quantitative research approaches, using a content analysis to analyse collected data. The author recommends prescription of quota by the department of higher education and training for students with disabilities in all South African universities; the training of academics on how to handle, communicate and assess students with disabilities in their classes. There is also a need to conduct awareness programmes in line with national government requirements; participation and capacitating of all units and stakeholders about disability issues and infuse such issues to all qualifications offered in the universities.

**Keywords:** students with disabilities, universities, disability units, handle, communicate, infuse

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**Aligning e-learning policy with practice: voices from e-learning policy stakeholders in a university in South Africa.**

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Electronic technologies have the potential to shape a sustainable future for teaching and learning in higher education that is relevant for national reconstruction and development. The full potential of using technologies to promote innovative teaching in higher education institutions has not been realized. One of the major challenges has been the disjuncture between policies at various spheres of e-learning governance in universities and the views and expectations of e-learning policy stakeholders. This paper sought to understand the challenges faced by e-learning policy stakeholders in HEI’s in South Africa in integrating the decisions, expectations, values and goals articulated in institutional policies governing the use of technologies in teaching. A qualitative post structuralist research methodology associated with case study research was used to gather data from 14 interviews held with e-learning policy stakeholders. Findings from this case revealed that e-learning stakeholders are faced with a number of challenges in integrating the purported policy on e-learning. The challenges vary from competing priorities at institutional level, a lack of political will and interest, personal perceptions and attitudes, policy inconsistency, conceptual imprecision, conceptual blurring and institutional turf arising from institutional mergers. This case revealed that the innovative uses of technologies in teaching have been reduced to theory rather than practice. Creating an environment that promotes the innovative uses of technology requires the commitment of multidisciplinary stakeholders in the university to ensure the alignment of policy with practice.

**Keywords:** e-learning, teaching and learning, governance, policy, management, administration

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Technophobia: Understanding Computer Anxiety For Teaching And Learning Of Computer Studies.
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the use of computers in the institutions of learning has become an integral part of learning. As such
the use of technology in imparting knowledge to learners in education fraternity remains one of the
most significant tools. This study sought to understand how computer anxiety known technically as
technophobia affected student performance and possible remedies for this anxiety. 152 WSU first year
students of 2014 conveniently selected participated in the study which employed a mixed method of
both quantitative and qualitative approaches. Questionnaires were used to collect quantitative data
while face-to-face interviews were employed to gather qualitative data for purposes of triangulation.
Quantitative data was analysed by employing univariate analysis and qualitative data was analysed
using content analysis. The findings revealed that both students and lecturers had negative feelings
towards computer usage such that lecturers tended to be less inclined to use computers or technology
in the lecture rooms for teaching purposes. The study also established that the anxiety experienced by
technophobes should be taken seriously and addressed since it impacted negatively on the teaching
and learning situation. The study recommends use of a form to detect or identify early computer anxiety
students and then offer counselling to those exhibiting anxiousness towards technology. It also
recommended that during curriculum design, lecturers can expand the education on ergonomics
to include computer anxiety and its impact to productive learning and work, in order to create awareness
and education on how to overcome technophobia. Keywords: technophobia, computer anxiety,
technology, teaching, learning, understanding

**Keywords:** technophobia, computer anxiety, technology, teaching, learning, understanding

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Sexual Risk-Taking Behaviour Among Married Or Cohabiting Women And Its Implication For Sexually Transmitted Infections In Mahikeng, South Africa.
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Introduction: risky sexual behaviour continues to propel sexually transmitted infections (stis) in South
Africa. However, there is dearth of research on sexual risk taking in South Africa, particularly in
mahikeng. Therefore this study was designed to examine sexual risk taking and its implication for stis
among married women in mahikeng. Methods: the study cross-examined 568 women of age 18-49
years selected using a multistage random sampling technique from the clusters carved from census
2011 enumeration areas in mahikeng. A composite sexual risk taking behaviour was generated from
two questions by assigning a value of 1 to unsafe sex practices, otherwise 0. Data analyses were
conducted using descriptive statistics, chi-square and logistic regression model. Results: the data show
that the mean ±sd age of the women was 34.5±8.0. Fifty-eight percent had good safer sex attitude.
The identified predictors of sexual risk taking were having at formal education, being a student,
acceptance of condom and perceived sex for health enhancement to be important were less likely to
engage in risky sexual activities. Those who have experienced forced sex, uncertainties about being at
risk of contracting STI and husband/partner’s has right to sex were more likely to engage risky sexual escapade. Furthermore, women who perceived sex for procreation to be important were more likely to have risky sexual intercourse. Conclusions: the study suggests that more women were able to avert risky sex. However, there were socio-cultural and individual factors that exposed women to risky sexual behaviour. Husband/partners aggravated women’s sexual risk taking behaviour. This may have some implications in the spread of sexually transmitted infections in marital relationship. It appeals for more work at individual and couple level to allay women’s vulnerability to sexual risk taking. Intervention should focus on improving women’s educational status and women’s awareness on their basic sexual rights. There is a need to emphasise that women’s sexual health takes precedence over childbearing in Mahikeng.

Keywords: mafikeng, marital relationships, safer sex decision, STIs prevention, sexual behaviour.

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Interrogating the role academic developer’s play in improving efficiency for professional development amongst academics in a rural based University.

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The paper aims to interrogate the strategic positioning of academic developers in improving efficiency through professional development initiatives in a rural based university. The notion of professional development for improving efficiency is explained and distinctions sketched. Through tracing a history of academic development in South Africa, the researcher further discusses the significance of professional development in improving efficiency amongst academics in a rural based university. The paper discusses challenges that academic developers encounter in their role of improving efficiency in a higher education. The researcher further recommends ways in which academic developers should position themselves in ensuring improved efficiency through professional development initiatives in a rural-based university.

Keywords: academic development. Professional development. Rural university

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Implementation of e-learning as a means of enhancing education in schools in South Africa: Case Study Mthatha Christian School.

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With the advancement of technologies around the world and new knowledge which is being generated every day, most academic institutions now employ blended learning as a way of delivering content. Blended learning (b-learning) is a combination of traditional learning and e-learning, allowing learners to access new knowledge anytime, anywhere with their pace and with no constraints. b-learning has been revealed as the most popular pedagogical concepts since 2000. Mthatha Christian School recently introduced the use of Samsung Galaxy Note 10.1 smartphone at their school so there is need to introduce a learning management system (LMS), which will be an integral support to their Samsung application, it will enable teachers to analyze e-learning log data with learners’ academic achievements. This research is going to look at how to implement an e-learning system at Mthatha Christian School.
and test the positive contribution of the installed system against the traditional approach of teaching and learning.

**Keywords:** blended learning, e-learning, traditional learning, smartphone, academic achievements and implementation

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**Exploring first additional English language rural teachers’ pedagogical approaches in grades 10 and 11 English lessons.**

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Pedagogy is often used synonymously with teaching, prescribing it to be an element of what teachers do in a classroom. Perceived this way underplays the intricacy of pedagogy as a catalyst in the relationship between learning and teaching. Advancing the process of teaching from merely doing, to a practice of reflective process, deconstruction and reconstruction of knowledge is important. Thus, understanding teachers’ pedagogical choices when teaching English might present information regarding the conceptions that teachers hold about their subject matter. The analysis of teachers’ pedagogical approaches when teaching English is important to understand the reason for pedagogical choices. In particular that little research has been done to gain an insight of rural first additional English language teachers’ pedagogical approaches in grades 10 and 11 English lessons. This paper presents data from the m. Dissertation research, which explores first additional English language teachers’ conceptions of learning and teaching and the pedagogical approaches in rural mpumalanga secondary schools. The study is qualitative and collected data using four non-participatory classroom observations and semi-structured interviews with eight teachers in grades 10 and 11. The data is analysed using a general qualitative analysis approach, through finding patterns and themes from the two research methods and generating meaning and correlations between the participants’ responses, in order to draw inferences from these responses to answer the research question.

**Keywords:** rural, teachers, pedagogy, english, conceptions

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**On the art of questioning: A case study of two high risk subjects in one programme offering at a developmental comprehensive university.**

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in high risk subjects, perhaps some introspection is warranted regarding the art of questioning for effective measurement of learning outputs and outcomes. Literature on performance assessments indicate desire for measuring specific learning outputs (correct responses) concomitantly reflecting acquired competencies post programme delivery. Poor question design can be as much damaging to assessment results as student ill-preparedness. Thus, in setting final assessments, critically conceived questions must be set to aid effective measurement of key learning outputs and outcomes. In view of the foregoing, this study aimed at examining the questioning styles and techniques used in two key high risk subjects and providing a platform for a further research on the likely association with the quantum and quality of examination passes. Three most recent previous examination papers for each subject were purposively drawn from all papers in these subjects since the merger. A combined
quantitative-qualitative design was employed with content analysis-hermeneutics approach used to analyse questioning-styles and techniques for elicitation of appropriate responses from any average student while quantitative analysis focused on summary statistics of command words. The study picked up critical issues in examination setting with potential impact on examination results and remedial measures are recommended and could be adopted by management as part of the developmental agenda and specifically by the centre for learning and teaching development for targeted intervention. Broader research is recommended on questioning styles and techniques to include other subject areas to which results of current case study may not be generalizable.

**Keywords:** art, case study, content analysis, developmental university, hermeneutics, high risk subject, programme offering, questioning

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**Factors Affecting Success Of National Diploma In Accountancy Students At Walter Sisulu University, Ibika Campus.**

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Low throughput rates in South African universities is a phenomenon that higher education authorities have been grappling with for a long time. This challenge is more prevalent in accounting and science related programs. In pursuit of increased throughput rates, this paper investigates the factors that impact on performance of students. The purpose of the investigation is twofold: it aims, firstly, to suggest necessary university interventions to improve student performance; and secondly; to inform university authorities on admission requirements as well as informing basic and high school education authorities on different ways of improving learner performance. For this paper, successful students are those who graduate within the minimum required time whilst unsuccessful students are those unable to complete the qualification within the minimum time. The study analysis is based on data to be obtained from the student administration section for the national diploma (nd) students enrolled between 2009 and 2012 academic years. To ascertain the relationship between identified factors and student performance, the study will use SPSS version 20. It is expected that the subjects that students did at high school, the status and location of the school as well as their age and gender to have a negative impact on their performance. These factors are likely to affect the performance in different subjects as well as the time taken to complete their studies.

**Keywords:** throughput; performance; success; accounting education; national diploma; higher education

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**Presenting a biometric attendance system for Walter Sisulu University.**

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Research has proved that there is a high correlation between school attendance and academic performance and success, while on the other hand absence from classes is often the greatest single
cause of poor performance and achievement (Kindberg, 2006). Walter Sisulu University takes seriously the issues pertaining to class attendance as highlighted in its policy document entitled, “guidelines to control and monitor the attendance of scheduled classes by academic staff students” (www.WSU.ac.za/.../guidelines). The document states that, “it is compulsory for the students to attend lectures (classes) and the lecturers are required to keep the attendance records”, hence the need for an effective automated system to address the problem. With the rise of biometric technologies, many institutions are adopting the use of biometrics in authentication. Biometric has also been used together with soft metrics (username, password) in the authentication process to improve user identification, this use of multiple identity metrics together in authentication is known as multi-factor authentication (MFA). This paper focuses on the study, analysis and design of biometric attendance system and how it can be used to enforce attendance regulations at higher learning institutions in general and Walter Sisulu University in particular.

Keywords: biometric, attendance, authentication, identification, automated, system, institutions, metrics

Pluralistic tendencies in healing: healing abantu illness in the contemporary South Africa.

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Beliefs about health, as well as what makes people ill, are strongly influenced by culture. Beliefs tend to guide people as far as which healing approach they should apply. Hence, the focus of the study was more on the holistic healing approach to understanding abantu illness. The research embraced attributional theory which recognises that certain illnesses are attributed to spiritual and social causes rather than biomedical causes. The southern nguni’s recognition of ukuhanjwa illness, as one of the examples of abantu illnesses, signals entry into the body by ‘familiars’. By exploring the specific healing methods of the southern nguni, it became clear that causal link is socially constructed between the illness and the familiars. Issues explored included conceptualisation of ukuhanjwa illness; healing of ukuhanjwa illness as a cultural phenomenon; the source of healing power in the preferred healing method; social construction of authenticity in the efficacy of the healing methods; and the continued use of the preferred healing methods despite the evolution of biomedical healing methods. The ethnographic study took place in the OR Tambo district municipality (ORTDM) in the Eastern Cape, South Africa. Data was collected using qualitative and ethnographic research methods focusing on in-depth interviews, focus group discussions and observations amongst a sample group of 50 participants.

Keywords: illness, beliefs, conceptualization, attributional theory, healing methods

Challenges Teachers Encounter in Diverse Classes in East London, South African.

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The aim of this paper was to explore the challenges teachers’ encounter in diverse classes in East London, South Africa as they attempt to implore effective and efficient instructional strategies. A classroom of diverse learners with diverse language backgrounds can be a challenge for English teachers. As these learners come from different backgrounds with a range of academic and language abilities. Teachers struggle to understand the many backgrounds and abilities of these learners in their classrooms. A qualitative face-to-face, semi-structured individual interview was conducted to provide in-depth perspectives on the challenges teachers’ encounter in diverse classes in South African. A structured observation schedule was also used to collect information on the teacher practice in diverse classrooms. To establish the validity and reliability of the research instruments, a pilot study was conducted. The data from the investigation revealed some challenges teachers encounter in diverse classrooms. The most salient recurring findings include: cross-cultural and communication challenges, lack of adequate resources, and teachers’ lack of experience. In view of these challenges, there is the need for teachers to be prepared to take on difficult tasks that require continuous critical thought, action, and rethinking both individually, collaboratively with other teachers, and with the families and members of the communities in which they teach key words: instructional strategies, backgrounds, abilities, cross-cultural and diverse classes.

**Keywords:** instructional strategies, backgrounds, abilities, cross-cultural and diverse classes

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**Effects of the attributes of school management teams on the management of quality education: towards school effectiveness.**

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The study was part of a larger study which sought to assess the management of the quality education in South African schools. A mixed methods descriptive research design was adopted. The study elicited quantitative information from 60 school management team members and qualitative information from 10 school managers who were randomly sampled from the 20 participating schools. Reliability of the questionnaire was determined by chronbach’s alpha coefficient and a pilot study was conducted to ensure validity. Quantitative data were analysed with the aid of the SPSS version 22 and qualitative data were analysed through content analysis. Quantitative data presentation took the form of both descriptive and inferential statistics. The study found that school management teams were aware that there were national and provincial legislation mandates that guide the management of quality education but were of the view that schools did not utilise such mandates to guide the provision and management of quality education. Smts also viewed schools as having clear vision and mission statements in place but that neither were displayed for all to see nor were they well known to and supported by the internal school stakeholders, thus they were not implemented. Furthermore, factors that promote high-quality education were largely absent in schools. It also emerged that respondents viewed performance measurement and management and holding smts accountable for poor school performance as imperative measures for the provision and management of quality education. Recommendations were made with a view to improving the management of the quality of education in schools.

**Keywords:** quality of education. Smts. South African schools.

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**Comparative Analysis Of Learners’ Views Of The Selection Criteria For Prefecthood And Effects Of Prefecthood Roles On Learners’ Academic Motivation.**

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The aim of this study was to identify learners’ perspectives of how school prefects ought to be selected and describe the influence of prefecthood on learners’ academic motivation. A total of 250 learners from five purposively selected independent and public schools in one educational district in South Africa participated in this study. 50 percent of the participants were prefects while 50 percent were non-prefects. Data were intentionally sought at that ratio to pave way for reasonable comparative analysis. A quantitative-cum-qualitative research design was used to collect data through semi-structured questionnaires. Reliability of the questionnaire was determined by the use of cronbach’s alpha coefficient and a pilot study was conducted to ensure validity. Likert scales were used as responses. Data were analysed with the aid of the SPSS statistical software package version 22 and presented through a blend of both descriptive and inferential statistics. It emerged from the study that to varying degrees, there were both divergent and convergent views of learners regarding the issue of selecting prefects and its actual and perceived academic motivational impact on prefects and non-prefects, respectively. Based on the findings, recommendations were made buttressed on the implications for school management practices. Key words: academic motivation. Effects. Learners. Non-prefects. Prefecthood. Prefects. Selection criteria.

Keywords: academic motivation. Effects. Learners. Non-prefects. Prefecthood. Prefects. Selection criteria.

A Study On The Perceptions That Extended Programme Students Have Towards The Extended Programme At Walter Sisulu University (WSU).

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Essentially, the extended programme in higher education has been designed to provide alternative university access to students who have the potential to succeed, but do not meet the minimum admission requirements for the mainstream programme. The determination being to integrate surplus academic support and skills development with mainstream courses in order to prepare the student. However, students on the programme have been confronted with a number of challenges. This descriptive study was aimed at examining 100 sample of students registered in the extended programme at WSU, in order to determine factors confronting the extended programme student. This was achieved by determining, (1) challenges encountered by the students enrolled on the programme (2) to understand perceptions that extended students have towards the extended programme. (2) to also examine whether or not the are benefits of being an extended student. The empirical research was carried out using quantitative method. Non-probability sampling was used (judgmental, quota and convenience sampling approach). The study was limited to students that have been involved in the extended programme between 2013 and 2015), WSU, Mthatha campus.
The perceptions of Walter Sisulu University (WSU) students towards the "no vote campaign" in South Africa.

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The purpose of the research was to evaluate the perceptions of Walter Sisulu University students towards the "no vote campaign". The research pondered on the students’ level of understanding of the no vote campaign and their attitudes thereof. The research hypothesis leaned towards the "no vote campaign" as an effective mechanism to strengthen democracy. A quantitative research approach and purposive sampling technique of 80 respondents constituting 56% male and 44% female students was used. The respondents showed some level of understanding of what the "no vote campaign" entailed. SPSS was also utilised in the analyses of data. The findings revealed that poor service delivery and corruption were the major factors which led to the no vote campaign. The respondents highlighted that the campaign did not deprive them of political rights and it serves as a wakeup call in the next elections on service improvements. The proposed recommendations where that government needs to look beyond its own borders so as to find unique strategies to limit the spread of corruption which restricts adequate service delivery. The "no vote campaign" should also continue in being part of the South African electoral process in order to put pressure especially to the ruling party to improve services in fear of losing voters and ultimately losing elections.

Keywords: perception, WSU students, no vote campaign, democracy


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This paper conceptualises how an expanded notion of multicultural education could support the achievement of a socially just, diverse and cohesive South African society. Rising ethnic tensions and renewed manifestations of xenophobia are a constant reminder that South Africa has to intensify its efforts to achieve a society which is united in its diversity. In the context of education, laudable efforts have been made to overcome challenges posed by cultural diversity in the classroom through multicultural education. In higher education, both in South Africa and globally, the notion of internationalisation of higher education has recognised the contribution of cultural and national diversity to the achievement of educational, and specifically intercultural outcomes. This paper demonstrates that elements of internationalisation may be infused in basic education to achieve multicultural and intercultural learning outcomes in the classroom. It first unpacks the principles of social justice, multicultural education and internationalisation. Thereafter, it develops a theoretical framework which allows for an expansion of the notion of multicultural education, which will be reconceptualised to encompass the deliberate creation of diversity in the classroom. Suitable teaching interventions which
capitalise on diversity to create sustainable learning environments will be proposed and opportunities for further research will be demonstrated.

**Keywords:** multicultural education, internationalisation, social justice, learning environments, sustainable learning environments.

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**Teaching Practice Policy: Towards Improved Quality- A Comparative Perspective.**

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South African policies that regulate teaching practice have been consistently reviewed, aimed at improving the quality of teaching practice at higher education institutions and to assist student teachers in their exciting journey of professional development. Policy development as a focus for this paper spans the visionary policy document known as “norms and standards for educators of 2000” which was replaced by the “minimum requirements for teacher education qualifications”. In keeping with the changing South African landscape and international trends on teacher education, policies on teaching practice in first and third world countries offer important perspectives on practices in these countries. These examples are used to evoke comparisons that will provide theoretical frameworks to ensure a minimum level of standardization with the design and implementation of learning programmes for teaching practice in South Africa. This paper thus examines teaching practice policies in both South Africa and other countries, towards the aim of providing input into a theoretical framework towards best practice in teaching practice. Teaching practice policy and its implementation is considered in two west African countries (Cameroon and Nigeria), Finland and the United States of America.

**Keywords:** teaching practice, policy, South Africa, Nigeria, Cameroon, Finland, United States of America.

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**Diagrams drawn by learners as a tool to understand their conceptions about optics.**

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Children’s drawings are often used as effective tools to represent their conceptions about a particular phenomenon. Optics is a branch of physics in which most of its phenomena can be very well represented by diagrams, commonly known as ray diagrams. In ray diagrams, the path of a light ray can be represented by a straight line and the direction in which the light ray travels is represented by an arrow. Ray diagrams are used as a learning-teaching tool in the discussion of many optical phenomena like reflection, refraction, total internal reflection, dispersion and so on. This paper reports on the conceptual understanding of a group of 70 South African grade 11 learners about various optical concepts; this was understood by asking them to complete a given ray diagram and predicting the apparent position of the object in an aquarium. The participants were conveniently selected from a senior secondary school in the Mthatha district of the Eastern Cape province, South Africa. After qualitatively analyzing the diagrams drawn by the participants, the participants’ conceptions about various optical phenomena were identified. The findings showed that most of the participants had a vague understanding about many optical phenomena and that many of them could not correctly complete the ray diagram. Recommendations were also made to improve learners’ conceptual understanding of optical concepts.

**Keywords:** ray diagrams, optics, conceptions, reflection, refraction, total internal reflection.
Understanding a univen student first year experience: a value centered action research programme to improve wellbeing and performance.

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The 2013 che report indicates that only one out of four students completes their studies during regulation time. The huge part of it is associated with high attrition at first year level. At a rural based university in South Africa, a holistic first year experience programme called samp was implemented for the first time in 2013/2014 to learn about first year students and to see if a regimented programme could make a difference to students’ emotional, psycho-social wellbeing and academic performance. Seventy first year students were recruited and organised in groups of ten each. Each group was led by 2 senior students and met twice a week to build read, play and do a physical activity. Students were also required to do 24 hours of community service on their own time per semester. Students were selected based on an application and were placed in mixed groups based on degree, gender, language and any other form of diversity. The study also utilized quarterly focus groups, friday night programs and outdoor adventure camps to further bolster the first year experience. The paper discusses the issues facing first year programme at a rural based university. Lessons learned and measures that are being implemented due to the knowledge gained from the programme are also outlined

Keywords: first year students; mentoring; value centred; first year experience; extracurricular activities; physical activity; community service

Staff Developmt and Institutional Effectiveness at Walter Sisulu University (WSU).

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The subject of this paper relates to the discipline of public relations management. It examines the impact of WSU’s staff development on student quality and institutional effectiveness. WSU is categorised as a historically disadvantaged institution (hdi). It is a comprehensive multi-campus university in a province with high levels of poverty and unemployment. Most of its students come from this disadvantaged socio-economic environment. Moreover, WSU is the outcome of the 2005 merger of two technikons and one university. These pre-merger institutions had some pockets of excellence in the three areas of university core business. But they had challenges of staff institutionalisation and programme viability and sustainability. These challenges have not disappeared. They continue to impact negatively on student quality and institutional effectiveness. This is so, even though WSU has a policy on staff development as part of its retention strategy. The correlation between staff development, on the one hand, and student quality and institutional effectiveness, on the other hand, has so far not been researched. This paper examines this critical problem by exploring staff development and its impact on the university’s core business, taking Mthatha campus as a case study. The research was conducted using qualitative and quantitative methods. Desk research was supplemented with data obtained through questionnaires administered to a random sampling of academic and support staff. The study yielded the interesting generalizable result that there is a strong correlation between effective staff development, student quality and institutional effectiveness. More staff development results in enhanced student quality and institutional effectiveness.
Key words: correlation, effectiveness, generalizable, institutional, quality, staff development

Exploring The Implementation Of Service Standards In Health Resource Centres Of The Eastern Cape Province Of South Africa.

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The motivation for this study was that health resource centres of the Eastern Cape ought to provide quality information, “evidence based information” to assist health professionals accomplish their responsibilities. The provision of quality information can be achieved by upholding certain service standards. The study was carried out in two phases; a literature review and a survey. The study used quantitative method of collecting data in an exploratory survey. A self-administered questionnaire was used to collect data. The investigation was done to the three health resource centres of the Eastern Cape; umtata health resource centre, east london resource centre and port elizabeth health resource centre. Health resource centre managers and leaders in the provision of service elements of each health resource centre were interviewed. The overall findings of this study show that the three health resource centres uphold service standards. However certain aspects of their service such as availability of space, health and safety, staff performance and development, quality leadership and design and financial management still need attention. The study suggests further research to solicit health professional’s opinion about the services provided by these health resource centres and to find out if there is any connection between the services they provide and patient care.

Keywords: health resources centres, service standards, quality services health resources centres, service standards, quality services health resources centres, service standards, quality services health resource centres, service standards, quality information, evidence based information

Investigating The Challenges Faced By Educators In Implementing Arts And Culture In The RnCs In Libode Schools.

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The purpose of this paper is to report on a study that was conducted in the Libode district of education. The purpose of the study was to examine the challenges experienced by arts and culture educators in implementing arts and culture learning area in Libode schools. Ten schools were randomly selected from which participants in the study had been selected. This study used survey research design. Questionnaires and in-depth interviews were the instruments used to collect data. Interviews were done on the day we collected questionnaires from all participants. Data collected through the use of questionnaires were analysed using the statistical package for social science (SPSS). Data collected through interviews were first coded to form units. Units were thereafter grouped into clusters to form domains in order to discover relationships between domains. Challenges faced by educators, as per the findings of this study, include; inadequate teacher training, lack of infrastructure, and lack of teaching and learning material relating mostly to the practical part of the learning area. Some of the recommendations that emanated from the findings of this study are: in-service training for arts and
culture educators, provision of learning and teaching material, building of classrooms suitable for teaching and learning of arts and culture.

Keywords: arts, culture, learning area, educators, rural, get, challenges

Young people and sexual offences.
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A sexual act that is committed against a person’s will is an unlawful act therefore it calls for punishment. There is a lot of sexual violence committed by and against young people in South Africa. This paper will explore the nature of these violent crimes and touch on the important aspect which is who are these young offenders. This paper also stresses that be no generalization when we speak of young offenders and rule out the assumption that youth sex offending is a single pattern of behavior however that there are certain characteristics these young offenders have. It is important to note that youth sex offenders form a diverse population and that such offending behavior may reflect a broad variety of personality types and different factors may have contributed to the offending behavior such as poverty, patriarchal notions of masculinity, poor parenting, pornography and substance abuse. Furthermore the paper will discuss the sex offender registry and the negative effects it has on the young offender. The juvenile justice system acknowledges that children who break the law should be treated differently from adults, with a greater emphasis on rehabilitation for their subsequent reintegration back into the community. Therefore the treatment programmers must be in line with the juvenile justice principles and develop techniques to prevent young people from them engaging further in violent crimes.

Keywords: sexual violence, young people, South Africa, rehabilitation, juvenile justice

Factors Contributing To Stress Among Primary School Teachers.
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The survey design limited was employed in this study. A sample of 100 post level 1 teachers was involved in the study, 50 teachers for each circuit was selected. The teacher responded to questionnaires that were based on teachers stress. The findings of this study revealed that factors contributed to stress among primary school teachers are lack of learners discipline, lack of resources and lack of support from learner’s parents. It is recommended that school must develop code of conduct for learners and the department of education must provide schools with enough resources. Parents must be encouraged to be more involve in their education of their learners. When teachers experience stress, the researcher suggests self-help strategies like knowing about the phenomenon and the signs of stress in the early time, schools must form committees that deal with teachers stress, schools must invite psychologist to workshop teachers about stress, schools must encourage teachers to communicate openly about everything that has to do with their work. Key words: stress, anxiety, burnout, alarm, frustration and strain.

Keywords: stress, anxiety, burnout, alarm, frustration, strain
Using Lie Symmetry Analysis To Establish A Relationship Between The Benjamin-Bona-Mahony Equation And The Black-Scholes Equation. W Sinkala And T F Nkalashe

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The benjamin-bona-mahony (bbm) and black-scholes partial differential equations arise in very different contexts. The bbm equation is used to model the propagation of unidirectional, one-dimensional, small-amplitude long waves in nonlinear dispersive media, while the black-scholes equation arises in financial mathematics as a model for the price of european options and related derivatives. Both these equations have been studied extensively, independently. Using lie symmetry analysis we show that the two equations are closely related. We establish this relationship as a mapping between the equations and hence deduce solutions of one from known solutions of the other.

Keywords: lie group, symmetry analysis, benjamin-bona-mahony, bbm, black-scholes, lie algebra, differential equation.

Challenges Facing Youth Economic Participation In The Post-Apartheid South Africa Case Of King Sabatha Dalindyebo Municipality (Ksd).

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The purpose of the study was to investigate challenges facing youth economic participation in the post-apartheid South Africa using the case of king sabatha dalidyebo municipality. A purposive sampling of 15 people were used in the study. A qualitative approach research approach using interviews and open-ended questionnaires were used in the collection of data. The collected data was categorised according to the research questions that were raised in chapter one. The data from primary and secondary sources was interpreted after interviews, displayed and analysis. The findings show that the most common challenges that hinder youth economic participation in the ksd are unemployment, poor education, poor municipal capacity, drugs and alcohol abuse, migration of youth to other region in search for greener pastures and the ineffective utilization of agricultural opportunities. The study recommended among others that, the municipality to increase capacity building to create market opportunities, to create free access to education as this would help for career building and skills development.

Keywords: challenges, youth economic participation, ksdm

Democracy And Education: Teacher Non-Involvement In Policy Formulation And Its Impact In Non-Change On Schooling.

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This paper draws from a master’s study that was conducted in the district of Mthatha in the Eastern Cape province of South Africa. The study sought to find out the extent to which teachers are involved in the formulation of policies implemented at schools by the department of education. From findings, it appears that teachers and principals displayed a very negative attitude when they are to implement education policies. A questionnaire was used to investigate how involved teachers and principals were in policy formulation of the department of basic education. Quantitatively, the study accessed a larger group of teachers’ views for the researcher’s understanding of teachers’ non-involvement in policy formulation. The findings of the study reflected that, teachers and principals were still marginalized. Teachers believe that schools are their terrain and therefore if they are not consulted, the implementation of policies may not be possible. These findings make it clear that South Africa needs to learn from other countries on how teachers should be involved in policy formulation than imposing other people’s ideas on them to implement. Professionalism and the autonomous position of teachers need to be considered. This is unlike other African countries such as nigeria, where teachers are taken as key role players in formulating school development programs and policies (ajidagba, 1998). Literature shows that the exclusion of teachers in South Africa in the formulation school policies has resulted in the deterioration of the education system and teacher interest in the development of schools (jansen, 2002; 2009; ramparsad, 1995; 1999; anc, 1994). From their (literature) analysis they identified gaps that reflect non-involvement and non-change in education and curriculum development. Teachers’ involvement should not be confined to high hopes of influencing policy outcomes; it should be about social and policy understanding and its implications for teachers’ daily practice and commitment to implementation. Teachers’ involvement and policy formulation has been dominated by the adoption of a rational and expert driven approach in policy making; views and contributions of experts are more highly valued than those of ordinary citizens, including teachers. For a democratic society as claimed in South Africa, involvement of teachers is primarily a need for school development.

**Keywords:** teachers, involvement, policy formulation, curriculum, implementation, professionalism and school development

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**The Contributory Factors of Teenage Pregnancy among Learners at Secondary School in the Vhembe District, Limpopo Province.**

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The purpose of this paper was to explore the contributory factors among secondary school learners in the Limpopo Province within the Vhembe district. The study sought to establish whether teenage pregnancy has an impact on school attendance and academic performance of pregnant learners as perceived by educators. The research methodology was pure qualitative in nature. Eighteen learners and six educators from six secondary schools were purposefully sampled for the study. Data was collected using in-depth interviews to allow the researcher a platform to ask open-response questions and to explore the educator’s perspectives about the contributory factors of teenage pregnancy. Data was analyzed thematically by carefully identifying and expanding significant themes that emerge from the participant’s perceptions about the contributory factors of teenage pregnancy. The study revealed that teenage pregnancy has a negative impact on the school attendance, academic performance and the relationship between their peers. The study recommends that sex education should be taken seriously in secondary schools; parental involvement could be of good help in the lives of teenagers,
educators should treat pregnant learners like other learners to avoid stigmatization, learners should be advised to use preventive measures and to encourage learners to delay engaging in sexual relationships.

**Keywords:** teenage pregnancy, learners, secondary school, school attendance, academic performance, educators.

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**Re-Positioning Community Engagement Within The Normative Value System Of A Socially Responsive University.**

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The ambitious goals of the national development plan of South Africa demand a concerted and accelerated effort for expanding the spaces which are currently provided by means of higher education and training, particularly in the context of a developing economy. However, the historical, systemic, and structural challenges that still confront some universities in South Africa pose a serious challenge to the ideals of social responsiveness which should characterise a socially embedded university. This paper reports on the study about the perspectives of project implementors as part of a university community engagement system. The research project was designed as a qualitative case study whereby the nature of social and cultural issues were identified and examined in evaluating project coordination and impact. A purposefully sampled group of community engagement projects which one selected university had with the regional tvet colleges were identified as part of understanding stakeholder claims and concerns. Using a morphogenetic methodology by archer, the structural and cultural factors that condition the exercise of agency for project sustainability were then surfaced in order to understand the lacks, tensions, contradictions and inconsistencies in both the institutional and project community engagement goals and the results. For the study in which research data was collected by means of a survey questionnaire and organisational records, the potential for further social and cultural interaction constitute the insights from which emergent reflections indicate the potential for well conceptualised and sustainable projects. From this presentation, an argument will therefore be made that community engagement policy implementation could be framed within the progressive agenda of social reconstruction, within the normative value system of a socially responsive university, while considering the socio-political context both of human action and social agency. The paper has the potential to enhance value in academic leadership and management with specific reference to conceptualising and implementing community engagement projects.

**Keywords:** community engagement, project sustainability, human action; social agency

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**Examining Lecturers Attitudes towards Evaluation of Teaching By Students: A Case Of One Faculty In A Rural University.**

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Evaluation of lecturers’ teaching by students is a matter of concern. This study sought to examine lecturers’ attitude towards evaluation of teaching by students. The study utilized a mixed method
approach in order to triangulate the data. Forty lecturers participated in the study. The researchers used self-designed questionnaires to collect quantitative data and focus group interviews were conducted to gather qualitative data from the participants. The main findings of the current study showed that lecturers do not have confidence in students since most of them may not be truthful. Lecturers also showed that these evaluations may be used by incompetent leaders in faculties as a means of showing that they are doing something to improve teaching and learning. The study recommends that an evaluation model be adopted when evaluating lecturers by students.

**Keywords:** teaching, evaluation, university lecturer

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**Customer’s Satisfaction and Experiences in a Fine Dining Restaurants in East London, South Africa.**

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The formal full-service restaurant industry in South Africa is undergoing a period of anaemic growth due to the after effects of the 2009 global economic recession. Since the recession, industry growth has been subdued as diners seek more for their money when spending at restaurants. Consequently, industry revenue declined 1.8% in 2013 as diners tightened their purse strings. It is for this reason that it was decided to investigate diners’ expectations and experiences in selected formal full-service restaurants in east London. The strongest correlation with diners’ expectations was level of service whilst the strongest correlation with diners’ experiences was food quality. The regression model showed that the level of service was rated as the most important variable for diners. Despite the increasing popularity of eating out (Andaleeb & Conway, 2006) formal full-service restaurants in South Africa have shown a negative growth rate, with statistics showing a decline of 5.3% in total income in 2012 compared to 2011, as customers opt to eat in fast food restaurants (Datamonitor, 2013). Researchers (Soriano, 2002; Chi & Gursoy, 2009) identify restaurateurs’ inability to satisfy their customers’ expectations and experiences as one of the main reasons for formal full-service restaurant failure. Rated as the most important for diners’ experiences. However, recommendations were made to improve diners’ experiences in the selected formal full-service restaurants in east London. The results of this study would help restaurateurs to identify areas of improvement and increase customer satisfaction.

**Keywords:** customers, experiences, satisfaction, restaurants.

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**Perceived benefits of participation in recreation and leisure activities among students at the University of Venda.**

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Background: participation in recreation and leisure are considered most important in building a healthy lifestyle, instilling love, unity, and peace among students in institutions of higher learning. Recreation and leisure activities are considered as ideal vehicle for promoting mutual understanding among people with different cultures and languages. Aim: the aim of the study was to examine the perceived benefits of participating in recreation and leisure activities in the University of Venda. Methods: students in the
school of health sciences (n=8) completed questionnaires that investigated the perceived benefits derived in recreation and leisure participation. The design of the study was structured on the survey method where in quantitative approach was used to guide the study. The variables tested focused on social, health and psychological benefits. Results: the results obtained indicated that majority of the respondents were aware of the importance of participating in recreation and leisure activities. Conclusion: the study concluded differences on and importance of understanding students’ perceptions on recreation and leisure participation

Keywords: perceived benefits, recreation and leisure

Teachers’ and learners’ meta-cognitive skills and its application in mathematics problem-solving in the rural primary schools of the Eastern Cape province, South Africa.
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it is an undeniable fact that the predominant objective of the government of any country in the world especially South Africa, is to provide quality and equal education for all learners in the country to enable them realize their full potential in order to contribute meaningfully to the community in which they find themselves (prinsloo 2001 & 2005). There is growing evidence that meta-cognition application is an important component of academic success in general and on mathematical achievement in particular. Teachers’ application of meta-cognition therefore directs and reflects their teaching-practice behaviour which influences learners’ learning with understanding in problem solving. The purpose of this paper explores both teachers’ and learners’ meta-cognitive skills and its application in mathematics classes in the rural primary schools of the Eastern Cape province of South Africa. Participants (n=5) are made up of three (3) teachers and two (2) learners. Teachers are randomly selected from three primary schools whereas learners from two selected schools. The selected participants are believed to be information rich who can help answer the research question. Interviews are conducted with 3 teachers and 2 learners, and three lessons are observed. The interviews focused on teachers’ knowledge or understanding of meta-cognitive skills and how they use these skills in helping their learners in mathematics problem solving. The progress made is reported with regard to the following aspects: the conceptual background, problem statement, theoretical framework, research questions, setting of aims and objectives of the study, literature reviewed, selection of the participants, ethical clearance, and data already collected. The preliminary findings to be shared include: teachers ability to prepare lessons effectively with meta-cognition knowledge, effective delivery of their prepared and refined lessons to their learners’ meta-cognitive strategies in their various schools, teachers use of meta-cognitive strategies lesson delivery to develop their mathematics learners’ meta-cognitive strategies as well, and how learners exhibit meta-cognitive strategies in solving mathematical problems. The results of the interview confirm that some teachers usually assist learners in problem solving in class. Some learners also use meta-cognitive strategies in solving mathematical problems. Further recommendations to improve teachers’ methods of teaching to develop meta-cognitive strategies of their mathematics learners through problem solving are made. Main research question: how does the exploration of meta-cognitive skills in problem solving situations by senior primary mathematics teachers (spmt) support learners’ learning in the rural schools.

Keywords: problem-solving, teachers, learners, application, meta-cognitive skills, mathematics.

Lack of parental involvement and its effects on learner academic achievement.
Cenge PN

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This study investigated lack of parental involvement and its effects on the learner’s academic achievement of grade 12 learners in one of the senior secondary schools, in the mqanduli education district. The subjects in the study included a group of five grade 12 learners, five parents and five teachers, all selected randomly, using systematic sampling. Despite the government's pressure to involve all stakeholders in the education system towards the attainment of quality education, there is still a challenge of parents not playing an active role in the education of their children. Action research was employed in order to interact very closely with the subjects studied, for the purpose of getting to understand their perceptions, feelings, thoughts and interpretations of the situation under study. Semi-structured interviews were used to extend data gathered through participant observation and from the analysis of documents. The results obtained indicated that the school and the parents were not living in the same world. Neither the parents knew what happened inside the school classroom, nor did the teachers understand how conditions were at their learner’s homes. There was a clear indication from the parents on the lack of communication from the school and minimal involvement in school activities and planning. The school could not afford parents equal responsibility in their children’s education and as such, parents were not aware of their own right to be informed about their children’s learning activities and progress. The teachers, on the other hand, were not aware that it remains their responsibility to create opportunities that would promote parental involvement in the school. Teachers felt that there was nothing designed by the government to promote parental involvement in both the school activities and in the learning activities. The findings further revealed that most of the learners were staying by themselves, thus, faced with challenges of being “adults”. Some of them were parents themselves, having their own children who stayed with their grandparents while the parent (learner) was at school. In such cases, the grandparents found it difficult to avail themselves when required by the school. Some learners reflected that they had estranged relations with their parents because of the social child grant that they were receiving, which made them thought they did not need their parents support at times. These estranged relations extended to their school life as well.

Ameliorative effects of chloroform fraction of methanol extract of cocos nucifera l. Husk fiber against cisplatin-induced toxicity in rats.

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cisplatin (cis) is used in the treatment of solid tumors and is known to elicit serious side effects. We investigated the protective effects of chloroform fraction of methanol extract of cocos nucifera husk fiber (cfcn) against cis-induced organs’ damage and chromosomal defects in rats while quercetin (que) served as positive control. Thirty male wistar rats were assigned into six groups and treated with corn oil (control), cis alone, cis + cfcn, cfcn alone, cis + que and que alone. Que and cfcn were given at 50- and 200- mg/kg/day respectively by oral gavage for seven days before the rats were exposed to a single dose of cis (10mg/kg, i.p.) At the last 36 h of study. Results showed that cis intoxication caused a significant (p<0.05) affected in cis-treated rats. Also, activities of hepatic and renal catalase, superoxide dismutase, glutathione-s-transferase, glutathione peroxidase and levels of reduced glutathione were significantly (p

Keywords: cocos nucifera, cisplatin, chemoprevention, antioxidant, clastogenicity, lipid peroxidation, toxicity
we herein report a simple, economical and green synthesis of highly water soluble and stable cdte/cdse/znse multicore-shell nanoparticles (nps) via a one pot synthetic route. The synthesis was carried out under ambient conditions in the absence of an inert environment and involved the use of k¬2teo3 and na2seso4 as a stable tellurium and selenium precursor respectively. The temporal evolution of the optical properties and stability of the growing nanocrystals was monitored in detail by varying the refluxing time, ph and storing the nps under ambient condition for several days. The as-prepared nps were characterised using uv-vis absorption and photoluminescence (pl) spectroscopy, dynamic light scattering (dls), fourier transform infrared spectroscopy (ftir), transmission electron microscopy (tem), high resolution transmission electron microscopy (hrtem). The optical analyses showed an enhancement in the fluorescent intensity after the addition of the shell solution accompanied by red-shifting of the absorption and emission maximum. The stability study revealed an increase in the emission intensity as the ageing days increased. The tem analysis showed that the materials are small, mono-dispersed, spherical and highly crystalline. The cytotoxicity of the nps investigated on km-luc/gfp cell line at different concentrations showed a decrease in cell viability as the concentration of the nps increased with the highest value of 88 % at 0.1µg/ml. Furthermore, the as-synthesised nps prepared at longer reaction time showed lower cytotoxicity compared with those prepared at shorter reaction time. The results show variation in cytotoxicity from 88 % to 57.6 % for the nps produced at 7 h compared with those produced at 30 min (from 82 % - 33 %) as the concentration increased from 0.1 µg/ml to 60 µg/ml. The fluorescent imaging performed using confocal fluorescent microscope indicated that the as-synthesised nps were taken up by the cells.

**Keywords:** nanoparticles, multicore-shell, cytotoxicity, fluorescence imaging.

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**Synthesis, Characterization And Antibacterial Activity Of Heteroleptic Nickel(Ii) Complexes Of Dithiocarbamates And Xanthates.**

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Metal complexes of sulfur-donor ligands such as dithiocarbamates and xanthates are known for a number of industrial applications and recently strong evidence of their antimicrobial activity have emerged. In spite of the fact that transition metal complexes of these ligands have received considerable attention in the coordination chemistry for various applications. At present, few studies exist on their heteroleptic complexes. In this study, we report the synthesis, characterization and antibacterial studies of heteroleptic complexes of Ni (II) containing xanthates and dithiocarbamate complexes. A one pot synthesis of mixed ligand complexes was achieved by reacting equimolar amounts of a xanthate and dithiocarbamate ligands in a solution containing the metal of interest. The mixed ligand complexes were characterized by spectroscopic analysis (IR & UV), melting point, conductivity measurements and elemental analysis. These complexes will be screened against nosocomial bacteria which cause hospital associated infections.

Keywords: xanthates, complexes, spectroscopic, nosocomial, antimicrobial, conductivity

Constituents And Biological Studies Of Nidorella Auriculata.

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Nidorella auriculata is an aromatic plant belonging to the asteraceae family used by the villagers in making fire but in the science community has been found to possess labdane diterpene derivatives. The aim of this study was to extract volatile components from the plant and to investigate the biological properties of the plant. The essential oils were extracted using hydro-distillation apparatus as described in the literature and identified using the gas chromatography-mass spectrometry (GC-MS). The major components identified were beta-pinene (9.56%) for dry leaves, alpha-pinene (9.11%) for fresh leaves, limonene (25.03%) for fresh flowers and cis-octene (37.03%) for dry flowers. This is an ongoing study therefore the biological studies are still yet to be investigated.

Keywords: nidorella auriculata, aromatic, asteraceae, volatile components, hydro-distillation, gc-ms

Synthesis And Characterisation Of Triazole – Linked Aminochalcones And 2-Aryl-6,8-Dibromoquinoline Hybrids Via Huisgen 1,3-Dipolar Cycloaddition.

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4-azido-6, 8-dibromoquinoline-3-dicabaldehyde 1, aminochalcones 2 and diazidoquinolone derivatives 3 were prepared in generally good to excellent yields. Chalcones display a wide variety of biological activities which include among other anti-oxidant, anti-viral, anti-inflammatory, anti-cancer...activities wherea quinolone derivatives 2 are well known to have antibacterial and antimalarial as well as anti-tumor properties. Our current focus envisages to link aminochalcones 2 with 2-aryl-6, 8-diazidomquinolone 3 and 4-azido-6, 8-dibromoquinoline-3-dicabaldehyde 1 via click chemistry using a triazole linker. It is anticipated that coupling of 1 and 3 to 2 through click chemistry will lead to conjugates with increased anti-bacterial properties.

Keywords: aminochalcones, click chemistry, quinolones, triazoles.
this paper explains a one-pot green synthesis of type ii water soluble glutathione-l-cystein co-capped cdte core and cdte/cdse core shell qds using cadmium acetate, potassium tellurite (k2teo3), sodium borohydride (nabh4), glutathione and l-cystein as the starting material. The reaction was carried out in a single three-necked flask open to the atmosphere under reflux t 100oc. Their optical properties were characterized by uv-vis absorption spectroscopy and florescence spectroscopy, while their structure and morphology were characterized by transmission electron microscope (tem), fourier transform infra-red spectra (ft-ir) and x-ray powder diffraction (xrd). The effects of different reaction times, ph and mole ratios were varied to determine optimum conditions for synthesis. Compared to cdte core (564nm), the core shell (600nm) demonstrated a drastic shift in wavelength to the red region proving that an extra material had been deposited unto the surface of the core. The 20 days, 40 days and 60 days stability tests conducted proved that core-shell nanoparticles were quite stable compared to the core material. Since this reaction did not involve the use of a nitrogen atmosphere nor special ligand or buffer solutions, it suggests that the process could be easily operated on an industrial scale.

Keywords: facile, glutathione, l-cystein, cdte/cdse, ph, optical and structural morphology, stability.

mbashe river in Eastern Cape, South Africa passes through three districts with catchments that have been modified by anthropogenic activities. To determine the effects of anthropogenic activities on the river, stable isotopic c/n ratios of particulate organic matter were determined. Six sampling sites from three sections of the river were identified according anthropogenic activity occurring close to river and sampled over a period of twelve months from september 2012 to july 2013. C/n ratios varied significantly (p< 0.001), revealing that pom was derived from different sources in the river catchment. Different human activities had significant effect on the pom stable isotope dynamics, resulting in distinctly unique stable isotopes signature varying both seasonal and spatial variations. The research revealed that pom was mainly derived from allochthonous sources c/n ratios > 8 and also that anthropogenic pom in the river catchment was mainly derived from soil (c/n : 8.1-14). The downstream showed less effects effect of anthropogenic activities but more of phytoplanktonic production. Further research is recommended and required to check whether isotopic dynamics observed can be replicated and determine whether the effect of anthropogenic activities is increasing or decreasing.

maeKeywords: stable isotopes, anthropogenic activities, particulate organic matter, enrichment, depletion
Help-seeking behavior regarding stressful events among Walter Sisulu University (nelson mandela drive-site) students.

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Background: research shows there is a significant rise in levels of psychological disturbance following the transition from home to university. In spite of this situation, students’ show negative attitudes toward help-seeking, this are transmitted through by family and social networks (fisher, 1994). The aim of the present study was to investigate the help-seeking behaviour of students regarding stressful events among WSU students. Methods: the research participants were all level two and level three bachelor of psychology students whose ages ranged between 15 and 20 to 36 years. The data was collected from 30 students both males and females, 10 from level ii and 20 from level iii students using a questionnaire with open-ended and closed-ended questions. The data was analysed using a statistical package for social sciences (SPSS), version 16.0. Results: the findings of the study revealed that most of the frequent causes of stress among students were financial problems, academic related problems, and misunderstanding between parents and students. The majority of students did not seek help for their stressful events instead they coped with the situation on their own, others talked to their family members or friends. The results further revealed that the majority of students never sought for professional help in the past. Conclusions: the study has confirmed the findings of other researchers that university students are severely underutilizing professional and psychological help. Students tend to ignore the impact of stress on their health and wellbeing this has a negative impact on studies if it is not dealt with.

Keywords: help-seeking behaviour, social networks, stressful events, coping, social support.

Chemical Constituents And Biological Studies Of Tagetes Minuta.

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plants synthesize and store a variety of biochemical compounds some of which are extractable and can be used for various scientific investigations. The aim of this study was to extract and identify biologically active volatile chemical compounds from tagetes minuta. Hydrodistillation techniques as prescribed by british pharmacopeia were used to extract volatile oils from the plant while gas chromatography-mass spectrometry (gc-ms) was used to identify constituent compounds. Cis-β-ocimene (38.08%), caryophyllene oxide (18.04%), cis-ocimene (38.14%) and trans-β-ocimene (37.03%) were the major components identified in essential oil from fresh stem, dry stem, fresh flower and dry flower respectively. This is an on-going investigation and therefore biological studies of essential oils extracted from tagetes minuta are still to be considered for its application.

Keywords: biochemical, tagetes minuta, hydrodistillation, essential oil, gc-ms, extraction
Synthesis of musk fixatives: 1-(6-tert-butyl-1,1-dimethyl-2,3-dihidro-1h-inden-4-yl)ethanone (celestolide) and 1-(1,1,6,6-tetramethyldodecahydro-as-indacen-4-yl)ethanone (dimuscan).

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in the perfumery industry, musk fixatives have long been used as the groundwork on which the rest of the perfume composition rests. Earlier musk fixatives were solely extracted from animal parts and such an approach is nowadays no longer environmentally sustainable. Thanks to the rapid development of synthetic chemistry increased variety of musk fixatives are now possible. While there are some literature references on the syntheses of celestolide, there is none on the synthesis of dimuscan. This research project looks at a novel procedure for the synthesis of both celestolide and dimuscan and the results obtained will be presented and discussed. We expect this new approach to the synthesis of both musk fixatives to open up the way for the synthesis of a variety of indane-based perfume fixatives.

Keywords: musks, fixatives, synthetic, celestolide, dimuscan, odour

Intercalation Of Mn2+ Ions Onto Bentonite Clay: Implication On Groundwater Defluoridation.

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Fluorosis is a chronic disease caused by drinking water with fluoride concentration greater than 1.5 mg/l for extended periods of time. The disease is manifested by tooth decay in dental fluorosis and deformation of bones in skeletal fluorosis. In trying to reduce the effect of fluoride in human health, world health organization (who) has fluoride limits in water at 1.5 mg/l. Most rural areas of South Africa depend on groundwater as source of drinking water, however groundwater in some of the boreholes has concentration of fluoride above the permissible limit and will require defluoridation. The present work aims at evaluating the use of mn2+ intercalated bentonite clay for defluoridation of groundwater. Clay was characterized for mineralogy using x-ray diffraction (xrd) and elemental composition using x-ray fluorescence (xrf) and morphology using scanning electron microscopy (sem). Batch experiments were conducted to evaluate and optimize various operational parameters such as contact time, adsorbent dose, ph and initial adsorbate concentration. Xrd revealed that clay mineralogy is characterized by quartz and montmorillonite. Xrf revealed that clay is mainly characterized by sio2 and al2o3. Sem revealed that the clay surface is spongy and has porous appearance. Optimum operation conditions for adsorption of fluoride were established to be 30 min contact time, 0.3 g/100 ml adsorbent dosage, 3 mg/l adsorbate concentration and ph of 2.maximum percentage f- removal was 84.0 %. The adsorption isotherm data fitted well to langmuir model showing that the adsorbent is monolayer. Kinetic modelling showed that the data fitted well to pseudo second order than to the pseudo first order showing that the rate limiting factor is chemisorption. Mn2+ intercalated bentonite clay removed 55.89 % of fluoride from field water. The study shows that mn2+ intercalated bentonite clay have potential for application in defluoridation of groundwater.
Assessment Of Trace Metal Contamination Of Nzhelele River And Sediment In Limpopo Province, South Africa.

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Trace metal contamination of rivers and sediments remains a global threat to biodiversity and humans. This study was carried out to assess trace metal contamination of Nzhelele River and sediment. Trace metal concentrations were analyzed in triplicate using an inductively coupled plasma optical emission spectrometer supplied by thermo scientific after nitric acid digestion. Compliance study was carried out using the department of water affairs and forestry (dwaf) guideline of South Africa, who and canadian council of ministers of the environment sediment guidelines (ccme). The levels of trace metals determined in nzhelele river and sediment were in the range of: al (1.172 mg/l – 29.09 mg/l and 2788 mg/kg-707 mg/kg), cd (0.001 mg/l - 0.002 mg/l and not detected-4.16 mg/kg), cr (0.062 mg/l – 0.396 mg/l and 7.803 mg/kg-51.288 mg/kg), cu (0.0259 mg/l–0.066 mg/l and 2.1817 mg/kg-27.138 mg/kg), fe (0.755 mg/l – 3.001 mg/l and 115 mg/kg -5252 mg/kg), mn (0.052 mg/l – 0.545 mg/l and 120 mg/kg -516 mg/kg), pb (0.001 mg/l – 0.019 mg/l and 0.247 mg/kg-2.214 mg/kg) and zn (0.042 mg/l–0.131 mg/l and 2.605 mg/kg -50.238 mg/kg). The average concentrations of all the metals exceeded the guideline value of dwaf for the protection of aquatic life. The concentrations of al, cr, fe, and mn exceeded the recommended guidelines for domestic water use, while the concentration of pb fluctuated below and above the guideline value of 0.01 mg/l. The trend observed for trace metal contamination of sediments in nzhelele river is al<fe<mn<cr<zn<cu<pb

Keywords: aquatic life, contamination, domestic, river, sediment, trace metal

Evaluation of contamination of soil by trace metals from dairy wastewater in Limpopo Province, South Africa.

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the contamination of soil by trace metals from dairy wastewater (dww) has been evaluated in a major dairy plant in Limpopo Province. The ph, electrical conductivity (ec) and total dissolved solids (tds) of dww were measured in the field using a portable crison mm 40 multi meter, while the ph of soil was measured using a ph meter. The concentrations of al, ca, cu, fe, k, mg, mn, pb, na, zn and al, cu, fe, k, mn were measured in triplicate using perkin elmer 520 atomic absorption spectrometry (aas) for dww and soil respectively. The results of dww were compared with standards for wastewater (ww) discharge of the department of water affairs (dwa). The results of dww and soil were compared together in order to evaluate the probable effects of the disposal of dairy wastewater onto soil. The ph ranges from 6.36 to 8.18 and 7.08 to 8.52 for dww and soil, respectively and were within the set guidelines of dwa. Ec and tds ranged from 193 ms/m-593 ms/m and 1293.10 mg/l-3973.10 mg/l, respectively and were higher than the standard values. The trace metals concentrations in dww were in the range of: al (0.13 mg/l-0.44 mg/l), fe (0.16 mg/l-1.14 mg/l), cu (0.05 mg/l-0.10 mg/l), na (66.50 mg/l-520.90 mg/l).
mg/l), k (5.10 mg/l-122.40 mg/l) and mn (0.04 mg/l-0.47 mg/l). The dww is of poor quality and should not be discharged into the environment without proper treatment.

**Keywords:** contamination, dairy wastewater, discharge, electrical conductivity soil, trace metals

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**The Application Of Gis In The Mangrove Distribution Of Protected And Unprotected Estuaries Along The Transkei Coast.**

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A mangrove is a plant, either tree or shrub, that grows in muddy coastal swamps and is found in the inter-tidal region between the sea and the land. However, there are some exceptions to this latitudinal range of mangroves because some mangrove forests are found beyond the 30°n/s. Mangroves are exploited for a variety of uses such as economic (provide wood, timber, medicine) and ecological (serve as breeding/nursery areas and control coastal erosion). Both mbashe and nqabara estuaries are located in the mbashe local municipality along the transkei coast of the Eastern Cape, South Africa. Mbashe estuary is located within a marine protected area (dwesa-cwebe nature reserve) and nqabara is outside the latter nature reserve. The distribution of mangroves therefore in protected estuaries should be denser as compared to those found in unprotected estuaries. This research aims to make a comparison of mangrove distribution and density in mbashe estuary and nqabara estuary. The objectives of the study will be to determine: vegetation cover; species composition; species density and size frequency; and mangrove distribution in both mbashe and nqabara estuaries. The objectives will be achieved by use of the following methodology: mangrove species (including associated fauna and flora) will be identified by use of observation and checklist. Line intercept transects (from the sea inward) will be used to assess density, size frequency and distribution for each species. Vegetation cover (per 0,1ha) in each site will be determined. Then the use of arcgis to map the mangrove distribution will be used.

**Keywords:** mangrove; mangrove distribution; exploitation; estuaries

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**Coagulation Efficiency Of Dicerocaryum Eriocarpum Plant.**

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A study has been conducted to investigate coagulation efficiency of dicerocaryum eriocarpum (de) plant in the removal of turbidity from raw water. Widespread poor land use practices in river catchments contribute to high turbidity in river water, making turbidity management or removal critical particularly before the water is used for drinking or subjected to chemical treatment. In this study, mucilage from de plant was extracted with deionized water and different chloride solutions. Results of the study show achievement of coagulation efficiency of 99% using modified mucilage coagulant. The modified mucilage of potassium crude extract (pce) and sodium crude extract (sce) displayed higher coagulation efficiency than unmodified mucilage of deionized water crude extract (dce). The study showed that an increase in coagulant dosage, settling time and initial turbidity influenced the coagulation efficiency of de coagulant. Electrical conductivity (ec) levels, ph and high reduction in turbidity levels of the treated water samples showed improvement in water quality.
Groundwater containing fluoride above the WHO guideline of 1.5 mg/l is detrimental to health. In communities where the most appropriate drinking water is groundwater, any excess fluoride contained in such water needs to be removed to make the water suitable for consumption. In this study, optimised al/fe oxide-modified diatomaceous earth was prepared and used for batch defluoridation experiment. The ph at point of zero charge was evaluated to be 6.0±0.2. At optimum agitation speed of 200 rpm and 50 min equilibration time, the initial concentration of an artificial fluoride water was reduced from 10 mg/l to 0.693 mg/l (93.1% fluoride removal), solid-liquid ratio being 0.6 g/100 ml. The optimum fluoride uptake capacity of the adsorbent was observed to be 7.6333 mg/g for a solution containing initially 100 mg/l fluoride. The equilibrium ph of the suspensions ranged between 6.77 (for 10 mg/l fluoride) and 8.26 (for 100 mg/l fluoride). The adsorption data fitted better consistently into langmuir isotherm than the freundlich isotherm at the three evaluated temperatures; although both had very high linearity. The kinetics of adsorption obeyed only the pseudo-second-order, implying that the adsorption was chemisorption.

Keywords: diatomaceous earth; groundwater; defluoridation; thermodynamics; kinetics; adsorption


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The rocky intertidal region experiences vast environmental changes resulting in both biotic and abiotic induced stresses to the organisms found there. this area of the seascape is covered by marine flora and fauna, some with close marine lineages while others are more closely related to land species. Rock pools offer sanctuary to organisms that cannot tolerate harsh changes that come with inhabiting the rocky intertidal. Studies conducted on the intertidal tend to focus on either rock pools alone or on the emergent rock outcrop without comparing the two. The aim of the study was to quantify and contrast the diversity and distribution of species found on both the emergent outcrop together with those found in rock pools. A 0.4m2 quadrat was laid out using systematic random sampling inside and outside rock pools to quantify the diversity of both the flora and fauna of Mkambathi nature reserve. Diversity indices were used to quantify the diversity of species found in Mkambathi nature reserve. A total of 32 species were identified, including 14 seaweeds and 8 limpets. There was a 20% difference in the diversity of limpets between the habitats. Only padina boryana was confined to rock pools while 4 seaweeds and 4 limpets were confined to outcrop. The results show that these two habitats house
different organisms. However, rocky intertidal pools have less diversity than the emergent rock outcrop in Mkhambathi nature reserve.

**Keywords:** limpets, seaweeds, wave action, microhabitat, zonation, association

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**Assessment of Microbial Safety of Surface Water Sources of Luvuvhu River Catchment, South Africa.**

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the majority of rural communities worldwide including South Africa rely on untreated surface water for human consumption. Part of the challenge originates from erratic supply of treated drinking water by local municipalities. Here we report on the microbial load of surface water sources and after simple water treatment using hand dug wells in Vhembe district, South Africa. The results of the ph were in the range 6.90 to 8.86 and the water temperature were range from 16 to 25 ºc. The turbidity values were in the range 2.53 to 393.67 ntu which shows problem of soil erosion, rainfall runoff and wastewater discharge by upstream sewage works. The faecal coliform counts varied between 0 cfu/100 ml to >300 cfu/100 ml, total coliform counts range from 0 cfu/100 ml to >300 cfu/100 ml, e. Coli counts varied between 0 cfu/100ml and >300 cfu/100 ml, and faecal streptococci counts were between 1.5 cfu/100 ml to >300 cfu/100 ml. The microbial load in the hand dug wells was considerable lower than that of the open water sources (no form of water treatment). The high microbial load exceeding acceptable regulatory guidelines render these water sources unsafe for human consumption. The physical conditions such as water temperature are also suitable for bacterial propagation. Thus the advert of climate change with the warming of the surface waters may exacerbate the current situation with regards to the use of untreated surface water sources.

**Keywords:** hand dug wells; e. Coli; waterborne diseases; turbidity, riverbank

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**A Comparative Study Of The Bionomics Of Clavigralla Tomentosicollis Stål (Hemiptera: Coreidae) On Three Varieties Of Cowpea (Vigna Unguiculata (L.) Walp).**

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Clavigralla tomentosicollis stål, is a notorious pod-sucking bug of cowpea in tropical agro-ecosytems. The screening of cowpea lines for field or screen house resistance to pod-sucking bugs has not been undertaken in South Africa. Such studies will identify cowpea lines with a potential to significantly reduce yield losses encountered annually in farmers’ fields as a result of insect pest infestations. This paper reports on results of a study conducted in the laboratory using c. Tomentosicollis that were reared on fresh pods of two local cowpea varieties (glenda and bechuana white) and one improved variety (it03k-396-3). Results from the study indicate that pre-oviposition periods of mated females fed on glenda, bechuana white and it03k-396-3 were 2.5, 7 and 3.8 days, respectively. A relatively longer oviposition period of 56 days was recorded on it03k-369-3 compared to a shorter period of 51.75 days and 54.75 days on glenda and bechuana white, respectively. A significantly (f=8.3, p < 0.05) higher number of eggs (140 and 134) were laid by mated females which were fed on fresh pods of glenda and bechuana white, respectively, compared to 97.5 eggs when mated females were reared on it03k-369-3. A relatively higher daily rate of oviposition, 12.2 eggs /day was recorded on glenda, compared
to that on bechuana white (11.4 eggs /day) and on it03k-369-3 ( 10.23 eggs /day). Mated females lived for a significantly longer period on glenda (f= 4.4; p < 0.05) than it03k-369-3. Nymphal survival rate was significantly higher, at 76.7% (f=9.16, p < 0.05) on bechuana white than on it03k-369-3, (59.9%) and glenda, (53.3%). The nymphal weight gain was also significantly higher (f=8.11; p < 0.05) on bechuana white. Results obtained from this study have significant implications for future research pertaining to cowpea varietal resistance against insect pests in general, and the integrated control of pod-sucking bug infestations on grain legumes in particular.

Keywords: n/a

Response Of Soil-Surface Dwelling Invertebrates To Alien Invasive And Indigenous Plant Cover In King Sabata Dalindyebo (Ksd) Local Municipality, Eastern Cape, South Africa.

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The soil-surface dwelling invertebrate assemblage of four sites (habitat patches) in luchaba nature reserve was assessed using pitfall traps. A total of 335 specimens in three phyla (arthropoda, annelida and mollusca) were sampled. Of the nine arthropod orders recorded, four were identified to seven families and ten species while five orders and two phyla (annelida and mollusca) were separated into 15 morpho-species. The eucalypt site supported fewer taxa compared to indigenous acacia and grassland patches while the mixed alien patch attracted the highest numbers of invertebrate families, species and individuals. Although species composition across sites was not significantly different (p>0.05), specimen counts showed significant differences (p

Keywords: n/a

A Preliminary Study on The Identification Of Alien Invasive Fresh Water Fish Species In King Sabata Dalindyebo Municipality And Selected Surroundings, Eastern Cape South Africa.

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Faculty of natural science, department of biological and environmental sciences, walter Sisulu University, nelson mandela drive campus, p. Bag x1, 5099, Mthatha invasive alien species (ias) are recognized as one of the greatest threats to ecosystem stability and economic productivity and are therefore a matter of global concern. Global environmental changes and anthropogenic disturbances and biogeochemical cycling make ecosystem more susceptible to invasion by alien species which form a primary threat to endemic species. Scientific data on the distribution of invasive species is a pre requisite for strategic planning and implementation of control measures. Fresh water systems of the king sabata dalindyebo municipality and surroundings are also facing the challenge of being threatened by invasive fish species. In the present study an effort has been taken to identify alien invasive fresh water fishes in these areas. Eleven sites were selected for the study including eight from ksd municipality, two from port st johns and one from mbashe municipality. Coordinates of the areas were appropriately recorded, fishes photographed and preserved in 70% alcohol and identified using standard keys and with the help of experts. Five different alien invasive species of fishes identified in the water bodies inside ksd,
two from port st johns and two from mbashe. The present study demands the need for identification and prioritization of areas for intervention which requires detailed scientific study before devising conservation action plans for the same.

**Keywords:** invasive alien species, endemic species, freshwater, intervention, conservation, strategic planning

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**Elucidating On Paleoenvironments Of Kaolinitisation.**

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There are lots of kaolin occurrences in Africa. Over 292 kaolin deposits and occurrences have been documented in Africa and some occur within the continental boundaries between present day south west Africa (swa) and eastern south america (esa). This review attempts to highlight the use of kaolinite in reconstructing paleoenvironments of their formation. Hydrogen and oxygen isotopes are widely used to interpret the environmental conditions prevailing during mineral formation. Kaolinite line (kl) and supergene-hypogene line (shl) for δd−δ18o stable isotopes for kaolinite and the meteoric water line (mwl) are used in interpreting paleoenvironments for kaolinitisation. The δd and δ18o plot close to the kaolinite line indicate that the kaolinite is formed due to weathering and the supergene and hypogene line is used to distinguish between clay formed under the earth surface and high burial temperatures. Hydrogen and oxygen isotopic compositions of the kaolinitic rocks are very similar in all types of deposits and are consistent with a supergene origin: δ18okaol = 20.2‰ ±1‰, δdkaol = -55‰ to -67‰. Values of δd (-80 to -40‰) and δ18o (+17 to +23‰) are associated with kaolinite formed in hot climates whereas lower values are associated with kaolinite formed during weathering at high altitude. Hydrothermal kaolins have very low isotopic values and sedimentary kaolin have higher values and there is an overlap between the kaolinite from residual deposit (+15 to 19‰) and kaolinite of sedimentary origin (+19 to 23‰).

**Keywords:** kaolinitisation, kaolinite, paleoenvironments and stable isotopes

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**Mining Impacts On Soil Quality Related To Agriculture.**


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Mining and associated activities have negative impacts on the environment both during the mining operations and for years after mine closure. Unregulated mining sites and improperly disposed tailings have the potential to release harmful substances into the soil, air and water through erosion. Mining operations often contaminate the soil with toxic heavy metals and acids. The heavy metals and acids from the mining sites could be transported to the nearby farmlands, communities, aquatic ecosystem and water sources. This depends on the distance between the mining location and the surrounding areas, and also the structure of the mining operation or tailings is equally important. The acids and heavy metals dispersed from those mining sites to the environment pose danger by contaminating soil and water resources. In the case of contaminated farmlands, soil ph could be lowered to prevent plants and microorganisms from thriving and thereby making the present heavy metals toxic. Other essential nutrient elements such as nitrogen, phosphorus and potassium, sulfur, magnesium, calcium, iron, zinc, manganese, molybdenum, copper and boron, could also be absorbed by the hydrogen ions from the
The heavy metals may enter into the food chain, resulting in health implications. The paper therefore looks at the impacts of mining on the surrounding soils of abandoned mines and measures of developing effective management strategies for their rehabilitation.

**Keywords:** health implications, heavy metals, mining impacts, water and soil contamination

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**Mineral Phase Transformation of Kaolin At Lwamondo and Zebediela, Limpopo Province, South Africa.**

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The formation of kaolinite and its stability depend upon the changes within its environment. Transformation of kaolin from one type to another is a function of temperature, pressure and time. Thermal behaviour is very important in kaolin transformation especially for industrial application. Temperature plays a role in phase transformation, sintering mechanisms, morphological characterization and mineralogical changes before and after sintering. Kaolin undergoes a series of phase transformation as the temperature is raised from room temperature to 1300 °C. It is transformed to metakaolin above a temperature of 400 °C, mullite will appear at 1050 °C and quartz starts to appear at temperature around 1300 °C. Previous studies mentioned mineralogical composition of zebediela and lwamondo. It was revealed that mineralogical composition of zebediela and lwamondo constituent kaolinite, illite, dickite and quartz. When the samples were fired at 1050 °C, mullite and quartz where produced. At 1300 °C quartz, mullite and cristoballite were detected. It was stated that the appearance of quartz limit the application of zebediela and lwamondo kaolin for brick manufacturing. In the present study, kaolin will be transformed by firing in order to develop new material for bricks production. Xrd, tem and dta analyses will be carried out on both raw and fired clays for identification, and study of mineral phases and their changes contained in samples. The data will indicate whether kaolin raw materials are better than fired kaolin materials for manufacturing of bricks. For comparison reference raw material rich in kaolin will be used. Kaolin materials will be characterized and the quality of products will be improved. Key words: kaolin, mullite, phase transformation

**Keywords:** kaolin mullite, phase transformation

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**Sequences Of (ψ; Φ)- Weakly Contractive Maps And Stability Of Fixed Points.**

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many problems arising in different areas of mathematics, such as optimization, variational analysis and differential and integral equations, can be modelled by the equation $tx=x$ where $t$ is generally a nonlinear operator and $x$ an element of a topological space $x$. The solutions to this equation are called fixed points of $t$ and the theorems concerning the existence and properties of fixed points are known as fixed point theorems. Fixed points have been used as a study tool to investigate the relationship between the convergence of sequences of mappings on a metric space and the sequence of their fixed points. This area of research is called the stability of fixed points. In this context, the first result was
obtained by bonsall where he proved that the point wise convergence of a sequence of contraction mappings \( \{ t_n \} \) on a metric space implies the convergence of their corresponding fixed points. In respect of the stability of fixed points, uniform convergence and point wise convergence play an important role. However, when the domain of definition of all mappings in question is neither the same space nor a unique nonempty subset of it, the above notions do not work. This difficulty has been overcome by barbet and nachi where some new notions of convergence called \((g)\)-convergence and \((h)\)-convergence have been introduced and utilized to obtain stability results in a metric space. In this paper, we consider a sequence \( \{ t_n \} \) of \((\psi; \phi)\)-weakly contractive mappings which are only defined on a subset \( x_n \) of the metric space \( (x; d) \) and obtain stability results using the notions of \((g)\)-convergence and \((h)\)-convergence.

**Keywords:** fixed point, stability, \(g\)-convergence, \(h\)-convergence, metric space, \((\psi; \phi)\)-weakly contractive mappings.

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**The Prevalence And Distribution Of Candida Species Isolated From National Health Laboratory Services-Nelson Mandela Academic Complex From 2013-2014.**

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Candida species are opportunistic fungal pathogens in humans and are the leading cause of fungal infections and the fourth most common cause of nosocomial bloodstream infections. C. Albicans remains the most common cause of candida infections, there is however a rapid change in the distributions of candida species worldwide. The aim of this study was to determine the prevalence and species distributions of candida isolates. 206 yeast isolates were collected from national health laboratory services-Mthatha and analyzed for candida species using microscopy and fungal culture, the isolates were further characterized to species level using the chromogenic assay, chromagar candida (mediamage, sa). Of the 206 yeast isolates, four species of candida were identified namely; c. Albicans (45%), c. Glabrata (30.8%), c. Dublinskiens (10.9%) and c. Tropicalis (12.3%). There was no significant difference in species distribution amongst the different clinical specimens \((x^2 = 36, df= 66 \text{ and } p= 0.999)\). While c. Albicans was the most isolated species, it must however be noted that most of the cases were caused by non-albicans species thus it is important for laboratories to rapidly identify isolates to species in order to optimize antifungal therapy. Keywords: candida, species distribution, laboratory diagnosis

**Keywords:** candida, species distribution, laboratory diagnosis

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**Characterization and screening for antagonism of bacteria associated with postharvest fungus diseases of fruit produced by small scale farmers in the Vhembe region.**

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A study on the fungi associated with postharvest diseases of fruit produced by small holder farmers in the Vhembe region forms part of an initiative during which the arc-ppri launched the conducting of plant health clinics in the Limpopo Province in collaboration with limpopo’s provincial government
department of agriculture. During these clinics, farmers presented their plant health problems to the extension officers ("plant doctors") and information was recorded to also determine possible needs for further research. As a result, a project was started to investigate the fungi associated with postharvest disease of fruit produced in this area. One of the aspects of the study also aimed to isolate, identify and screen the bacteria present on the fruit surfaces for possible antagonists which could be used in the biological control of these fungi. Bacteria were isolated from avocado, banana, mango and papaya and identifications were done using a standard api 20-e kit. All bacteria isolated belonged to the enterobacteriaceae and genera included aeromonas, chryseomonas, enterobacter, esherichia, klebsiella, klyuvera, leclercia, pantoae, providencia and serratio. Five of the species obtained have successfully been used as antagonists in biological control in previous studies, including control of anthracnose caused by collectotrichum species. Results presented here include the species composition of the bacteria isolates, as well as results of the in vitro screening for antagonism against six different collectotrichum species that were associated with postharvest symptoms.

**Keywords:** antagonism, anthracnose, colletotrichum, enterobacteriaceae, in vitro screening, postharvest fungi.

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**Aspects Of Symmetries And Conservation Laws Of The Classical Halphen Systems.**

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The classical halphen equation which describes the two-monopole system arises in similarity reductions of associativity equations on a three dimensional Frobenius manifold. This nonlinear system of ordinary differential equations does not admit rational rst integrals, and cannot be solved by the general methods for solving ordinary differential equations. In this talk, lie group analysis is applied to the system, which is found to admit a number of lie point symmetries, including several solvable lie algebras. A reduction of the system is performed using the admitted symmetries and conservation laws are determined.

**Keywords:** lie group analysis, adjoint equation, noether symmetry, lagrangian, conser- vation laws.

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**Determination of pb, cu, zn, mn and fe in cymbopogon validus and hyparrhenia hirta along komga road.**

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cymbopogon validus and hyparrhenia hirta belong to the family poaceae, they are thatching grasses with important medicinal value. Their decoction and essential oils are used as anti-infective, antispasmodic amongst other medicinal values. This work attempts to assess the concentration levels of cu, pb, zn, mn and fe found in hyparrhenia hirta and cymbopogon validus plant species that were harvested along komga road. Wet digestion procedure was used for dissolution of the plant samples and atomic absorption spectrometry (aas) was utilized for the determination of zn, cu, fe, pb and mn in fresh and dry plant parts (flowers and leaves). Aas analysis reveals that cymbopogon validus (dry leaves and fresh flowers and hyparrhenia hirta (fresh leaves and fresh flowers) had higher copper levels
when compared to other plant parts. Dry flowers of Cymbopogon validus had the lowest copper content and highest iron content was found in fresh flowers of Cymbopogon validus. Very low manganese level were found in dry flowers of Cymbopogon validus. Equal concentration levels of zinc were found in fresh leaves of Cymbopogon validus and dry leaves of Hyparrhenia hirta. The concentration level of metal ions found in these plants are below the permissible limits set by WHO.

**Keywords:** medicinal plants, Cymbopogon validus, Hyparrhenia hirta, metal ions

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**An inventory of epigeal ants of the western Soutpansberg mountain range, South Africa.**

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The distribution, abundance and sensitivity of invertebrates to habitat change are largely unknown. Long-term monitoring of ecological gradients with standardised and comparable protocols can form the basis of a better understanding. Altitudinal gradients are particularly relevant within this context. Here we provide baseline data of for ant indicator taxa and their distribution collected over a five-year period across the Soutpansberg mountain range, South Africa. Standardised pitfall surveys across 11 sites yielded a total of 133 species in 38 genera and 6 subfamilies. Sample coverage of epigeal ants was 0.98 for the transect as a whole. Of these species, 21% were restricted to the southern slope of the mountain and 14% to the northern slope. Forty-two percent of the species had significant indvals larger than 70 and several of these were restricted to elevational zones pointing to a narrow and restricted distribution of several ant species along this altitudinal gradient. Extrapolated richness estimates reached an asymptote for all, except for three sites. These were the only sites impacted by bush encroachment. Observed richness was the highest at a low-altitude mesic site that is exposed to considerable disturbance by mega-herbivores and mechanical clearing of woody vegetation. Future monitoring should use identified indicator taxa to monitor expansion of bush encroachment, particularly with reference to their impacts on grasslands. Bush encroachment could endanger several ant species associated with mesic grasslands and woodlands on the mountain, as well as ant diversity, as these were the habitats with the highest ant diversity.

**Keywords:** long-term; global change; Formicidae; Soutpansberg mountain; indicators; invertebrates

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**Synthesis, transformation and biological evaluation of chromone derivatives.**

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Chromones are important bioactive plant-based compounds exhibiting broad-spectrum pharmacological properties ranging from antibacterial, antiviral, antifungal, anti-inflammatory, etc1,2 or exhibit interesting chemical reactions. Literature review has indicated that chromones and flavones having the hydroxy substituents can inhibit HIV-protease, an important constituent enzyme of the AIDS virus that is responsible for viral replication.3,4 The rigid bicyclic chromone moiety has been classified as a privileged structure in the drug discovery. In our efforts to synthesize potentially bioactive chromones which may be used for the treatment of opportunistic infections such as HIV, AIDS, TB, malaria or other applications, the results of an investigation on the synthesis, further transformation and biological evaluation of selected chromone derivatives will be presented. References: 1. E.Jr Middleton and G.Drezewiecki, Biochem. Pharmacol, 1984, 33, 3333 2. M. Bittner, J. Vargas, and F. Bohlman, Phytochemistry, 1983, 22, 1523 3. M.J. Balunas, and Kinghorn A.D., Medicinal Chemistry and
Prior to 1994, an estimated 30 to 40% of South Africa’s population, approximately 14 to 18 million people, was without adequate water supply services. As of 2004, some 10 million more people have been supplied with drinking water services. Alfred Nzo district municipality reported an increase of 4075 more household services between 2011 and 2013 having been connected to free basic water services. The reliability of this water supply, especially in rural areas however, has not yet been established, and is therefore unknown. This study therefore seeks to establish the reliability of the supply of water to the rural communities in Mt. Frere, one of the local municipalities in the Alfred Nzo district municipality, in Eastern Cape, South Africa. To realise that aim, the study set the following objectives: determining if the supply of water from the standpipes is broken/ faulty or not; if so, determining the intervals of interruptions in the water supply service; establishing the alternative sources of water supply during the period of interruptions; and also establishing the perceptions of the communities about their water supply. Six rural villages in Mt. Frere with piped water were selected using quota sampling or non-probability sampling. Questionnaire surveys were conducted in each village. Between 15 and 18 households per village were randomly selected during the survey. Geographic coordinates of each household that participated in the survey were captured using GPS, and were later mapped to show the distribution of the sample households in relation to the entire population. The questionnaire survey was supplemented with non-participant observations and some pictorial evidence was also captured wherever possible. Results of the study show that the supply of water in all rural villages studied was completely not reliable. In most villages, the water supply infrastructure was broken. Some communities noted that they had been without water for months. They also noted that the municipality did not even send the water supply trucks. They were thus left with no option, but to go back to the very unprotected natural sources the supply was meant to protect them from. The water supply situation in the rural Mt. Frere requires urgent attention as these communities are vulnerable to the waterborne diseases.

**Keywords:** water supply, reliability, standpipes, rural villages, waterborne diseases

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**An Application Of The Avrami Equation To The Analysis Of Hydraulic Conductivity Data.**

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The avrami equation describes the transformation kinetics of phase changes. It has been widely used to describe polymeric crystallizations, but because the transformation it describes is sigmoidal in nature, with an initial lag-period followed by a period of relatively rapid growth, and then a leveling off, it resembles a typical hydraulic conductivity plot for a soil using the drop-head method. In this paper, the avrami equation has been applied to hydraulic conductivity data with the intention of obtaining new insight into the equation constants in terms of the hydraulic conductivity parameters.
Carotenoids And Antioxidant Profile Of Flour From Four Sweet Potato (Ipomoea Batatas (L.) Lam) Cultivars From Limpopo Province, South Africa.

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We investigated total carotenoids, antioxidant profile, β- / α-carotene and mineral contents of sweet potato (ipomoea batatas) flour of three orange fleshed sweet potato (ofsp) cultivars and one cream fleshed sweet potato (cfsp) cultivar from Limpopo Province. Carotenoids, ferric reducing antioxidant power (frap) and 2,2-diphenyl-1-picrylhydrazyl (dpph) capacity were investigated using a spectrophotometer. The mineral content was determined using scanning electron microscope (sem). Carotenoids did not vary significantly among the cultivars even though impilo had the highest (7.56 g/ml) and dagga the lowest (6.91 g/ml). Mvuvhelo (1.33 g/ml) the (cfsp) cultivar had significantly (p < 0.05) the lowest total carotenoids. Dagga had significantly lower (16.15 μmol (te)/g) d.w frap among the three ofsp impilo (21.12 μmol (te)/g) d.w) had the highest. Radical scavenging activity was highest in bophelo (63.37 mmaeml-1) and lowest in dagga (26.93 mmaeml-1). The frap values were significantly correlated to dpph values (0.563**). Both frap and dpph values were significantly correlated to total carotenoids values (0.830**) and (0.0.486*) respectively. There were significant differences in β-carotene content between all cultivars and ranged from 1.71 μg/g in mvuvheloto 201.5 μg/g in dagga. The α-carotene content showed a similar trend to that of β-carotene ranging from mvuvhelo (0.003 mol/l) to dagga (0.057 mol/l). Dagga, bophelo and impilo showed consistently higher amounts of potassium (k) and lower amounts of magnesium chlorine and calcium across the two locations. This study is useful in selection of a cultivar with higher antioxidant capacity.

Keywords: carotenoids, sweet potato, antioxidants, flour, β-, α-carotene.

Comparative Evaluation Of Different Extenders And Sperm Protectors To Keep The Spermatozoa Viable For More Than 24 Hours.

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Preservation of semen is an important process to ensure that semen quality is sufficient for assisted reproductive technology. The aim of this study was to compare the effectiveness of three different extenders on nguni bull semen stored at controlled room temperature 24 °c for 3 days, as an alternative to frozen-thawed semen straws used for artificial insemination. Two nguni bulls were used for semen collection with the aid of an electro ejaculator. The collected samples were transported to the laboratory at 37 °c for evaluation within 15 minutes. The two semen samples were pooled together before being aliquoted into three extenders namely triladyl, modified ham’s f10 and m199 culture media, at a dilution ratio of 1:4 (semen: extender), and then stored at controlled room temperature 24 °c. Sperm motility was analysed after 0, 24, 48 and 72 hours. Morphology and viability were analysed after 72 hours. The study was replicated four times and data was analysed by anova. Triladyl had higher sperm viability rate and total motility rate for 72 hours (p0.05), between the two nguni bulls. In conclusion, nguni semen can be preserved in triladyl or ham’s f10 and m199 culture media stored at 24 °c and stay alive.
for 72 hours. Triladyl proved to be the best suitable extender showing higher sperm viability and total motility rates as compared to ham’s f10 and m199 modified culture media.

Keywords: bull semen, extender, triladyl, ham’s f10, m199, viability

Electrocatalytic Detection Of Ascorbic Acid With An Edge-Plane Pyrolytic Graphite Electrode Modified With Electro-Polymerised Nickel Tetra-Aminophthalocyanine.

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An edge-plane pyrolytic graphite electrode was modified with electro-polymerized nickel tetra-aminophthalocyanine and the electrocatalytic behaviour of the modified electrode was investigated through the electrocatalytic detection of ascorbic acid dissolved in 0.1 m, ph 7 phosphate buffer solution. An oxidation peak potential of 0.034 v and a linear measuring range of 3.6 · 10-4 m · 12.94 · 10-4 m were observed for ascorbic acid. The sensitivity of the nickel tetra-amino phthalocyanine-modified electrode was found to be 18.64 · a/mm.

Keywords: edge-plane, electropolymerized, electrocatalytic, nickel tetra-aminophthalocyanine, ascorbic acid, phosphate buffer

Synthesis, characterization and performance of iron oxide coated bentonite clay in the removal of fluoride from drinking water.

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Iron modified clay materials have been proposed as adsorbent mediums to remove fluoride from groundwater that has high fluoride levels beyond the recommended value of 1.5 mg/l. This study investigated the removal of fluoride from aqueous solutions by a newly synthesised iron oxide coated bentonite clay. Characterisation was done by xrf, xrd, sem, bet and ftir. Cec and pzc were determined using standard methods. A batch sorption protocol was applied and the system variables investigated included, initial concentration of the sorbate, agitation time, adsorbent dose, ph and temperature. The iron oxide coated bentonite clay reduced the fluoride concentration to below 1.5 mg/l in the drinking water, a level which meets the drinking water standard recommended by the world health organisation. Fluoride was effectively adsorbed at the optimum ph 2, reducing fluoride concentration from 5mg/l to 0.87mg/l. However, between the ph range of 6 and 9 the removal capacity was above 67% and at this ph range, the material showed minimal metal leaching into aqueous solution. The experimental data fitted well to the freundlich isotherm compared to the langmuir isotherm but the best fit was given by the dubinin radushkevich isotherm. The adsorption kinetics fitted the pseudo second order model. The calculated activation energy for adsorption was 281.83 kJ/mol, indicating the adsorption process to be chemisorption. The high adsorption capacity of iron oxide-coated bentonite clay indicates the potential use of this adsorbent for fluoride removal from aqueous medium.

Keywords: adsorption, fluoride, isotherms, kinetics, thermodynamics, bentonite
Photochemistry Of Carbontetraiodide With Crown Ether And Cyclodextrin.
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Carbontetraiodide is a rich source of molecular iodine. Iodine is known to possess powerful microbicidal and antibacterial properties. There is little known about the chemistry of carbontetraiodide. In this work, carbontetraiodide was synthesized in high purity from the distillation of methyliodide in the presence of carbontetrachloride using catalytic amount of pure aluminium oxide. Pure carbontetraiodide was successfully reacted with 18 crown 6 ether to produce a yellow complex; a light brown iodine complex was also produced with β cyclodextrin. Kinetics of the reaction between carbontetraiodide with the crown ether was followed by running time drive scans of the reaction on the ultraviolet visible spectrophotometer. The observation is that the carbontetraiodide reacts with the crown ether in distinct phases. The first phase occurring under darkness involves the release of molecular iodine which subsequently enters the cavity framework as the second phase to produce the bright yellow complex. In the final phase, and under light conditions, iodine is ejected from the complex. The reaction with β cyclodextrin follows similar phases except the iodine is never ejected from the complex. These results suggest that the interaction of carbontetraiodide with crown ether is a photochemical reaction. The cyclodextrin complex with iodine on the one hand, is more stable under similar conditions.

Keywords: carbontetraiodide, 18crown6, iodine, β cyclodextrin, phases, kinetics, light

Benthic Macroinvertebrate Assemblage Composition And Distribution Pattern In The
Upper Mthatha River, Eastern Cape, South Africa.
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Benthic macroinvertebrate species were sampled and environmental variables were measured at langeni forest and kambi valley in the upper Mthatha river with varying degrees of human impact in 2010-2011. Four species, simulium adersi pomeroy, baetis harrisoni barnard, pseudocloeon sp. And tricorythus sp. Occurred at all site sampling units. Specimen counts increased from the rainy months of january to april/may, and higher numbers of individuals occurred at langeni. Species occurrences per site were directly or indirectly affected by season, substrate and habitat heterogeneity. Canonical correspondence analysis (cca) results showed that conductivity, ph, flow, substrate and marginal vegetation, were important in determining species distribution patterns. Both rare/habitat-restricted and widespread/common benthic macroinvertebrates identified in this study can be used as indicators for assessing the ecological integrity of the Mthatha river. Habitat management along the river should aim at preserving indigenous vegetation especially during the summer season when habitat requirements are optimal for growth stages of most benthic macroinvertebrate fauna. The practicality of using species-level surveys on a routine basis can be challenging, given the lack of taxonomic expertise and time constraints. It might be advisable to select a few indicator species and to monitor them as surrogates for the whole community.

Keywords: n/a
A Comparative Study Of The Histology And Microanatomy Of The Stomach In Schilbe Intermedius And Tilapia Sparrmanii.

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the teleost stomach shows a morphology which exhibits a distinct difference which correlates with diet, feeding habit, body shape and also environmental conditions. It is well developed and structurally adapted to accommodate a wide variety of diets. The stomach in fish, lies in the upper part of the abdomen between the oesophagus and duodenum which, forms the most proximal portion of the small intestine. Its main function is to mix food with gastric enzymes and fluids, converting the contents to a semi fluid mass of partly digested food. The digested food is then slowly passed to the duodenum for further breakdown and absorption. The stomach is absent in some fish. Furthermore, in some fish species, the stomach performs other roles other than food digestion. The current research study was aimed to examine the functional aspects of the stomach in two fish with diverse feeding habits. Histology and topographical architecture in the mucosal epithelium of the stomach of schilbe intermedius and tilapia sparrmanii were studied using standard histological procedures. Physiological functions of the stomach of the aforesaid fish will be discussed.

Keywords: anatomy, microstructure, stomach, schilbe intermedia, tilapia sparrmanii

An investigation into the handling of bio-medical waste and the adverse effects of improper disposal to both humans and the environment: a case study of hospitals in the OR Tambo district, Eastern Cape, South Africa.

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Appropriate management and disposal of bio-medical waste is very necessary. Unfortunately, negligence and lack of adequate knowledge and practice on bio-medical waste disposal leads to dull health and environment apprehension. The aim of the study is to investigate the handling of bio-medical waste and the adverse effects of improper disposal to both humans and the environment in different hospitals in the OR Tambo district, Eastern Cape, South Africa. In order to realize this aim, the researcher had to identify the potential impacts that medical wastes pose to both human health and the natural environment due to improper disposal and management techniques; to gather information on the collection, treatment, handling, hauling, and disposal of medical wastes; to determine the level of knowledge and awareness of individuals involved in the medical waste industry in the hospitals; and to give alternative means of dealing with medical wastes, other than the ones currently being used in the hospitals. The researcher depended on a scientific questionnaire that was distributed and developed based on previous studies. The study population is composed of selected hospitals in OR Tambo and the questionnaires were distributed on the hospitals that shows corporation with the researcher. The study uses the descriptive and analysing statistics techniques to test its theories. Outcomes from this study discovered lack of knowledge and awareness of bio-medical waste management even among health workers. This has led to the poor practice of biomedical waste handling and management, hence exposing themselves and the public in general to health and environment hazards. The study recommends that hospitals show commitment to apply the rules and regulations of the South African
bureau of standards (sabs) in the waste management and to increase the focus on the training program of the stuff and employees.

**Keywords:** bio medical waste, improper disposal, human health, awareness, hospitals, training program

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**Factors Contributing To The Defaulting To Tuberculosis Treatment Protocol By Patients In Mdr Unit Of Limpopo Province.**

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Even though people know that defaulting to tuberculosis treatment is deadly, they still find themselves defaulting due to several factors and as a result the mdr-tb pandemic is growing in prevalence and global significance. Aim of the study was to determine the factors that contribute to patients defaulting to tb treatment protocol in mdr unit of Limpopo Province. The study design was qualitative, using in-depth interviews and focus group discussions as method of data collection. The population of the study consisted of all mdr-tb patients hospitalized at mdr unit of Limpopo Province. Non probability, open and purposive sampling methods were employed. The sample size was all registered mdr-tb patients both males and females on mdr-tb treatment regimen at mdr hospital. Data was collected by means of an interview guide and a tape recorder and was analyzed using thematically. Participants indicated that there are several factors that are contributing to their defaulting to treatment, and the factors were classified as themes. The factors include, poverty and unemployment, alcoholism, lack of social and financial support from family members, migration, cultural beliefs and attitudes, stigmatization of tb. The study concluded that there are several factors that are contributing to the defaulting to tuberculosis treatment protocol by patients in mdr unit in Limpopo Province. Management should take such factors into consideration when dot supporters are allocated.

**Keywords:** factors, defaulting, tuberculosis, treatment, protocol, mdr unit

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**The Effectiveness Of Solid Waste Management Policies And The Stipulated By-Laws In Ingquza Local Municipality, Eastern Cape, South Africa.**

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Solid waste is a growing global problem with adverse environmental and health effects and South Africa is no exception. Effective and practical municipal waste management policies are key to ensure the aesthetic outlook of the environment and healthy living conditions. In the Eastern Cape province of South Africa, particularly in o.r tambo district and in ingquza local municipality, mismanagement of solid waste is still a growing challenge. The research aimed to establish municipality compliance with national policies, stipulated by-laws, and derive solutions to solid waste backlog. Questionnaires with open ended questions to gather resident's perception on solid waste management, interviews, to ascertain the means by which they manage solid waste, and the review of published materials and physical observations were employed. Results revealed that solid waste problems in the municipality were influenced greatly by lack of compliance with the national standards on solid waste management. The study suggests that solid waste management policies should be implemented and adhered to, education and public awareness on solid waste management should be intensified by the local authorities. Incentives to encourage waste recycling should be given. In addition, it is vital to emulate other municipalities with successful solid waste management.
The increasing volume and complexity of waste associated with the modern economy is posing a serious risk to ecosystems and human health. This is particularly due to the rapid increase in rural-urban migration and the increase in per capita income as well as change in consumption patterns brought about by development. The aim of the study was to investigate the effect of solid waste on the environment in the king sabatha dalindyebo local municipality (ksdlm). The paper evaluated the effectiveness of the current strategy of waste eradication, the measures that the municipality employed in order to make sure that the environmental degradation was mitigated. The study investigated if there were any factors that exacerbated the solid waste generation and identified the challenges faced by the ksdlm when it comes to waste disposal and suggest strategies that can be employed in tackling challenges faced by the ksdlm particularly the ilitha community situated right next to the landfill site. The data were collected through observations, open – ended questionnaires, interviews, and discussions with key respondents from selected households. In addition to the primary data collected, secondary data were also collected through scientific journals, books, internet and unpublished papers. Results revealed that the growing population in urban areas, creates increasing quantities of waste consequently, causing negative effects on the environment such as human health, discouraging tourism and establishment of businesses. These results highlight the need for strategies such as waste minimization, law enforcement, and collective participation of all stakeholders including government authorities, private sector and the general public.

Keywords: urbanisation, landfill, illegal dumping, economic development
systolic and diastolic blood pressures ≤ 130 mmhg and 80 mmhg respectively. Optimal waist circumference occurred in 10.6% of patients. Ldl-cholesterol ≤ 2.5 mmol/l, triglyceride < 1.7 mmol/l, hdl-cholesterol > 1 mmol/l were respectively found in 60.1%, 45.2% and 75.6% of patients. Hypertensives were older 62.2±11.2 versus 42.4±15.9 years, p<0.0001; with higher body mass index 31.9±7.8 versus 28.1±7.1 years, p=0.002 and had longer diabetes duration 10±8.9 versus 4±6 years, p<0.0001.

Conclusion: there was low attainment of blood pressure and glycaemic goals in our diabetes patients. Hypertension was associated with advanced age, type 2 diabetes, long diabetes duration and higher body mass index.

**Key words:** audit of care, diabetes mellitus, hypertension, obesity.

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**Choriocarcinoma With Ring Enhancing Nervous System Lesions In An HIV Patient: A Case Report.**

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Introduction: choriocarcinoma is an uncommon cause of ring enhancing nervous system lesions in persons with immunodeficiency virus unlike toxoplasmosis, tuberculosis and lymphoma.

Case report: this is a case report of 29 year old black African female infected with the human immunodeficiency virus. She presented with nuchal pains and quadriplegia. Computed tomography of the brain and cervical cord revealed multiple ring enhancing lesions. She was empirically treated for toxoplasmosis and tuberculosis but demised after 5 days of presentation. Histology of specimens obtained at autopsy confirmed metastatic choriocarcinoma.

Conclusion: non-human immunodeficiency virus diseases should be entertained in the differential causes of ring enhancing nervous system lesions.

**Key words:** human immunodeficiency virus, ring enhancing lesions, metastatic choriocarcinoma.

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**Past, Present and Future Of E-Learning In South African Medical Education System.**

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Medical faculty of Walter Sisulu University (previously university of Transkei) was a pioneer in telemedicine and distance learning mostly due to remote location. Digital still pathology and radiology images were sent to afip in Washington, dc, usa for diagnostic and continuous education purposes since 1996. Live internet based tele-pathology has been widely used for consultation between pathology departments of medical schools. Four pathology department schools in South Africa have virtual histology slide digitizers. Pacs network is used in academic hospitals to store and transmit as well as provide instant access to radiology examinations in wards but also to exchange between hospitals if patient is transferred for further management.

Isdn based videoconferencing was used in late 90-ties to teach medical students when in rural hospitals for community based learning. Teleconferences using ordinary telephones are still used for some of distance programs, e.g. Africa calls – cytology training program run from annenberg centre in california, usa. However, web based technologies are nowadays becoming a standard to transmit educational material (example worldwide HIV online provider education program (hope from Harvard university & Massachusetts general hospital in boston, usa).
The current trend is to link South African medical schools in effort to provide better education and exchange of the best teaching practices especially for postgraduate training. Challenges, lesson learnt and future development will be presented.

An evaluation of the role of an intermediate care facility in the continuum of care in western cape, South Africa.

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A comprehensive primary health care approach includes clear referral and continuity of care pathways. South Africa lacks data that describe intermediate care (ic) services and its role in the health system. This study aimed to describe the model of service provision at an ic facility and the role it plays in the continuity of care in cape town.

A multi-method design was used. Sixty-eight patients were recruited in a prospective cohort design over a one month period in mid-2011. Patient data were collected from a clinical record review and an interviewer-administered questionnaire, administered at a median interval between admission and interview of 11 days to assess primary and secondary diagnosis, knowledge of and previous use of home based care (hbc) services, reason for admission, demographics and information on referring institution. A telephonic questionnaire administered to 84% of study participants at 9 weeks post-discharge on average recorded their vital status, use of hbc post-discharge and their level of satisfaction with care received at the ic facility.

Seventy staff members (82%) were recruited in a cross-sectional study using a self-administered questionnaire to describe demographics, level of education and skills in relation to what they did for patients and what they thought patients needed. A cox regression model was run to identify predictors of survival and the effect of a care-plan on survival.

Of the 68 participants, 38% and 24% were referred from a secondary and tertiary hospital, respectively, and 78% were resident of a higher income community. Stroke (35%) was the most common single reason for admission at acute hospital. The three most common reasons reported by patients why care was better at the ic facility than the referring institution was the caring and friendly staff, the presence of physiotherapy and the wound care. Even though a large proportion of the ic inpatients had been admitted in a health facility on the year preceding the study, only 13 patients (21%) had used a community health worker (chw) ever before and only 25% (n=15) of the discharged patients had a confirmed chw visit post-discharge. Of the 57 patients that could be traced on follow-up, 21(37%) had died. The presence of a care-plan was significantly associated with a 62% lower risk of death (hazard ratio: 0.380; ci 0.149–0.972). Notably, 46% of staff members reported performing roles that were outside their scope of practice and there was a mismatch between what staff reported doing and their actual tasks.

Patients and family understood this service as a caring environment that is primarily responsible for rehabilitation services. A care-plan which extends beyond admission could have a significant impact on reducing mortality. Ic services should therefore be recognised as an integral part of the health system and it should be accessed by all who need it.
**Key words:** subacute care; sub-acute care; intermediate care; step-down facilities; stroke rehabilitation; continuity of care; care plan; cape town; South Africa

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**Investigation Of The Effects Of A Plant Extract On The Liver Of Male Wistar Rats On A Normal Diet And A High Fat Diet.**

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Investigation of the effects of a plant extract on the liver of male wistar rats on a normal diet and a high fat diet. Obesity is globally continuing to be a pandemic. Non-alcoholic steatohepatitis is a consequence of obesity. This is the deposition of fat in the liver resulting in fibrosis of the liver. The study aimed to determine the effect of high fat diet on the hepatic histopathology of rats given fat diet for nine months; the effect of plant extract sutherlandia frutescens on the liver histopathology of these rats; to evaluate the progression of nash by measuring the amount of fibrosis around the hepatic portal triad and the portal vein using sirius red stain; and to use the above findings to draw conclusions with regards to effect of the plant on the rat livers with or without steatosis. The livers of rats were harvested, fixed and processed through three histological protocols. Steatosis, bile duct hyperplasia, and fibrosis are observed as well as glycogen storage in the liver. Key words: obesity, non-alcoholic steato-hepatitis, fibrosis, sutherlandia frutescens

**Keywords:** obesity, non-alcoholic steato-hepatitis, fibrosis, sutherlandia frutescens

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**Use Of Traditional And Alternative Healers In A Cohort Of Psychiatric Patients In Nelson Mandela Metropole.**

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South African (sa) studies show that 70% to 84% of patients consult traditional healers (ths).1,2,3, in the sa stress and health study (sash), 5.7% of persons with mental disorder had received conventional mental health care in the preceding year.4 while 5.8% of the population had accessed a traditional or alternative healer (tah); 6.6% used social or religion-based practitioners' services. Use of tahs by psychiatric patients in South Africa (sa) is thus an essential research area.
Investigate pattern of use of tajs in 254 psychiatric patients in nelson mandela metropole (nmbm). Subjects, n = 254, were interviewed at 6 sites, utilising an interview schedule enquiring about consultation of tajs in the past year. (see table 1) Black respondents and males were more likely to consult but gender differences not statistically significant. Males and subjects 35 to 49 year age-group more likely to consult religious-aligned healers. Those aged 18 – 34 years more likely to consult all three types of healers. Forty-five (58%) of the consulters indicated medical treatment was more helpful than the taj’s and yet 43 (55%) of them said they would consult a tah again. Consultation prevalence was 31%. Being black was associated with consultation. Males and those aged 35-49 years were more likely to consult a religious-aligned healer. Those aged 18-34 years were more likely to consult all three types of healers. Medical intervention was reported as more helpful than tah’s but most consulters intended to consult tajs again.

**Keywords:** traditional, healer, alternative, complementary, potion, intervention.

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**Substance Use And Comorbid Psychiatric Diagnosis In An Acute Mental Health Unit: One Year Prevalence, Clinical And Demographic Determinants.**

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South African data on substance use and comorbid psychiatric diagnosis (dual diagnosis) is deficient; so is data on appropriate evidence-based interventions.

1. Investigate prevalence of dual diagnosis in the Mthatha mental health unit
2. Describe associated characteristics.

Retrospective analysis of 105 consecutive files of patients presenting beginning of january 2014 to end of december 2014, was undertaken, in the Mthatha mental health unit, a 60-bed unit in the oliver tambo district municipality (ortdm). A multivariate analysis was undertaken on the data. After adjustment for confounding factors, significant and independent predictors of dual-diagnosis were identified through calculation the odds ratio (or: 95% ci) for each predictive factor. The twelve-month prevalence for dual diagnosis in the unit was 29.6%. After adjusting for confounders using multivariate logistic regression, the following were significantly and independently associated with bipolar mood disorder (manic episode):

1. HIV infection (or=10.7; 95%ci 2.6-44.6; p<0.001) and
2. Recurrent hospitalizations greater than 3 (or=5; 95%ci 1.9-13.1; p<0.001);

After adjusting for confounders (westernization, HIV infection, age, hospitalizations, religion, use of heavy alcohol, hypertension, and poly-substance abuse), male gender (or= 18.4; 95%ci 2.2-153; p=0.007) showed a significant association with cannabis use (or= 3.8; 95%ci 1.5-10; p=0.006) and schizophrenia. Female gender showed a significant association with HIV sero-positivity, mood symptoms and heavy alcohol intake or methaqualone use.

Prevalence of dual diagnosis was 29, 6% and repeated hospitalizations, HIV infection, and cannabis use were significant contributing factors. Evidence-based, integrated intervention strategies are required to address the dual diagnosis challenge.

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**Keywords:** dual-diagnosis, co-morbid, cannabis, mandrax, HIV, substance abuse, OR Tambo district

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**Mental Health Screening Tools Suitable For the South African Population: A Systematic Review.**

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The South African population consists of a diverse group of people. The majority of this population is black (80.2%), followed by coloured people (8.8%), white people (8.4%) and Indian/Asian people (2.4%)\(^1\). Due to this diversity, identification of an effective and generalizable screening tool for mental illness in South Africa poses a unique challenge. Identification of appropriate screening tools will aid in case detection and management at primary care level while limiting unnecessary referrals to overburdened mental health care services. The lifetime prevalence for any psychiatric disorder in South Africa is 30.3%\(^2\). The most common disorders are anxiety disorders, substance use disorders and mood disorders.

1. To assess the cross-cultural validity of brief psychiatric screening tools in South Africa
2. To make appropriate recommendations on brief psychiatric screening tools applicable to the South African primary care setting.

A systematic review of studies determining the validity of brief psychiatric instruments for the most common psychiatric disorders in South Africa will be undertaken, using electronic databases PubMed, Medline, the Cochrane Library and grey literature.

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**Female gender and maternal mental health: results from a study of patients presenting with mania in Limpopo Province, South Africa.**

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Research with regard to bipolar disorder (BD) in South Africa remains scarce and even more so with regard to attention to female gender and maternal mental health issues in women suffering from bipolar disorder.

To investigate and describe the course of illness and clinical features in a cross-section of patients with a history of mania attending public hospitals in Limpopo Province with specific attention to female gender and maternal mental health with bipolar disorder in this study population.

A purposeful sample of 103 patients presenting with a history of mania between October 2009 and April 2010 to three public hospitals in the Limpopo Province were selected and interviewed using the affective disorder evaluation. Specific attention was given with pertinent questions related to maternal mental health issues.
The majority of women in the study had their menarche at ages 15 to 16 years. Some estimates suggest that the median age of menarche worldwide is 14 but varies by geographical region, race, ethnicity and other characteristics.

Twenty-six percent reported irregular menses. Fifty-four percent were not using contraception. Only 29% (n=26) stopped taking their medication while pregnant.

Thirty percent (n=17) of women in the sample had suffered a miscarriage, the majority of whom (n=11) had been prescribed valproate at some point in their illness. The rate of miscarriages is higher than the findings of a study on pregnancy outcomes in South Africa by bello et al (2010) who reported that 9.5% of pregnancies ended in spontaneous abortion and only 2.2% in stillbirths.

A third of patients (n=18) reported mood symptoms associated with pregnancy while 49% (n=28) reported postpartum onset of symptoms. Freeman et al (2002) found that 67% of 50 women with bd experienced a post-partum mood episode.

This study has clearly identified several pertinent issues that are specific to women suffering from bd in South Africa. More than a quarter of participants experienced side effects related to irregular menstrual cycles, with a much smaller percentage complaining of peri-menstrual exacerbation of symptoms. More than half the participants used no contraception whatsoever, which is alarming in a country that has the highest number of people living with HIV/AIDS worldwide.

Thiry percent of participants had experienced a miscarriage, a rate more than triple than the national average reported in other studies. During pregnancy, only a quarter of patients stopped taking their medication.

The value of adequate counseling and psycho-education cannot be over-emphasized in this setting, where adequate provision of information and ongoing support have the potential to prevent the unnecessary loss of pregnancies, unsafe sexual practices and side effects of medication. Priority should be given to the issues facing these women, which would be in keeping with the millennium development goals of promoting mother and child health and gender equality.

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Unipolar Mania In South Africa: The Rule Rather Than The Exception?

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There is a lack of studies that examine prevalence and phenomenology of bipolar disorder in Africa. In literature, a unipolar manic course of illness in particular is reported to be rare. The purpose of this study was to investigate and describe the course of illness and clinical features for a cross-section of patients diagnosed with bipolar disorder attending public hospitals in Limpopo Province, South Africa and to determine the rate of a unipolar manic course in this sample of patients.

This was a descriptive, cross-sectional study of patients presenting with a history of mania between october 2009 and april 2010, to three hospitals in Limpopo Province. A purposeful sample of 103 patients was recruited and interviewed using the affective disorders evaluation.

This study confirms that a unipolar manic course is indeed much more common than occurrences suggested in present day literature, with 57% of the study sample ever experiencing manic episodes. Patients presenting with a unipolar manic course of illness, as described in this study, may contribute to the search for an etiologically homogeneous sub-group which presents unique phenotype for genetic research and the search for genetic markers in mental illness. With a view to future research a unipolar manic course therefore needs to be considered as a specifier in diagnostic systems in order to increase the awareness of such a course of illness in bipolar disorder.

Conclusion:

Fifty seven percent (57%) of study subjects had only ever experienced manic episodes which is in keeping with findings from Africa and other non-western countries. Identifying etiologically homogenous subgroups in psychiatry can also aid the profession in developing a reliable and valid
nosology for psychiatric disorders. We need to consider a unipolar manic course at least a specifier in DSM and ICD.

Presentations and outcomes of intentional poisoning at the Nelson Mandela Academic Hospital.

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Suicide is sometimes achieved by the intentional ingestion of poisonous substances. The aim of this study is to assess demographic, clinical features and outcomes in relation to various poisons ingested in suicide attempts.

Retrospective review of patients admitted with intentional poisoning from January 1 2015 to July 31 2015. Data on age, gender, type of poison ingested, blood pressure at presentation and outcome following treatment were analyzed.

Records of 57 patients (27 males and 30 females) were analyzed. Mean age in years was 23.4±6.6 with range of 13-39 (n=57). Organophosphate, aluminum phosphide (tank pill), rat poison, tricyclic antidepressant and sodium valproate were ingested by 32, 11, 2, 1 and 1 persons respectively. The nature of substance ingested was not known in 6 patients. Most patients presented in the months of January and June. The overall mortality rate was 36.8% (n=57). Table shows comparable young age and gender distributions but higher mortality rate following tank pill than organophosphate ingestion.

Young persons are the main victims of suicide attempts with organophosphates and tank pill being the main substances ingested. The very high mortality rate from tank pill is worrisome as 9 out of 11 persons died after ingesting it. Measures to render tank pill inaccessible to vulnerable young persons is required.

Key words: poisoning, suicide, organophosphates, tank pill

Chemical analyses of some non-herbal traditional oral health remedies from the littoral and north west regions of Cameroon.

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in 1978 the world health organization (WHO) came out in support of traditional medicine and the organisation of African unity (now the African union [AU]) declared 2001–2010 as the years of traditional Africa medicine (TAM). However, whereas European, Indian and Chinese traditional medicines have been subjected to much scientific investigation as to their safety TAMs have not. Thus there is much work still needed to scrutinise them scientifically for real or potential risks to humans. We report here the chemical analyses (pH, XRD, ion chromatography and XRF) of non-herbal traditional oral remedies from the littoral and north west regions of Cameroon. The results of some of the samples showed the presence of tridymite, a rare SiO2 which is suitable for dental care use. The other samples were shown to be aluminium sulphate, which in an aqueous solution develops sulphuric acid, a potential risk to gums especially on repeated exposure and at unknown concentrations.

Keywords: traditional healers, remedies, science, risks, oral health, herbs
Antimicrobial activity of terminalia sericea leaves.
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The leaves of terminalia sericea is commonly used by traditional healers for the treatment of stomach disorder, diarrhea, infected wounds and dysentery but no known bioactive compound associated with these therapeutic activities has been reported. The aim of this study is to determine the antimicrobial activity of crude extracts and fractions obtained from t. Sericea leaves. The extracts and fractions were tested against six bacteria and six fungal strains using broth dilution method. The result showed that the methanol crude extract exhibited the highest anti-bacterial and antifungal activities. The fractions obtained from the methanol extract showed higher minimum inhibitory activity against all the tested bacteria and fungal strains. This study has shown that the fractions obtained from the methanol extract exhibited higher antimicrobial activity compared to the crude extracts. Further study is ongoing to isolate the compounds responsible for the antimicrobial activity of t. Sericea leaves.

Keywords: terminalia sericea, antimicrobial activity, crude extracts, active fractions, bacterial, fungi.

Anxiolytic effects of rauvolfia caffra (leaf and bark) in mice.
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Background: rauvolfia caffra is a plant used traditionally for treating anxiety and stress-related disorders in the Eastern Cape province of South Africa. The aim of this study was to investigate the acclaimed anxiolytic effects of this plant. Method: both leaf and bark extracts were prepared in 70% ethanol. Anxiolytic effects of both extracts were assessed using the elevated plus maze and holeboard tests.
Result: the elevated plus maze test of both the leaf and bark extract significantly (p

Keywords: anxiety, rauvolfia caffra, elevated plus maze, holeboard test

In vitro antifungal potential and acute toxicity of drypetes tessmanniana (euphorbiaceae) extracts.
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The increase of fungal infection in the past decades due to immune depression, aids and fungal resistance to conventional antifungals drugs stimulated the search for new effective bioactive compounds with low side effects. Therefore, this study aim to evaluate the in vitro antifungal activity and acute toxicity of extracts from drypetestessmanniana (euphorbiaceae).the leaves, twigs and stems
were macerated in distilled water to yield aqueous extracts. The minimal inhibitory concentrations of crude extracts and fractions were determined by microdilution method against four reference strains of candida albicans atcc (p 37037, p 37039, l 26, 12 c) and four yeasts isolates (candida albicans, candidaglabrata, candida parapsilosis, and cryptococcus neoformans). The most active extract was fractionated using flash chromatography and the fractions collected were grouped according to their thin layer chromatography (tlc) profile. The toxicology profile of the active fractions was done on bal/c female mouse. The results showed that the yield of extraction were ranged from 1.09 % to 15.63 %. The mic of extracts ranged from 1.25 to 20 mg/ml. The aqueous extract of leaves was the most active with mic of 5 mg/ml and 1.25 mg/ml on three c. Albicans atcc and cryptococcus neoformans respectively. 261 sub-fractions were collected and grouped in 25 fractions (f1 to f25). The fractions 9 and 8 were the most actives with the respective mic of 5 and 10 mg/ml on the four reference strains. The active fractions were non-toxic with an ld50 > 2000 mg/kg. The results show that the aqueous extracts and fractions of drypetestessmanniana could be exploited for the treatment of fungi infections which are the public health.

**Keywords:** acute toxicity, antifungal activity, dry petestessmanniana,

**Antioxidant and Phytochemical Properties of Aqueous Extract of Lauridia Tetragonia Bark.**

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Oxidative stress is implicated in the development and progression of most chronic disorders such as diabetes mellitus and hypertension. Managing oxidative stress can potentially prevent and or treat such diseases. The present study sought to evaluate the antioxidant and phytochemical properties of aqueous extract of lauridia tetragonia bark methods and materials. In vitro antioxidant effects of lte was assessed through dpph radical scavenging assay. In vivo antioxidant effects were tested against a rat model of cadmium induced oxidative stress qualitative and quantitative phytochemical determinations were conducted. Brine shrimp assay was conducted to assess toxicity. Results. Lte had a lower ic50 value of 54.2 μg/ml in dpph radical scavenging effects compared with the standard antioxidant, ascorbic acid whose ic50 value was 175 μg/ml. Lte had unremarkable antioxidant effects in vivo. Administration of lte for two weeks promoted a significant increase p

**Keywords:** lauridia tetragonia, antioxidant, oxygen radicals, oxidative stress, hypertension, diabetes
INDIGENOUS KNOWLEDGE SYSTEMS
Assesing the Relationship between Morden Technology and Indigenous Knowledge System (IKS).
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The study seeks to investigate, assess and evaluate the relationship between modern technology and indigenous knowledge system. The study will be focusing on aspects such as, education, agriculture and communication. There is a rapid growth of technology in Africa, including South Africa. Since the introduction of technology on the education, agricultural and communication sectors etc, there is a great impact on indigenous knowledge system including indigenous people. The problem identified here is that people are losing their tradition, culture and moral values. Young generation have now and all the education that these elderly people could provide to the young people. Socialization among people is no longer an important matter; they may rather socialize using social networks that enable them to connect with people abroad than the one seated just few centimetres away. The study will employ the qualitative approach in order to answer the research question or problem. People from different age groups will be interviewed. 10 youth and 10 adults from semi-urban areas will be interviewed. Also 10 youth and 10 adults from rural villages will be interviewed. All these villages and the informants will be randomly selected. The study location will be Thulamela municipality in Vhembe district. This area is selected because of its features which are more different from other municipalities because it caters both urban and rural villages and the study will be looking at its urban, semi-urban and rural villages. Purposive sampling will be adopted in order to select population. Preliminary findings suggest that modern technology is seen to suppressing indigenous knowledge systems especially within the youth of semi-urban population in Thulamela local municipality.

Keywords: modern technology, indigenous knowledge systems, South Africa and Thulamela local municipality.

Morden Technology, Indigenous Knowledge Systems, South Africa And Thulamela Local Municipality.

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Germ cell development in tilapia sparrmanii was observed in fish from 35 mm tl to 120 mm tl, in which various stages of development were observed. Tilapia sparrmanii species were collected, dissected and grouped into 8 groups based on their total lengths (tl) measured in mm. The aim of the study was to describe germ cell development and understanding whether sex change occurs in t. sparrmanii; and determining whether these species are protogynous or protandrous hermaphrodites. Haematoxylin and eosin were used to stain tissues so as to identify and describe the various stages of development. The observed developmental phases were oogonia, chromatin nucleolus, early perinuclear oocytes, late perinuclear oocytes, yolk vesicle and yolk globule oocytes in female gonads. Various developmental stages were also observed in male gonads, namely spermatogonia, primary spermatocytes, secondary spermatocytes and spermatids. The above mentioned developmental stages varied in size and morphology. Tilapia sparrmanii species were observed to be protogynous hermaphrodites and sex change occurred at 51-55 mm tl.

Keywords: tilapia sparrmanii, germ cell, gametogenesis, oogonia, spermatogonia
Research Gaps On The Use Of Moringa Leaf Powder In Traditional Fermented Food Development In Limpopo Province. Rikhotso LN, Jideani A.I.O And Takalani T. K.

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Traditional fermented foods (tffs) play an important role in the diet of people in Limpopo Province. These include fermented non-alcoholic cereal-based beverages (madleke), alcoholic beverages from sorghum or millet malt (muqomboti), fermented fruit mashes (vukanyi) and maize porridges (mukapo). Moringa leaf powder (mlp), rich in essential amino and other micronutrient is now used as food supplement to fight malnutrition and to assist people who suffer from micronutrient deficiency. This paper highlights research gaps in the use of mlp in tff product development that will address food insecurity and contribute to health foods in the region. Traditional fermented foods, madleke, muqomboti, vukanyi, mukapo, food security

Keywords: traditional fermented foods, madleke, muqomboti, vukanyi, mukapo, food security

The effect of pond type on the growth performance tilapia (oreochromis mossambucus) in Mthatha.

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the projected population growth of up to 9.1 billion people in the world by 2050 has led to a belief that there is a serious food crisis in the world. To meet the ever-increasing food demand, the rate of food production should increase significantly. Thus, the aim of the study was to compare growth performance of the species reared under two production systems, earth and concrete ponds. The study was conducted at the Mthatha dam research station. Three concrete and three earth ponds were selected for the study. Each pond was stocked with 300 fish. Cattle manure was applied at 5000 kg/ha on both production systems, two weeks before stocking of the fish. The fish stocked on the concrete ponds received supplementary commercial feed at 3% of their body weight daily. Earth ponds received manure alone to stimulate live food production while concrete ponds received manure and commercial feed as a source of nutrition. Physico-chemical parameters such as dissolved oxygen, temperature, salinity, ph and turbidity were taken daily. Fish measurements in each of the six ponds were sampled fortnightly. Results showed no significant differences on the mass of the fish from the two production systems. However, the fish from the earth ponds had higher specific growth rate (sgr) than on concrete ponds. Except for ph, there were significant differences among the physico-chemical parameters between the two systems with no consistent trends. The study revealed that the earth ponds provide better growth rate of fish than concrete ponds.

Keywords: aquaculture, fish growth, cattle manure, fish feed, physicochemical parameters.

Integration of African traditional medicine into health care systems: a tentative community-based approach for reduction of HIV infection burden in rural areas.
It has been estimated that in Africa, there is one traditional health practitioner for every 200-400 people, whereas the availability of trained medical personnel is typically one per 20,000 people. As a consequence, most patients including those with HIV/AIDS use traditional herbal treatments for a variety of pathogenic conditions. Because of the pivotal role played by the traditional healers for centuries in Africa before colonization, the integration of African traditional medicine into health care systems using a community-based approach for reducing HIV infection burden in rural areas can be of great interest.

We have investigated the efficacy and safety of some African medicinal plants used in the traditional treatment of HIV/AIDS, the type of counseling given to those patients and the involvement of their families. A survey including interviews and questionnaires was conducted addressing traditional healers, HIV/AIDS patients as well as their family members. Among the three categories of medicinal plants analyzed, only plants with immuno-stimulating effect are the most used. Involvement of the family members during the counseling, rituals practice before administration of medication, use of social and ancestral behavioral mimics are among the important factors that could explain the observed high rate of compliance.

In addition to the hope that is raising among traditional healers and HIV/AIDS patients using powerful immuno-stimulating traditional medicines, the successful programme for prevention and treatment of HIV/AIDS in Africa should be conducted using a community-based approach which will emphasize not only on drugs to be administered but also on social behavior of the people on the ground. The involvement of trained traditional healers in health care systems will be of great impact in those areas where the majority of people still believe on their spiritual power which surely influences their social behavior.

**Keywords:** traditional medicine, health care systems

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**Pluralistic tendencies in healing: healing abantu illness in the contemporary South Africa.**

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beliefs about health, as well as what makes people ill, are strongly influenced by culture. Beliefs tend to guide people as far as which healing approach they should apply. Hence, the focus of the study was more on the holistic healing approach to understanding abantu illness. The research embraced attributional theory which recognises that certain illnesses are attributed to spiritual and social causes rather than biomedical causes. The southern nguni’s recognition of ukuthanjiwa illness, as one of the examples of abantu illnesses, signals entry into the body by ‘familiars’. By exploring the specific healing methods of the southern nguni, it became clear that causal link is socially constructed between the illness and the familiars. Issues explored included conceptualisation of ukuthanjiwa illness; healing of ukuthanjiwa illness as a cultural phenomenon; the source of healing power in the preferred healing method; social construction of authenticity in the efficacy of the healing methods; and the continued use of the preferred healing methods despite the evolution of biomedical healing methods. The ethnographic study took place in the OR Tambo district municipality (otrdm) in the Eastern Cape, South Africa. Data was collected using qualitative and ethnographic research methods focusing on in-depth interviews, focus group discussions and observations amongst a sample group of 50 participants.
Biological Studies On Rauvolfia caffer.
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Medicinal plants, a well-known source of antioxidants, have been used by many populations in treating and managing assorted ailments over thousands of years. Rauvolflia caffer is one of the medicinal plants used for managing hypertension, depression and other disease associated with oxidative stress. To validated folk medicinal use we evaluated its toxicity, sedative effect and CNS depression properties. Aim and objectives of the study was to determine the phytochemical constituents’ and evaluated the toxicity, sedative and CNS depression effects of 70% ethanol extract of the leaf and bark of the rauvolflia caffer. 70% ethanol extracts of the leaf and bark of the plant were obtained. Phytochemical screening was done to detect types of secondary metabolites. Locke’s method was used to determine the acute toxicity of extracts. Novelty-induced behaviour (rearing, grooming and locomotion) effects of the extracts were evaluated while ketamine-induced hypnosis was used to study the sedative effects. The LD50 was estimated to be 5000 mg/kg, p.o. Indicating low-toxic potential. Rearing activity was significantly reduced by the extracts compared to vehicle, a sign of CNS depression. Grooming activity was not significantly altered by the extracts compared to vehicle. Leaf extract of rauvolflia caffer (500 mg/kg) and bark extract of rauvolflia caffer (1000mg/kg and 2000 mg/kg) significantly inhibited locomotion suggesting CNS depression. Both extracts did not significantly reduce sleep latency or prolong total sleeping time compared to vehicle, indicating lack of sedative effect. Conclusion: from the results obtained in this study, the leaf and bark ethanol extracts of r. Caffer have low acute toxicity, moderate CNS depressant activity but devoid of sedative effect.

Keywords: rauvolflia caffer, sedative, depression, acute toxicity.

In Vitro Antioxidant Potentials Of Selected Indigenous Leafy Vegetables From The Eastern Cape Province Of South Africa.
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Six dietary leafy vegetables commonly consumed by the rural Eastern Cape communities were analysed for their antioxidant activity and phenolic content. The indigenous leafy vegetables (ilvs) were amaranthushybridus, solanumnigram, bidenspilosa, urticaurens, ribesuvacrispa and taraxacumofficianale. Aqueous and methanol extracts were tested for free radical scavenging and antioxidant activity using 2,2 azinobis-(3-ethylbenzthiazoline-6-sulphonic acid) (abts) assay and total phenolic content were determined using the folin-ciocalteu assay with gallic acid as the standard and expressed as gallic acid equivalents.the antioxidant activity of the indigenous leafy vegetables were for
aqeous extracts (5.04±3.12 mmol/100g) and methanol extracts (12.28±3.40 mmol/100). The total phenolic content of the water extract were (429.55±143.39mg) while the methanol extract were (560.30±287.97 mg) gallic acid equivalent (gae)/100g. Total antioxidant activity correlated well with total phenolic content of the methanol extract ($r^2 = 0.875$). Results suggest that the indigenous leafy vegetables tested in the study have the potential to provide antioxidant properties and may offer effective protection from free radical injury implicated in metabolic stress, chronic and degenerative diseases if included in the diet.

**Keywords:** indigenous leafy vegetables, antioxidant activity, total phenolic content, metabolic stress, chronic and degenerative diseases

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**Hyraceum (umchamowemfene) improves insulin sensitivity in pregnant female rats.**

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Type 2 diabetes mellitus, characterized by peripheral insulin resistance, is a major disorder of the 21st century. Pregnancy exacerbates insulin resistance resulting in gestational diabetes mellitus. Hyraceum, locally known as umchamowemfene is used as a traditional medicine in the treatment of diabetes in some communities of South Africa. Hyraceum is an accretion of urine and dung of rock hyraces (rock rabbits; mbila or mbili). In the Eastern Cape umchamowemfene is taken by pregnant women to ease pregnancy induced complications. In other parts of South Africa, hyraceum is used for treatment of epilepsy, diabetes and infertility. We sought to investigate the effects of locally sourced hyraceum on glucose tolerance in female pregnant rats. Hyraceum was purchased from a local traditional chemist in Mthatha. A boiling water infusion was prepared, filtered and dried to give the extract used for this study. An oral glucose tolerance test (ogtt) using 3g/kg body weight glucose load and intraperitoneal insulin tolerance test (iitt: 1.5 iu/kg insulin) were performed on treatment groups (n=6): distilled water (control), 150 and 300 mg/kg of hyraceum. Ogtt and iitt were performed. Results showed no acute effects of hyraceum on ogtt and iitt. However, after a 21 day treatment period, there was a significant ($p$)

**Keywords:** hyraceum; umchamowemfene; diabetes mellitus; ogtt; iitt; pregnant rats

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**Community Of Practice In The Digitization And Dissemination Of Indigenous Knowledge: A Rural Communityexperience.**

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Globally digital technologies have become embedded into our everyday life demanding digital literacies if society will cope with the ever increasing ubiquitous proliferation of digital tools. Indigenous knowledge (ik) emanates from local contexts, involving local actors possessing tacit knowledge. This constrains its generalization and diffusion into modern electronic platforms. Lack of digital literacies, among the ik custodians is a major impeding factor, for the ik custodians to fully harness these
technologies and participate in the creation, dissemination and use of this knowledge. The paper shows how participation of adults in a community project led to building of a community of practice (cop) in rural contexts. The objective of the community project was to empower ik custodians with digital literacies through community education supported by e-learning so they can participate in dissemination of ik. The study was conducted in a rural community in the Eastern Cape province of South Africa. The study used a collaborative situated community learning theoretical perspective, drawn from three theoretical underpinnings namely andragogy, situated learning and eziko. Twelve adults between the ages of 28 and 60 comprising men and women were purposely selected. Data was collected through participant observation and interviews and analysed thematically using codes. Results revealed that rural people are agents of their own empowerment, transformational change occurs to communities who adopt modern tools and that ik can be combined effectively with icts to preserve indigenous people's culture. Recommendations included increasing ict-ik projects and conducting large-scale research to determine the impact.

**Keywords:** dissemination, digital literacy, indigenous knowledge, indigenous food plants, community of practice, e-learning.

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**Education for Sustainable Development of Medicinal Plant Sellers.**

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This paper reports the results based on challenges in the medicinal plant selling businesses from 56 respondents in northern kwazulu-natal. The results showed that medicinal plant sellers were harvesting medicinal plants without replanting those harvested. An education for sustainable development intervention was subsequently introduced to medicinal plant sellers in order to ask them to reflect on their medicinal plant selling business. The study followed a case study design, within an mixed-methods research paradigm. Data collection involved the use of face-to-face questionnaire administration, follow-up focused group interviews and a workshop. The workshop was assessed into two phases. Phase i assessment results revealed a number of challenges faced by the medicinal plant sellers, including processing, storage and packaging, business skills (such as marketing, pricing, banking of profits as well as record keeping of trading stock, income and expenditure) and conservation of medicinal plants and products. Following a capacity building intervention based on esd and non-formal education principles, phase ii assessment results showed that the medicinal plant sellers had started revisiting some of their business practices such as pricing techniques, as well as record keeping. However, processing of medicinal plant materials, storage, packaging and conservation still persisted as challenges that needed further attention.

**Keywords:** conservation, education for sustainable development, non-formal education, medicinal plant sellers, marketing, storage, packaging.

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**Chemical Analysis and Biological Potential of Hyssop Herb A Medicinal Plants Used By Traditional Healers in South Africa.**

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Medicinal plants are often used by herbal practitioners without the scientific knowledge of the chemical composition or the toxicity of the plants. Hence, there are usually limited to what was handed over to them by their forefathers. As part of improving the herbal practices in the Eastern Cape, this paper reports the chemical and biological evaluation of hyssop herb, a plant commonly used by our indigenous knowledge system holder Mr R Matewu. Hydro-distillation was carried out on the plant to obtain essential oil and hydrosol of a plant, while infusion extracts for phytochemical screening of a plant (for qualitative and quantitative analysis) was obtained according to the iks holder method. Anti-inflammatory, analgesic and acute toxicity assay were performed on the oil and aqueous extracts. Our finding are hereby reported which is in line with the usage of the plant but can further be used for other ailments.

**Keywords:** hydro-distillation, essential oil, infusion extraction, phytochemical screening, biological essay

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Give a man a fish or teach him how to fish: ubuntu in social assistance, a stumbling block to peoples’ empowerment?

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Section 27 of the constitution of South Africa provides for the right to social security to the people who are unable to support themselves and/or their dependents. The state is obligated to take reasonable legislative and other measures within its available resources to achieve the progressive realization of inter alia the right to social security. Even though the concept of ubuntu is not easily definable, it is understood to carry with it the idea of humanness and solidarity. However with the escalation in unemployment rates and the need for more funds to be allocated towards social grants, the question arises whether these resources should not be diverted towards job creation? In layman’s terms: is it not better to provide a starving man with a fishing rode and teach him to fish than to merely give him fish? This paper will explore whether the right to social security influenced by the spirit of ubuntu impacts negatively on the people’s right to development and ultimately their empowerment and dignity. The analysis employed will be both legal and philosophical in nature as the paper will strive to reconcile a balance between allocating resources to social security grants and developmental projects that create employment. The paper will argue that job creation is essential as it gives the populace a sense of control over their welfare instead of awaiting handouts from the government; it will attempt to postulate how to balance social assistance with job creation by contrasting methods employed in developed countries where unemployment is significantly lower.

**Keywords:** ubuntu, social assistance, social cohesion, unemployment

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Learning from each other: an appreciative enquiry on indigenous knowledge systems in selected multi-stakeholders engagement processes.

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In a multi-stakeholder engagement process, facilitation is still skewed to western forms and is thus frustrating process for the powerless yet the inclination to allow the power holders to claim that all is well because they were there is dire. The proposed study seek to explore and describe the
epistemologies, processes and methods of facilitating multi-stakeholder engagement processes in a manner that empowers the often marginalised groups such traditional leaders, healers, rural women groups and community elders to be co-creators of knowledge forms. The study departs from the contention that HEI’s have limited knowledge and competencies of how to engage iks practitioners, knowledge holders and a broader diverse multiple stakeholder group process for a common goal (in this regard problem solving, conflict resolution and socially cohesive approaches). Often the learning processes are western dominated and polarising than integrative. The university has several requests from different groupings in the community to address these issues in the Limpopo Province. The researcher also draws from personal experiences in engaging multi stakeholders and activism. The magnitude of the challenges without doubt require concerted efforts. Lessons are drawn through focus group appreciative enquiry discussions leading to better engagement, better partnerships, and better knowledge co-production and co-learning process. It is envisaged that the process and the outcomes will inform academia about best practices.

**Keywords:** multi-stakeholder engagement process; knowledge production; co-learning; appreciative enquiry

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**Integrating traditional and modern art, craft and design technologies to enhance livelihoods among the rural community dwellers.**

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Traditional zimbabwean society was characterized by diverse technological innovations, some of which have been adapted in contemporary life in modern ways. These include metallurgy, pottery, kiln firing and leather craft among others. However, some of these indigenous technologies were systematically relegated to non-useful innovations on the premise that they did not fall within the realm of colonizers conception of serious technologies. Among the traditional practices that have registered positive innovative indices are art, craft and textile related technologies. Some are still visible in rural communities in their traditional versions. Such craft ideas can be developed and integrated with the support of modern research input to come up with products that can significantly sustain rural communities in small cottage industries. Such ideas can merge with modern technologies and interface with contemporary studio and laboratory methods and materials to produce innovations that can be a source of livelihood for the rural population. This paper aims at generating such innovations based on the author’s experiences, researches and propositions that integrate indigenous knowledge systems and modern practices. It is an exploratory paper aimed at enhancing craft and design ideas and activities that merge traditional and modern innovations among the rural folk for sustainable development. The rural target population, which constitutes over 75% of the zimbabweans has limited sources of livelihood, hence introduction of such technological innovations could be beneficial to the general populace. Key words: art and craft, indigenous knowledge systems, innovations, rural communities, traditional society, zimbabwe.

**Keywords:** art and craft, indigenous knowledge systems, innovations, rural communities, traditional society, zimbabwe.
Pentanisiaprunelloides is a medicinal plant which is widely used to remedy various ailments including diarrhoea, dysentery, inflammation, fever, rheumatism, heartburn, tuberculosis, haemorrhoids and skin diseases in South Africa. As part of our ongoing medicinal plant investigation, the phytochemical screening of the fresh and dry leaf and rhizome was carried out for proper secondary metabolite documentation. Fresh rhizome of the plant was collected from Mthatha muthi market, part of which was dried. All plant part was subjected to phytochemical screening using known methods. The qualitative phytochemical screening showed the present of saponins, alkaloids, tannins, flavonoids, steroids, terpenoids, triterpenoids and glycosides. Dried and grinded plant material was for quantitative phytochemical screening of saponins, flavonoids and alkaloids, results showed that percentages were 0.63%, 5.9% and 2.18% respectively.

**Keywords:** medicinal plant, phytochemical screening (qualitative and quantitative analysis), pentanisiaprunelloides, muthi and rhizome.

Colonialism in all its forms dislodged the indigenous knowledge systems and intellectual traditions in Africa by forcing the colonised to deny and disown their own identity. Colonialism denied people an opportunity to apply their own traditional knowledge in life. This dislodgment always forced African people to start from the unknown in knowledge production. This stifled the intellectual traditions of African people which rendered African people as copycats and consumers instead of being inventors, innovators and producers of knowledge to generate solutions for their problems despite inhabiting the continent with abundant resources and minerals. This paper gives an account of the dislodgment of indigenous knowledge systems and intellectual traditions of African people and its impact on African peoples’ ability to generate knowledge for their own survival and development. The paper also highlights some of the innovations and achievements attributed to Venda indigenous knowledge systems and intellectual traditions. This is done in order to advance the argument that the Venda people were able to realise such innovations and achievements for their own adaptation and survival. The paper concludes by calling for the reconfiguration of the strategies to rekindle and ignite the African peoples’ self-belief, creativity and ability to generate knowledge that will sustain them and propel their development, advancement and global standing among other nations.

**Keywords:** indigenous knowledge system, intellectual tradition, development, self-belief, validation and innovation
Zakes mda’s fiction in the economy of indigenous knowledge systems.

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It is a trope of wordsworthian proportions that nature acts not only as an exemplar for human conduct (let nature be your teacher) but also as a source of healing to the wounded spirit. In zakes mda’s fiction, nature often assumes the form of non-human characters that interact with humans in a manner that might defy logic but is consonant with the writer’s implicit worldview on indigenous knowledge systems (iks). If anything, modern science, despite its empirical grounding, acknowledges the healing power of the human-animal connection in animal-assisted the Eastern Cape, and proceeding to the whale caller, the madonna of excelsior and the sculptors of mapungubwe, this paper explores the various interfaces of the human-animal connection. That mda draws on non-human characters in his fiction is not surprising, considering that he once started a beekeeping project with a rural community in the Eastern Cape. In an interview on the heart of redness, he stated that the conflicts in the novel are not about prophecies and other religious matters but about the protection and preservation of the environment, of cultural heritage and other developmental issues. The symbiotic relationship between humans and non-humans in mda’s fiction finds a niche in the economy of indigenous knowledge systems in the South African context.

Keywords: zakes mda, human/animal, symbiotic relationships, healing, iks.

Integration of indigenous leadership perspective to strengthen local government: the case of king sabatadalindyebo (ksd) local municipality.

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This research paper explores how indigenous knowledge perspective can be integrated into the policies and programmes to strengthen local governance in king sabatha dalindyebo local municipality (ksdlm). Ksdlm is a rural municipality located in the o.r tambo district municipality in the eastern side of Eastern Cape province. The objective of the study was to investigate the integration of indigenous leadership perspective whether it would strengthen local governance in terms of its policies and programmes in ksdlm. Specifically the study explored the relevance of ksdlm official’s knowledgeability about iks, and whether it is important for ksdlm to integrate iks to its policies. The study applied a mixed method approach. The mixed method approach is flexible in that it uses multiple methods, contextual interpretations and the best strategies to address research questions about real-life problems. The methods of inquiry applied in the study to address the research question were, questionnaires, in-depth interviews and focused-group discussions were used in order to strengthen the validity and reliability of the study. The findings revealed that in order for ksdlm to be strengthened iks needs to be integrated into policies and programmes of the municipality. It further disclosed that for the integration to happen within the municipality, ksdlm needs to develop an iks policy that would clarify the role of traditional leaders to have an impact on the municipal programmes and policies.
An assessment of community’s perceptions on female participation in male circumcision.

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This paper highlights the community’s perceptions on female participation in the practice of traditional male circumcision. The paper gives an overview on the state of traditional male circumcision in various contexts ranging from South Africa, Africa and elsewhere. The research largely focuses on the different perceptions relating to the practice of traditional male circumcision in a South African community called Gomeni. The research is an ongoing study that uses qualitative methodology where in-depth interviewing and observations were used. The paper raises important interpretations on the form of perceptions held by males and females of varying age groups relating to female roles during various stages of the practice. Due to the sensitivity of the topic the research avoids focus on specific traditional male circumcision rituals that directly touch on the processes that are considered as secrets. The paper also highlights the researcher’s gender related experiences especially with elderly male participants who openly showed their surprise towards having to relate information on what they consider a male domain issue. The paper also highlights younger and elderly female responsibilities and obligations during the practice as well as the myths and taboos associated with it.

Keywords: community, perceptions, traditional male circumcision, gender, male domain, myths and taboos

Paradigms on Disability in Bakossi and Xhosa Oral Traditions.

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A healthy society is one in which effort is made in order to get people with diverse backgrounds to work together towards the society’s goals. Although this is a difficult task, some societies have made and continue to make conscious efforts aimed at achieving this purpose by enacting laws prohibiting discrimination based on disability, race, gender, sexual orientation ethnicity and colour. This paper examines the perceptions and conceptualizations of disabilities as portrayed in the Bakossi and Xhosa oral traditions of Cameroon and South Africa respectively. It argues that the oral traditions of the above communities are heavily loaded with images that highlight stereotypical notions both societies have towards the disabled. The images reveal that these categories of people are the most stigmatized, prejudiced and marginalized. In other words, people with disabilities have been pushed to the margins of society, facing socially constructed barriers that prevent full participation in many domains of their lives. Written against the background of the sociological theory, the study concludes by recommending that inasmuch as disabled people are recognized as existing among the Bakossis and the Xhosas, they should be wholly integrated and treated like other members of the society because some of them have hidden potentials that can be exploited to salvage society from various trials and tribulations.

Keywords: Disability; oral literature; paradigms; Bakossi; Xhosa; perceptions
Gender, the Handicraft Industry and Tourism on the Wild Coast, Eastern Cape, South Africa.

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This research focuses on the contribution of the handicraft industry to rural livelihoods on the wild coast through tourism and how the handicraft industry is gendered. Four tourist’s hotspots were chosen, these being: Port St John’s, Port Edward, Coffee Bay, and Mazeppa Bay. The results revealed that, the handicraft industry help crafters to put food on the table for their families and that the majority of these crafters (i.e. 98%) are females. The challenges identified include seasonality of demand as crafters are only able to sell more of their wares during festive seasons such as Christmas and Easter, as well during June and July when initiates return from circumcision schools. Other challenges relate to limited financial support, inadequate training, and marketing opportunities, as well as constraints placed on availability of inputs for crafting.

Keywords: Handicrafts, Gender, Tourism, livelihoods

Two Competing Voices in Manyika Jangwa Music: A Re-Interpretation of Zimbabwean Traditional Music & Dance.

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This paper reports on an ethnographic cum historical research on jangwa music from the Manyika people of Zimbabwe. The paper pertains to the double faced nature of the Manyika people illustrated through jangwa music. Jangwa music is a neo-choral traditional music born out of mission and government school choirs, incorporating Western harmony and African performance practices. The study was aimed at exploring the Manyika indigenous musical practices portrayed through the structure and performance practices of jangwa music. The music and musical performance bring out some form of marriage between Western and African indigenous musical cultures in the form of harmony and performance practices respectively. Purposive sampling was utilised investigating the perceptions of 150 participants. The study employed individual and focus group interviews as well as participant and non participant observation for data collection. Structural analysis and cultural analysis were used. The outcomes of the study reveal some form of acculturation in the structure of jangwa music with the musical performance more inclined to the Manyika culture. The study suggests the ethnomusicological use of jangwa music in formal education in Zimbabwe for the promotion of indigenous knowledge systems as well as some Western idioms as the world is now a global village.

Keywords: Jangwa music; acculturation; syncretism; harmony; structure; performance
Kinship relations and small business development in rural South Africa.

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This paper highlights the experiences utility of kinship relations among South Africa’s small businesses. The paper gives an overview of the concept of kinship and its associated networks in businesses. The research largely focuses on the role of networks that include friends, family and kinship relations in business development. The paper raises important interpretations on the form of relations found as well as the accompanying obligations. While the writer is aware of various management approaches and concepts it must be noted that the arguments in this paper are largely aligned to and influenced by the customary relations surrounding activities associated with the businesses and its associated networks. It has been noted that historically the concept of working together through mutualism and ubuntu related practices for the achievement of community development has been common among South African communities, this important practice has been neglected by contemporary studies. The South African government has also embraced entrepreneurship as one of the strategies that could be employed in addressing unemployment and black economic empowerment. This is an important route as it follows on the footsteps of success cases such as the Asian tigers where customary relations drawing from the brotherhood philosophy, influenced entrepreneurship and was key to driving development in those contexts.

Keywords: Kinship relations; business development; small businesses; networks; obligations, communities
Learning Support to School Children Given by Sick Parents: HIV/AIDS Perspectives in Rural South African Schools.
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This paper emanates from empirical study which explore learning support given by parents with HIV/AIDS related-sicknesses to their schooling children in Libode district of education in Ngqeleni in the Eastern Cape of South Africa. HIV/AIDS is a global phenomenon and has caused a public health crisis, especially in South Africa. It was assumed that parents were often sick and away from home either in hospitals or in the care of relatives. The question to be asked was: how do they give learning support to their children, as teachers expected them to support learners at home. The study employed qualitative research method in which 5 parents, 2 life orientation teachers and 10 learners participated. Data were collected from 3 sites through interviews. Data were also analysed thematically. The research study indicates that parents provided minimal learning support to their children, while other children were left to head their homes while sick parents were either hospitalized or staying with relatives for care. Both parents and affected learners felt that they were stigmatized.

**Keywords:** HIV/AIDS, affected learners, learning support and stigmatisation

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**Statistical Analysis of the South African Quality Of Life In Comparison To Other Countries.**

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A quality of life index is constructed on a regular basis for the 57 countries in the world with the largest economies. This index is based on purchasing power, safety, health care, consumer price, property price to income ratio, traffic commute, pollution and travel. For each of the quality of life sub-categories indices are calculated. The presentation will an assessment about South Africa’s positions in the overall quality of life and the various quality of life sub-categories and an analysis of the reasons behind these.

**Keywords:** n/a

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**The practices and methods of contraception used amongst the black rural secondary school learners in the Limpopo Province of South Africa.**

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In South Africa, unplanned pregnancies, especially among the adolescents constitute a growing health and social problem. Hence this study assessed the contraception practice and method of contraception used amongst the black rural secondary school learners in the Limpopo Province of South Africa. This study adopted a quantitative approach using a descriptive survey design. Data was collected from a total of 338 randomly selected learners, age 14-18 years from 10 secondary schools that makes up a rural Vhembedzi circuit in the Limpopo Province using a self-administered questionnaire. Permission to enter the circuit and schools was obtained from the circuit manager and parents/learners informed consent was obtained prior to data collection. The findings revealed that, the majority of the respondents who are sexually active (38.69% male, 38.51% female respectively, n = 298) were not using contraception and the most used method of contraception among the male learners was male condom (31.75%) and for female learners it was abstinence (17.04%), followed by injection (8.03%) and pill usage was low (4.55%). This study revealed that most of the secondary school learners of vhumbedzi circuit are no using contraceptives and the reason(s) behind this is unknown. Hence there
is a need to conduct further study to determine the ‘why’ question of not using contraception. Although some of these learners were using contraceptives but overall levels of contraception usage among adolescents remained low. Therefore, contraceptive services need to be made more accessible and available for all women, but especially adolescents, through investments both in contraceptive information as well as services

**Keywords:** adolescents, contraception, teenage and/or unwanted pregnancy. Sexually transmitted infections (stis).

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**Awareness of prevention of teenage pregnancy amongst secondary school learners in makhado municipality.**

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Sexuality plays a very significant role in the lives of both boys and girls. Professor kader asmal suggested that the earlier the school begins to teach children about sexuality, the better because they can be easily misled by their peers if proper guidance regarding their sexuality is not given. A quantitative descriptive survey study was conducted to assess the awareness of teenagers on the prevention of teenage pregnancy in six secondary school learners around sinthumule/kutama area, South Africa in 2014. A self-administered questionnaire was administered to 381 randomly sampled participants after they gave consent. Data were analysed descriptively using the SPSS v22.0 software. Necessary approval procedures and ethical clearance were obtained prior data collection. The findings indicate a beneficial role of sexuality education in alerting teenagers

**Key words:** sexuality, sexuality education, teenage, prevention of pregnancy

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**An Association between Vasoactive Agents and Etiology Of Hypertension And Obesity In HIV Patients In Mthatha, South Africa.**

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To determine the physiological effects of HIV infection, blood pressure and body composition on the changes of endothelin-1(et-1) and nitric oxide( no) and association between et-1 and no. A descriptive and comparative study was employed. A quota sample method was used. The study population consisted of 154 participants categorized into the following groups: 57 HIV negative participants, 40 HIV positive not on treatment participants and 57 HIV positive on treatment participants. Enzyme immunoassay kit and nitrate/nitrite colorimetric assay kit were used for the determination of et-1andno. Anthropometric measurements and hemodynamic body composition were determined. Results indicated resting metabolism, waist circumference and hip circumference had low mean levels in both HIV positives groups compared to HIV negative group. Interaction of blood pressure and body mass index across the HIV status groups, sbp showed no significant difference among the different groups. However, dbp and pp showed significant differences between the study groups (p
**Key words:** HIV-infection, antiretroviral therapy, endothelial dysfunction, endothelin-1 (et-1), nitric oxide (no), blood pressures (bps) and body composition.

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**Immunne Response to Mycobacterium Tuberculosis Antigens among Parasite Infected School Children in Mthatha.**

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Children from low socio-economic communities in the Eastern Cape province of South Africa and in the country at large are frequently infected by intestinal parasites. Tuberculosis also, remains a problem in South Africa and worldwide. According to literature, parasitic infections impair the body’s immune response to tuberculosis. The extent to which school children of Mthatha are infected with intestinal parasites and latent tuberculosis, and their immune response to these infections have not been investigated. Therefore, the immune response of school children to specific mycobacterium tuberculosis antigens was evaluated. A descriptive, cross-sectional design for the prevalence rates of intestinal parasites and a case-control study for comparison of interferon gamma and t helper1 and t helper2 cytokines in parasite infected and non-parasite infected participants were used. Cytokines were measured using luminex array system. Out of 137 school children analysed for intestinal parasites, 66.4% (91/137) were positive. The most prevalent parasite was ascarislumbricoides at 21.9% (30/137), followed by trichuristrichiura at 8.8%. Parents unemployment ($p = 0.005$) and low education level ($p = 0.004$) were significantly associated with the presence of parasites. Out of 75 participants analyzed for latent tuberculosis, 53.3% (40/75) were positive. Th1 cytokines were significantly reduced

**Key words:** tuberculosis, immune response, antigens, intestinal parasites, cytokines

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**Construction of a chimeric vector system containing the complete HIV-1-c gagpol gene.**

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Currently, available HIV phenotypic resistant testing assays can accommodate an incomplete fragment of the polymerase gene. However, it is important to have a system that comprises the complete group associated antigen (gag) and the polymerase (pol) genes so that changes in the gag gene that influence mutations in the protease gene can be evaluated; and importantly, there is potential to determine the effectiveness of integrase inhibitors and future compounds targeting the gag or pol genes. The goal was to construct a chimeric packaging vector for subsequent generation of an HIV-1 subtype c based pseudovirus. The pcmv-rre vector was modified by inserting a multiple cloning site (mcs) containing xhoi and pac i restriction sites by ligation. Successful insertion of the mcs was verified by restriction digestion and sequencing of clones from transformed dh5-? Cells. A 5 splice site was also incorporated by ligation. An HIV-1 subtype c complete gagpol sequence obtained from a patient was cloned into pcr-
topo-xl cloning vector, and subsequently transferred into pcmv-rre vector. Pluc, and penv plasmids were transfected together with the pcmv-HIV1cgagpol-rre constructs to generate virus-like particles capable of transducing luciferase. The amount of virus-like particles, as measured by p24 antigen levels were not as high as the values obtained constructs derived from subtype b and c molecular clones (nl4-3 and indie c). However, the approach in having a system with the complete gagpol gene geared for phenotypic assessment of known and putative resistance mutations is innovative and subsequent work will focus on improving the efficiency the constructs.

**Keywords:** construction, HIV-1, subtype c, pseudoviruses

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**Challenges in the implementation of HIV and aids prevention programmes in higher learning institutions.**

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The question of how HIV and aids prevention programmes should be addressed has been an agonising pedagogical issue among educators of the discipline in higher learning institutions. In the implementation of programmes meant to abate HIV and aids in higher learning institutions, there are obstacles that are likely to hinder the implementation processes. Every HIV and aids prevention programme practitioner should anticipate challenges. This paper endeavoured to examine the challenges higher institutions face in the implementation of HIV and aids prevention programmes apparently, higher learning institutions are involved in HIV and aids knowledge delivery hence, have a responsibility to ensure situations that guarantee them a safe working environment. They have a task of preparing HIV and aids programmes with meaningful knowledge and skills, which they can use when imparting information to the learners in their universities. This study is important by seeking to establish why implementation is difficult. The challenges have to be established in order to provide guidelines to make it sustainable this paper endeavoured to examine the challenges higher institutions face in the implementation of HIV and aids prevention programmes.

**Keywords:** HIV, aids, challenges, HIV and aids programmes, higher learning institutions.

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**Compensation Claims For Ex-Mineworkers In Mthatha Region Of South Africa: A Long Road To Travel.**

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Background: the benefit examination clinic for compensation claims for ex-mineworkers of the former republic of transkei has been in operation since 27th may 1996. The author on his own started this after feeling the need of the ex-mineworkers community in this area. It was inspected, and appreciated by the parliament portfolio committee in 1997. Objective: to highlight the problem of compensation of former mineworkers in the Mthatha region of South Africa. Method: this is a record review descriptive study from 1997 to 2000. All the ex-mineworkers were recorded in the register who presented for compensation at benefit examination clinic. Results table 1: showing the statistics of ex-mineworkers with their compensation claims from 1997 to august 2000. Year examined re-examined compensated *rip* 1997 601 --- 9 (1.5%) 2 1998 1181 11 (0.9%) 17(1.4%) 21999 165 99 (60%) 18 (11%) 3 2000 80 62 (78%) 7 (9%) 0 total 2017 172 (8.52%) 51 (2.5%) 7 *rip= rest in peace are the subjects who
awarded compensation but dead before their claim was made. Conclusion a few (5.7%) ex-mineworkers were compensated over a period of 4 years. It is a matter of serious concern.

Keywords: ex-mineworkers, compensation claims, and rest in peace.

Angiogenic Factor Imbalance Contributes To the Pathophysiology Of Preeclampsia Among Rural African Women.
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Preeclampsia remains one of the leading causes of maternal morbidity and mortality. An imbalance in the angiogenic factors has been hypothesized to contribute to the pathophysiology of this condition. The condition favors an increase in the antiangiogenic factors like vascular endothelial growth factor receptor 1 (sflt) and a decrease in the proangiogenic factors like placental growth factor (plgf). Although this has been found to be true in caucasian populations, it is not known whether this imbalance exists among the rural African population. The levels of antiangiogenic factor sflt1 and the pro angiogenic factor plgf were quantified using their specific enzyme linked immunosorbent assays (elisas) among both preeclamptic and normotensive pregnant women in the nelson mandela academic hospital in Mthatha. Ethical approval was obtained from the Walter Sisulu University faculty of health sciences research and ethics committee. Preeclamptic participants were selected as those that had on persistent blood pressure of? 140/90 mmhg on two occasions at least 4-6 hours apart or a single reading of >160/110 mmhg and proteinuria of? 1+ on at least two random specimens collected at least 4 hours apart (or a 24-hour urine protein of? 300mg/l) from 20 weeks of gestation, as defined by the international society for the study of hypertension in pregnancy (isshp). Controls were age-matched (within 2-3 years) and gestational age-matched (within 2 weeks) normotensive pregnant women attending antenatal clinic or admitted for other obstetric conditions other than hypertension or diabetes. Bloods were drawn, centrifuged and stored at -70c until analysis. Values were expressed as means s.e.m and were compared using students t-test. Statistical significance was set at p

Keywords: preeclampsia, angiogenic factors, antiangiogenic factors, sflt1, plgf

Health, Wellness And Illness Management In The Eastern Cape: A Case Of King Sabatadalindyebo Municipality.
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The research presented in this paper is a mixed methods study of how health related services are administered and facilitated in the district of OR Tambo at the king sabata dalindyebbo primary health care. The study presents current challenges observed in relation to people as recipients of health services and how the process of disease prevention and management is realized. The aim is to present such challenges while drawing our attention on the realities of people and health in the local municipality. The study is prompted firstly by the socioeconomic challenges with regards to health and illness in the local municipality. Secondly the growing imbalances in relation to people and health care access and support. The findings suggest a need to make health care services relevant and responsive to the needs of the serviced population.
Keywords: health care, services and support, health and illnesses, health and illness policies, health promotion strategies, patients.

Exploration of Attitudes, Perception and Beliefs on Cremation Practice amongst Urban and Rural Black Africans

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South Africa is experiencing high death rate. High rate of mortality amongst youth especially aids/HIV related deaths; increase in population in urban areas; unemployment and poverty; high cost of funerals and many more pose great challenge for all of us. The increase in the number of people who died because of HIV/AIDS had impacted on the demand for burial space in both rural and urban areas. The lack of available space for the disposal of human remains in cemeteries is a concerning issue for city authorities and local health authorities, especially in medium-large cities, which are encountering difficulties in providing burial sites. Bodies are buried on top of each other under a government proposal to break the shortage of burial space is becoming more pronounced in South Africa’s metros. Municipalities are considering several options. Some of the options up for discussion include on a mission to planning to have the departed laid to rest in mausoleums, on top of one another, or cremated. Much as cremations are not an unknown in this country, they are hardly commonplace. Cremation is a possible solution, but many in the African community do not want to hear about alternatives to traditional ways of burial. The council also believe cremations, which cost as less than traditional burial may be a solution to the shortage of burial sites. Another option could be vertical where the coffin is placed in an upright position with the deceased in a seated position - should also be considered as an option and above ground burials could be a solution to South Africa’s grave space shortages, a problem which was increasingly aggravated by the number of people dying from HIV/AIDS. This study seek to explore attitude, perception and beliefs on cremation which could be a long term solution due to the lack of burial space.

Keywords: cremation, HIV/AIDS, traditional burial, cemetery, space..

An Overview Of Deaths Related With Medical Errors In Mthatha Region Of South Africa.

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The practice of cut, kill and learn in Africa is going from centuries when they were taken blacks as a slave. The practice of slavery is over in this century but still, some tradition is persisted in this continent. There is a lack of statistics on the number of deaths related with medical errors in South Africa. There is abundant publicity of ‘batho pele’ means ‘people first’ in hospitals, but little research on the issues of preservation of human life. It is difficult and intimidating to collect data on the death-related with human errors. This article presents descriptive case histories that were brought to attention directly or indirectly.

Keywords: medical error, act of omission, act of commision
Maternal Arterial Stiffness In Early- Versus Late- Onset Pre-Eclampsia, During The Third Trimester.

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There is increasing support for classifying preeclampsia into early- and late-onset as distinct clinical forms. Early- onset is considered to be a foetal disorder that is typically associated with placental dysfunction, whereas late- onset a maternal underlying disorder, associated with normal foetal increased demands. Understanding differences between the 2 entities may help to improve diagnosis, treatment and management of preeclampsia. This was a cross section study, consisting of 64 early-onset and 21 late-onset cases according to gestational age at onset

Keywords: pulse wave velocity, augmentation index, arterial stiffness, preeclampsia.

Evaluation Of Total Antioxidant Status And Biomarkers Of Oxidative Stress In Type 2 Diabetic Patients In Mthatha Region Of The Eastern Cape Province Of South Africa.

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The metabolic derangement in diabetes mellitus lead to increased oxidative stress in the body and consequent development of the disabling chronic complications. The aim of the present study was to evaluate oxidative stress parameters and total antioxidant status in type 2 diabetic patients in the region and to compare it with that of healthy non diabetic controls. 57 type 2 diabetic patients and 41 normal healthy controls consented and participated in the study. Fasting blood glucose (fbs), glycosylated haemoglobin and lipid profile were assayed by routine laboratory methods. Serum total antioxidant capacity (tao), thiobarbituric acid reactive substances (tbars) and the antioxidant enzyme super oxidedismutase (sod) and oxidized ldl levels were measured using standard commercial reagent kits employing elisa technique. The results expressed as mean ±sd .the results indicated statistically significant increases in fbs (p<0.000), hba1c (p<0.000), triglycerides (p<0.031), tbars (p<0.004), and oxidized ldl (p<0.022) in type 2 diabetic patients as compared to control population, whereas total antioxidant activity (p<0.010) and hdl cholesterol (p<0.008) were significantly decreased in diabetic patients. Total cholesterol, ldl cholesterol and sod enzyme activity did not show any significant changes among both groups. Oxidative stress indicators showed positive correlation with fbs and hba1c while there was significant negative correlation with tao and hdl cholesterol. The above results warrant intervention through a diet rich in antioxidants, antioxidant vitamins and life style modifications to prevent the debilitating complications of diabetes in these patients.

Keywords: diabetes mellitus, oxidatives stress, total antioxidant status
Sexuality Education As A Preventive Strategy To Manage The Infection And Spread Of HIV/AIDS: A Case Study Of Walter Sisulu University.
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Today HIV/AIDS rank as one of the most devastating health and social calamity of our time. South Africa has the highest number of HIV/AIDS infected persons in the world. And so is the Eastern Cape Province. The statistics for the epidemic remains high for the post-matric students, notable the undergraduate Walter Sisulu students - target group. Most of our students join the university while at the adolescent stage. By virtue of their stage, they are the experimenters and the explorers. Despite the preventative strategies that have been tried and used by the government and communities to combat the spread of HIV/AIDS, there is still a challenge regarding the issue of HIV/AIDS. Education is one of the primary socialising agents in the society, particularly at the institutions of higher learning. In this paper, the researcher will look at how HIV/AIDS sexuality education is used to conscientise students about combating HIV/AIDS using Walter Sisulu University as a case study. Because our students are mostly from poor rural backgrounds, the focus of the paper will be on the role of lecturers as the agents of introducing students to the dangers of the pandemic as well as on how as a consequence of sexuality education, HIV/AIDS is checked, controlled and managed. The researcher will also give primacy to the vital facilitating role of peer leader’s play in providing practical sessions to other students. The management of the pandemic to a limited level of spread and contraction with intent to bring the scourge of HIV/AIDS to cessation will be brought to the fore.

Keywords: education, HIV/AIDS, management, prevention, sexuality, young people author email address:

Prevalence and Risk Of Hypertension And Pre-Hypertension In 13-17 Year Old Adolescents In Mthatha.
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Hypertension is one of the most common risk factors for cardiovascular diseases (cvds). The aim of this study was to investigate the prevalence of pre-hypertension and hypertension in peri-urban school attending adolescents and explore the relationship between blood pressure, selected anthropometric measurements and serum markers of cvds. Methods: a cross-sectional study of adolescents aged 13-17 years old was performed. Anthropometric data and blood pressure were obtained and converted to percentiles for age and sex. Fasting venous blood was drawn and analyzed for selected markers of cvds. Results: the overall prevalence of obesity was 20.4% while the prevalence of hypertension and pre-hypertension were 21.2% and 12.3% respectively. In males the prevalence of hypertension (ht) and pre-ht were 22.0% and 13.6% compared to 20.9% and 16.5% respectively in females. While mean systolic blood pressure (sbp) was positively associated with higher bmi and wc in both males and females, it correlated negatively with hc in males. On the other hand, mean diastolic blood pressure (dbp) correlated better with hc in males but only weakly in females. Obesity was significantly associated with higher levels of total cholesterol and high sensitive c-reactive protein (hs-crp) while mean systolic blood pressure correlated significantly with titers of interleukin 1? (r=0.318; p=0.016) in the presence
of ht/pre-ht. Conclusion: overweight and obese adolescents in Mthatha had a higher prevalence of ht/pre-ht which was associated with the presence of higher serum levels of cvd markers.

**Keywords:** adolescent, hypertension, pre-hypertension, obesity, overweight, South Africa

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**Placement of General Practitioners in Primary Health Care Facilities: Understanding the Realities In OR Tambo District In The Eastern Cape Province.**

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Universal health coverage is a policy priority globally and there is a need to identify ways of successfully pursuing this goal on the African continent. The national health insurance has been rolled out in 11 pilot districts in South Africa, OR Tambo district being one of the pilot districts. In an effort to improve access to services in the Eastern Cape, private general practitioners are being asked to contract to provide services in public sector facilities. Ways of working are however considerably different between the private and public sector and it is important to understand these contextual differences in order to support the implementation of gp contracting. Methods this research sought to understand the different realities of working in private practices versus public sector clinics, specifically focusing on primary health care facilities and general practitioners in the four sub-districts in or tambo. There was also a focus on access to health care, cost implications and the perceived impacts of a gp being placed in primary health care facilities. A mixed methods case study approach was utilised; 4 facility mangers, 4 clinic committees and 12 community members at the primary health care facilities were interviewed and 4 general practitioners were given administered questionnaires at their private facilities. Key findings key themes that emerged are positive anticipated impact of general practitioners being placed at primary health care facilities, high cost implications of improving access to health care services and continued disparities between the private and public sectors. Reviewing department: public health, HIV/AIDS and opportunistic infections

**Keywords:** universal health coverage, implementation, gp contracting, innovations/reform

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**Classroom environment and promotion of teacher mental health.**

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Academic excellence is an ideal which is striven for by the department of education in South Africa. However, the realization of this objective is negatively affected by the challenges in the promotion of the teacher's mental health which affects them in promoting the quality of teaching and learning particularly in the rural-based secondary schools. While the commitment is laudable, the consequences
can be detrimental and the job demands overshadow the individual's teaching challenges, coping resources, as well as the job rewards; thus leaving the teacher mentally not coping with teaching activities. When teachers experience mental health challenges, they may become frustrated, demoralized and become unhappy and thus ineffective in class. While it might be true that teachers are facing mental health challenges which negatively affect them in the teaching and learning environment, these have not yet been identified in rural secondary schools in the mutale area. This study will establish the mental health challenges facing teachers in the learning and teaching environment in rural secondary schools. This study will be quantitative in nature collecting data through questionnaires. The respondents for this study will be sampled using purposive sampling procedure to enable us to select teachers from schools categorized as dysfunctional by the department of education. Data collected would be analyzed using the statistical package for social science (SPSS). This study is part of the project on school improvement which is ongoing. Acknowledgement: national research foundation reviewing department: public health, HIV/AIDS and opportunistic infections

**Keywords:** classroom environment, mental health, promotion, dysfunctional school, rural areas, rural development

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**Early Childhood Exposure To Marijuana Cultivation And Trading, Its Influence On Adolescence Marijuana Use- A Case Of Selected Pondoland Communities, South Africa.**

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This study is envisaged to investigate whether early childhood exposure to marijuana through its cultivation or trading could influence future adolescence use of the drug in communities where the plant is cultivated. It further aims to ascertain whether children under the age of 13 years in those communities are exposed to the drug through its cultivation or trading. Also whether such an exposure could influence their marijuana use habits in their adolescence stage, so that shielding factors could be developed and recommended. A phenomenological qualitative research approach will be used for the data collection and analysis due to the sensitivity of the topic. First, four focus group interviews will be conducted with the marijuana smoking teenage cohorts as well as four non marijuana smoking teenage category for both genders. Two key informant and two gatekeeper’s interviews will also be conducted in each of the two communities to give more impetus into the findings. This will also help to validate the possible findings emanating from the focus group interviews. The interviews will be recorded using a tape recorder and the data obtained will be translated and transcribed. Encarta qualitative data analysis software will then be used to analyse the data. Findings and recommendations of the study will then be known after the completion of the study.

**Keywords:** marijuana cultivation, marijuana trading, adolescence, marijuana use review comments
Knowledge, Attitude And Behaviour Towards Physical Activity And Healthy Diet: A Tertiary Level Hospital Survey In South Africa.  
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According to the world health organisation (2014), one third of South Africans are obsessed. The numbers keep increasing for a developing country like South Africa. Physical activity and healthy diet has been implicated as major risk factors for obesity and non-communicable disease (ncds), which are increasing in South Africa. The purpose of this study was to investigate the knowledge, attitude and behaviour towards physical activity and healthy diet among the population that visit the nelson mandela academic hospital in Mthatha, Eastern Cape, South Africa materials and method between May 2013 and may 2014 we conducted a cross-sectional survey among 500 adults who visited the nelson mandela academic hospital using a standardised questionnaire to address the knowledge, attitude and practice towards ncds risk behaviours including physical activity and healthy diet. Nelson mandela academic hospital is a tertiary hospital situated in a rural environment in one of the poorest provinces in South Africa; Eastern Cape. Apart from knowledge and behavioural questions in the questionnaire, the five-point likert scale was utilized to generate information on attitude. Results although, the attitudes of the participants towards physical activity and healthy diet is favourable, however only 55% understood the meaning of healthy diet and 67.4 percent did not know or were not sure of the health importance and implications of physical activity. Conclusions: increasing knowledge levels about the benefits of physical activity and good diet among rural residents will be a successful factor for effective prevention of ncds and obesity initiatives. Reviewing department: public health, HIV/AIDS and opportunistic infections

Keywords: obesity; knowledge, attitudes, effects

The Demand For Health Care Services Within King Sabatodalinyebo Municipality In The Context Of The Introduction Of The National Health Insurance Scheme Within A Clearly Defined To Tier Health System.  
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South Africa, recognising the disparities of health services provided to the population and considering the legacy of apartheid has undertaken to introduce the national health insurance coverage for all who live in the country. Public spending on health care remains one of the few uncontroversial roles of government. What is not very clear is whether government money is spent in an appropriate fashion to increase access to, and the use of, health care services and in so doing achieve value for money. The research looked at demand for health care using information from the district barometer and information from the district health information system and data from private facilities for the period 2013/2014 to model the health care choices that individuals in king sabatodalinyebo municipality make when they are sick or injured. A sample of 500 households was used. We considered what these
behavioural characteristics mean for public policy. First, we were interested in how pricing of services will affect their use. Public and private care are distinguished to see where the choices of people are. The demand that we model is the selection of a health care provider, given that a person is sick. This is a discrete choice, so our estimates are actually for the probability that one elects a given option. We employed a nested multi nominal logit model. We also examine the impact of the quality of medical care on health demand, which is a favourite issue for advocates and policy makers. There is difficulty in examining the impact of quality on the choice of provider and therefore has limited research focus despite its importance. Demand for health tends to be inelastic especially when we are sick or injured. First, we have shown that quality is an important determinant of demand for health care. This applies to the quality and availability of doctors/nurses, drugs, and the facility environment. The demand for health care will increase if people have the option to see a better doctor/nurse, get access to pharmaceuticals, and attend a facility that is cleaner, has a toilet and water. The main weakness of our quality data is that the variables are subjective and qualitative. It would be far more useful to collect data on specific, costable, attributes of health delivery options. The research sheds more light on the substitution between public and private care when people can afford which has implications for nhI. As a result of insurance provision for all there is the possibility that previous public facility patients might move to get better services in the private sector. This is true even if the private sector responds to the shift in demand by raising its prices. Government should prioritise the improvement of quality of care in public sector. The fact that private and public health care are close substitutes directs our attention away from the public provision of quality services per se, toward the more general goal of expanding the size and improving the quality of the health care system in its entirety.

Partner Notification Of Sexual Transmitted Infections At Selected Clinic In Vhembe District, Limpopo Province: Women Experiences.

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Partner notification (pn) for sexually transmitted infections (stis) has been recommended as an important step in sti management to help interrupt transmission of infections, prevent potential re-infection, and prevent complications. Purpose: the purpose of the study was to explore the experiences of pn for stis from the perspectives of rural female partners at selected clinic at Vhembe district in Limpopo Province. The qualitative research design, exploratory and descriptive design was used. Population consisted of ten women who consulted at the selected clinic in Vhembe of Limpopo Province. Non-probability, convenient and purposive sampling was used to select ten participants who were diagnose with stis, and willing to participate in the study. Data were collected through unstructured in-depth interviews at participants home. One central question was, “how did it feel for you, to inform your contact about the exposure to stis and to give him the notification slip”, until saturation was reached. The question was followed by probing as a communication skill which elicited more information. Data were analysed by open coding method. Findings revealed one theme namely, notifying the partner about the exposure and sub-themes namely; experiences and views regarding sti partner notification and preferred method of partner notification. The following recommendations were made; provide opportunity for clients to make informed choices, provision of client-oriented counselling, ensuring of adequate privacy and confidentiality and consideration of cultural factors when motivating for pn.
**Keywords:** partner notification, sexually transmitted infections, female partners, patient referral, provider referral

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**Application Of Polymerase Chain Reaction And Real Time Polymerase Chain Reaction In The Detection Of Hepatitis B Virus Occult Infection In HIV Positive Patients From Cameroon.**

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ArchHIVed plasma samples obtained from mutengene baptist health centre in cameroon were used to determine the prevalence of hepatitis b virus (hbv) in human immunodeficiency virus (HIV) infected patients and to detect occult hbv infection (obi) by polymerase chain reaction (pcr) and real time pcr. Hepatitis b surface antigen (hbsag) elisa was done on 455 plasma samples. Hbsag prevalence was analysed based on gender, age and cd4+ cell count. Dna was extracted from plasma of the hbsag negative samples and few positives to serve as controls in pcr. Obi in samples negative for hbsag was detected by nested pcr and real time pcr, targeting a 366 bp fragment of the overlapping polymerase surface region of hbv. A selected number (n=5) of hbv dna was sequenced and phylogenetically analysed. The prevalence of hbsag in the study population was 25.5% (116/455). The prevalence of hbsag based on gender, age and cd4+ cell count was statistically not significant (x = 0.621, x =0.638, x=0.831, p > 0.05). About 4.7% (20/424) of the hbsag negative samples tested positive for hbv dna by nested pcr. The obi prevalence based on gender, age and cd4+ cell count was statistically not significant (x = 0.259, x = 0,145, x = 0.289; p > 0.05). A fairly high prevalence of hbv infection was detected in the study population. Reviewing department: public health, HIV/AIDS and opportunistic infections

**Keywords:** probe, hbv, obi, HIV, hbsag, pcr

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**Day Care Laparocopic Surgery.**

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Day care laparoscopic surgery (dcls) was recently adopted as a safe and viable procedure and is gaining great popularity due to costs reduction and convenience. We did a preliminary retrospective analytical study covering a five-year period between august 2010 and february 2013 in this study were included 84 patients, most of them 97,6 % were discharged among 24 hours after the surgical procedure,15 (18%) of them were males and 69 (82%) females. The group of age most frequently affected was the one of >50 years followed for the one from 40 50 years, cholecystectomies was the procedure more frequently performed 78 patients (93%), others were appendectomy, diagnostic laparoscopy, and lyses of adhesions. Conversions were performed in only 2 patients that remained more than 24 hours admitted. Was concluded that laparoscopic surgery reduced blood loss and pain achieving the patients a fast intestinal function and normal diet, so an early discharge. Reviewing department:public health, HIV/AIDS and opportunistic infections

**Keywords:** key words: day care laparoscopic surgery cholecystectomies- appendectomy- diagnostic laparoscopy
Subarachnoid Cysticercosis And Ischemic Stroke In Rural South Africa. A Cross-Sectional Study.
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Whether subarachnoid neuro-cysticercosis (sncc) induces ischemic stroke (is) is not yet confirmed because only short case-series and anecdotal case reports have been published and no observational studies exist in the literature to date. The few published inquiries on disease progression in sncc involving patients with well-controlled seizures have concluded that sncc does not inevitably lead to is. Also absent in the literature are studies which identify additional risk factors for ischemic stroke, particularly co-infection with HIV in patients living with ncc (plwncc). Objective to estimate the prevalence of ischemic stroke in patients presenting sncc and stroke frequency among HIV-positive patients in three ncc subgroups. To determine if the odds of ischemic stroke is elevated in sncc patients compared to patients with intraparenchymal ncc (incc). To determine whether the risk for stroke is elevated in HIV seropositive patients presenting with sncc or incc and to evaluate if and when the potential interaction varies by location of ncc in the brain. Material and method we reviewed neurologic medical records in the Mthatha hospital complex from the past 15 years to identify patients diagnosed with sncc, incc, and headache where ncc is ruled-out. Within these three ncc groups we followed-up through records and in some cases clinical visit the proportion of patients that suffered ischemic stroke in the same period of time. Eligible patients’ seropositive status was recorded and cross association for the independent variables (ncc status and HIV status) and outcome variables (ischemic stroke event) were performed. Results the proportion of patients who developed is were similar in patients with sncc or incc diagnoses and the odds of is were 2.0 and 2.66 times greater when compared with the reference group c. HIV positive proportions were similar across the three groups, however the proportion of HIV positive patients developing stroke differed considerable; from 40% (or=2.66 95% ci) in patients with incc: to 5.6% (or 0.82, 95% ci) in the reference group. C. 25.0% (or= 2.60) and c: 5.6% (or=0.82) and between group a and b the or=2.82 conclusions compared to the reference group, the odds of is in plwncc were 2.0 and 2.6 times greater patients with sncc and ipncc, respectively. The frequency of is was greater in HIV-positive patients in all three groups, but the risk was especially pronounced when seropositive patients were both ncc groups when compared with the reference group, subarachnoid space that risk increased three times more.

Theoretical Study Of (-)-Epicatechin: Structural Properties and Chemical Reactivity.
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The chemical reactivity and the geometrical structure of (-)-epicatechin (ecoh) are investigated using density functional theory in vacuo and in solution. The dft reactivity indices are used to predict the local reactivity of different sites of (-)-epicatechin. The frontier molecular orbitals and fukui functions indicate the carbon in para-position of benzyl ring to be preferential active site for electrophilic attacks. The bond dissociation energy (bde), proton affinity (pa), h- affinity, electron affinity (ea) and ionization potential (ip) of (-)-ecoh are provided and the antioxidant properties are also explicated. The (-)-epicatechin appears as an amphoteric molecule which can act as base and acid and it can also participate in proton transfer chemical reactions.

**Keywords:** epicatechin, green tea, dft, reactivity index, antioxidant, acid, base

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**Role Of Diabetes And Burnout In The Workplace: The Case Of Walter Sisulu University.**

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This article presents a literature review which focuses on the prevalence of diabetes and burnout syndrome among the employees of Walter Sisulu University. It is estimated that three and half million South Africans (about 6% of the population) suffer from diabetes and approximately five million South Africans have pre-diabetes, affecting employment and subsequent income opportunities. Burnout is often used to characterise a reaction to prolong stress, especially feelings of emotional exhaustion, which are believed to be at the core of burnout. The study will also investigate association between diabetes and burnout syndrome. Furthermore, the study will determine coping strategies used by employees who are diabetic as well as the role of family support in helping them deal with the illness. The study will employ a mixed method approach to collect data, whereby, a purposive sampling method will be used to select the respondents. The results will contribute to knowledge based about factors which can lead to burnout and help organisations as well as employees understand the impact of diabetes and its implications to work environment.

**Keywords:** diabetes, burnout, coping strategies, family support

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**HIV/AIDS Knowledge and Behaviours In Several Rural And Sub-Urban Communities In The Eastern Cape. 2002-2014.**

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HIV/AIDS epidemic is one of the main health problems in South Africa. With over 400 000 new HIV infections occurring in 2012, South Africa ranks first in HIV prevalence in the world (hsrc survey). Women aged between 30 and 34 and males aged 35 to 39 had the highest infection rates: 36% of
females and 28.8% of males. There were 270,000 deaths due to AIDS in the year 2012, and 9.3 million South Africans infected with HIV in 2014. The epidemic is having a negative impact on the labour productivity and human resources, on the educational and health sectors, on the demographic indicators, and on the community as a whole. Reviewing the results of the community diagnosis research projects made by the mbchb iii students (2002-2014) in more than 30 communities, revealed that still there are not adequate knowledge and behaviour related with the disease. Main results encountered in the populations surveyed during the years 2002-2014. Where more than 400 mbchb iii students visited 3,600 houses; a household survey (selected randomly) was conducted, applying a questionnaire as a main instrument. This included key questions related to knowledge about HIV/AIDS (agent, mode of transmission and preventive measures) and the main source of information (health centers, media, and schools). Other indicators included were educational level, age, sex, lifestyle, sanitation, and the access to the health services. The community leaders were informed about the research who agreed to support it. Results indicated that the knowledge about HIV/AIDS range from 54% to 91%; use of condoms, 16% to 60%; knowledge acquisition from the health centres, 32% to 87%. There is a marked difference in the knowledge about the disease between the communities under the study; the use of condoms is not in relation with the knowledge or understanding of the disease; knowledge acquisition from the health centres is not good and with differences between the communities; preventive initiatives need to be increased, people need to be made aware of the dangers, the risks, the ways they can protect themselves; and cultural believes can be affecting the preventive actions

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**Incidence Rates and Risk Factors for Multidrug-resistant Pathogens associated with Healthcare-acquired Infections in Nelson Mandela Academic Complex, Eastern Cape.**

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It is estimated that 1 in 7 patients entering South African hospitals are at high risk of acquiring a nosocomial infection. The study sought to provide an in-sight into the incidence rates and risk factors for nosocomial infections at Nelson Mandela Academic Complex. A surveillance tool developed by the US Centers for Disease Control and Prevention was used for data collection among 65 enrolled patients from June to December 2013. The incidence densities for catheter-associated urinary tract infections, ventilator-associated pneumonia and bloodstream infections were respectively 22.7; 11.1 and 41.2 cases per 1000 patients. The highest incidence rate was for surgical site infections with 100 cases per 1000 procedures. A total of 5/18 (27.8%) isolates of Staphylococcus aureus, the most predominant Gram positive pathogens, were resistant to cloxacillin (MRSA) whilst 6/11 (54.5%) of Klebsella pneumonia, the commonly isolated Gram negative pathogens, were resistant to 3rd generation cephalosporins and confirmed to produce an extended spectrum beta-lactamase (ESBL). Acinobacter baumanii, an emerging Gram negative pathogen, was multidrug-resistant (MDR) in 50% of cases. Risks factors for all MDR-pathogens included old age (p = 0.005), presence of urinary catheter (p = 0.024), length of stay of the urinary catheter (p = 0.011), presence of mechanical ventilation (p = 0.05) and prolonged length of hospital stay (>14 days) (p = 0.034). The magnitude of nosocomial infections was significantly observed. Findings underscore the need for a continuous surveillance system, and the implementation of the necessary quality improvement measures.

**Keywords:** Incidence, nosocomial infections, multidrug-resistant pathogens, risk factors.
Antiproliferative and apoptotic potential of Peltophorum africanum on cancer cells.

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Peltophorum africanum, a member of the family Fabaceae (Sond) is an African weeping wattle used in traditional medicine in South Africa. The study evaluated the in vitro antiproliferative and apoptotic potential of the ethyl acetate extract (EAE) of this plant in order to validate its pharmacological use. Methods: Antiproliferation of human breast (MCF-7), colon (HT-29) and cervical (HeLa) cancer cell lines by EAE was investigated using the Cell Titer-Blue viability assay and the mechanism of action delineated using the Nucleic Acid and Protein Purification Nucleospin® Tissue Kit, Scanning Electron Microscope (SEM), propidium iodide (PI) and acridine orange (AO) double-staining techniques. Results: Significant reduction in cell viability of the cells was noted as the MCF-7 cells were reduced from 100 - 54.33±1.84 % after 72 hrs of treatment with 5 µg/mL of EAE (P. value < 0.05). Internucleosomal DNA of MCF-7, HT-29 and HeLa cells was randomly fragmented, complemented by the intercalation of nucleic acid-specific fluorochromes by PI and AO spotting two phases of apoptosis; early (EA) and late (LA) apoptosis. Ultramorphological changes observed included; cell shrinkage, membrane blebbing, and typical cell induced death. Conclusions: The ethyl acetate extract of P. africanum has the potential to induce apoptosis.

Keywords: Apoptosis, Cancer, Mechanism, Ultramorphology, Peltophorum africanum, Medicinal, Viability

Cost-Benefit Analysis of Managing Healthcare Associated Infections at Mthatha Regional Hospital in Eastern Cape, South Africa.

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Healthcare costs are highly influenced by rates of nosocomial infections (NIs). The study sought to determine net benefits and costs associated with strategies used to decrease rates of NIs. An incidence survey was conducted between June and December 2013. Costs related to the treatment of NIs were measured. An effective preventive strategy was determined by incremental cost-effectiveness analysis. Sixty-five NIs occurred among hospitalized patients. The incidence rate was 10% for surgical site infections (SSIs); 2.27% for catheter-associated urinary tract infections (CA-UTIs); 1.1% for ventilator associated pneumonia (VAP); and 4.12% for bloodstream infections (BSIs). The total annual cost associated with loss of revenue was ZAR 3,279,572 for SSIs; ZAR 788,531 for CA-UTIs; ZAR 394,265 for VAP; and ZAR 1,989,248 for BSIs. The annual variable costs attributed to hospital expenditures was ZAR 417,504 for antimicrobial use; ZAR 688,224 for subsidiary laboratory testing; and ZAR 2,002,944 for imaging investigations. Multidrug-resistant microorganisms infected patients incurred higher costs, mainly for subsidiary laboratory tests (ρ = 0.045). The total annual gross cost attributable to the 4 NIs was ZAR 9,560,289. The investment cost for prevention of NIs was estimated to ZAR 1,416,345 per year. If the current NI rate was decreased by 15%, cost-savings were estimated to be ZAR 1,434,043
per year. There was a linear correlation between ratios of benefit/cost and avoidable rates of NIs (Y = 0.066X + 0.001; R² = 1). Findings showed that there is a good benefit–cost ratio when a strategy can prevent 15% to 30% of NIs.

**Key words:** healthcare costs, nosocomial infections, cost/benefit ratio.

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**Prevalence of potential enteric pathogens in treated and untreated water sources around Eastern Cape region.**

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Feacal contamination of water sources has always been a major safety concern and a factor in determining the need of a continuous treatment programme. A routine monitoring programme for drinking water sources would provide increased public health protection. The aim of this study was to determine the prevalent rates of potential enteric pathogens in water sources in Eastern Cape. Water samples (from water surfaces and undergrounds) were collected from treated and untreated water sources. The Colilert method (IDEXX Laboratories, Inc., Westbrook, Maine) was used to screen for faecal contamination and then selective culture media and Rapid 20E API Kit were used to identify different isolates.

Of the 80 water sources (from Mthata, Flagstaff, Tsolo, Mountfrere, Libode,.... areas) sampled, there was a widespread contamination with coliforms ranging from 1 to >2400 MPN/100ml. Whilst the contamination with E.coli remained relatively low in most of the sources, there were high contamination levels (>2400 MPN/ml) of E.coli in water sources from Ntabankulu, Ngqeleni, Libode and Flagstaff. Among the isolated enteric pathogens, *Escherichia coli* 1 was the most prevalent (41.2%) followed by Salmonella spp (17.7%) and Enterobacter spp (10%).

The presence of pathogenic micro-organisms in drinking water may pose a serious health risk to consumers especially the young, elderly and the immunocompromised. Therefore there is need for governing bodies to take extra steps in treatment and monitoring programmes for safer and cleaner water sources.

**Keywords:** Feacal contamination, E.coli, Salmonella

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The Role of T helper 17 and regulatory T cells in the Pathogenesis of Vulvo-Vaginal Candidiasis among HIV-infected Women.

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The pathogenesis of vulvo-vaginal candidiasis (VVC) in HIV infected women is not well understood. The study sought to describe relationships between IL-1β, IL-2, IL-4, IL-5, IL-6, IL-7, IL-8, IL-10, IL-12, IL-13, IL-17, G-CSF, GM-CSF, IFN-γ, MCP-1, MIP-1β, TNF-α, TGF-β1, TGF-β2 and TGF-β3 and the presence of VVC, stratified by HIV status. Plasma and genital samples were obtained from 51 clinic attendees in KwaZulu-Natal between June and December 2011. Cytokine concentrations were measured by Luminex® assays. Of 51 participants, 16/26 HIV infected and 15/25 HIV uninfected women were diagnosed with VVC. DA identified 2 variables (MIP-1β and TGF-β3) in plasma [Box’s M (5.49), p (.57) > α (.001); Wilk’s Lambda = .116, p < .0001] and 1 variable (IL-13) in vaginal secretions [Box’s M (2.063), p (.37) > α (.001); Wilk’s Lambda = .677, p < .0001] as able to discriminate HIV+VVC+ group whilst TGF-β1 in plasma discriminated HIV+VVC- group. Mean concentrations of genital IL-6, IL-8, IL-10, IL-17 and TGF-β3 were significantly higher in HIV infected women co-infected with VVC. It can be hypothesized that in the presence of TGF-β3 and IL-6, naïve CD4+ T cells differentiated to Th17 cells with production of effector cytokines. However, in the presence of TGF-β3 and IL-10, CD4+ T cells could have differentiated to regulatory T cells (Treg cells) resulting in increased IL-10, blocking Th17-mediated inflammation. Therefore, in HIV infected women, VVC might be explained by a decline of Th17 cells, hence a decrease of Th17/Treg ratio.

**Key words:** HIV, VVC, cytokines, discriminant functions.

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**Lipoprotein (a) levels in Type 2 Diabetes Mellitus Patients of African descent – A study from Mthatha region of the Eastern Cape Province of South Africa.**

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Type 2 diabetes mellitus (T2DM) is a growing health care concern which is associated with two to threefold increase in the risk of cardiovascular disease (CVD). T2DM is known to be associated with cardiovascular risk factors like elevated triglycerides and LDL, decreased HDL levels, obesity and hypertension. Lipoprotein (a) which is a LDL like particle containing Apo (a) is an independent predictor of cardiovascular disease (CVD) particularly in Caucasians. The aim of this study was to investigate the levels of Lp(a) in T2DM patients of African descent and its association with glycemic control. 68 T2DM patients and 41 controls participants were recruited for the cross sectional case controlled study. The Lp(a) levels and other parameters were assayed using appropriate laboratory methods and the results were analyzed using SPSS. The Lp (a) levels in diabetics was found to be significantly increased.

**Keywords:** Type 2 Diabetes, Lipoprotein (a), Oxidized LDL, Glycated haemoglobin, Cardiovascular risk factor

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**Antidiarrheal Effects of Ethanolic Leaf Extract of Eriobotrya Japonica (EEJ).**

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Eriobotrya Japonica is widely used as a medicinal plant for several diseases including diarrhea. The present study investigated the antidiarrheal effects of ethanolic leaf extract of Eriobotrya Japonica (EEJ) against experimental diarrhea in Sprague Dawley rats. The study also evaluated the effect of the extract on gastrointestinal propulsion using charcoal meal and on intestinal fluid accumulation.

**Keywords:** Eriobotrya Japonica, diarrhea, gastrointestinal propulsion, yohimbine, castor oil.

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**Possible factors influencing eating habits of children living in Mthatha dumping site, Eastern Cape.**

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The diet of any individual whether child, adult or adolescent is the result of range of complex and conflicting factors. This complexity is increased when focus is placed on children, who are considered to be at a stage of development. Children’s growth and development do not occur in a linear fashion, but are influenced by each child’s environment, nutrition and parental care. These factors play a critical role in a child reaching her/his full potential. Objective: Explore possible factors influencing eating habits of children aged three to six years in the study area. Study design: An exploratory study was conducted amongst 100 randomly selected black mothers, living in an informal settlement in Mthatha region. Pre-tested socio-demographic questionnaire was completed and focus group discussions to determine eating habits. Poor eating habits were apparent in the study sample. Socio-economic factors were amongst the factors that relate to lack of nutritionally adequate and safe food. Obtained result confirms that more than often most children have diarrhea, sores and scabies due to lack of economic access to enough safe, nutritious, and socially acceptable food for a healthy and productive life. Conclusion: It is wise to not only research and expose the problems, but to present a solution to problems the community faces. These results will be used to plan appropriate intervention strategies to address the crisis of malnutrition thereof.

**Keywords:** Dumping site, children, eating habits, factors, Malnutrition

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**The Evaluation of the Behaviour of the Final-Year B.Ed. Students after the Implementation of WSU HIV/AIDS EDUCATION PROGRAMME.**

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The study is investigating the impact of HIV/AIDS programme on the behaviour of the students at Walter Sisulu University (WSU), in South Africa. The purpose of the study is to determine whether the HIV/AIDS programme that is offered to the first-year students manages to change their behaviour. The universities are embarked on HIV/AIDS programmes and it is necessary to evaluate the sustainability
of the benefits of those programmes on the lives of the students. Participants of the study are final-year students from WSU. Quantitative and qualitative approach will be used to conduct the study. Questionnaires and interviews will be used as the tools to gather the data from the participants. Findings of the study hopes to contribute to the health of the students, the policy makers, and the global community who are facing with the pain of HIV/AIDS epidemic.

**Keywords:** Evaluation, students, behaviour, HIV/AIDS programme

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**Barriers on adherence to ARV Fixed Dose Pill in HIV positive patients at Empilweni Gompo Community HealthCare Centre, East London, Eastern Cape, Southern Africa.**

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Poor adherence to antiretroviral therapy is associated with less effective viral suppression, which risks the immediate health of the patient, but also risks creating permanent treatment resistance. The tablet known as Atroiza is a three-in-one combination antiretroviral and has been introduced in South Africa to improve adherence level. One of the reasons to embark on this study is to find out whether the pill make taking life prolonging drugs less of a burden for patients as this will improve adherence levels. Therefore, the objectives of the study were to investigate level of adherence, psychological & structural barriers and relationship between structural and psychological barriers. The present study comprised of 25 participants. 9 males and 10 females participated into in-depth interview. 6 respondents participated in focus group interview. Simple random sampling was utilized. The data was analyzed through 5 step interpretive data analysis model. Line numbers were used to identify questions asked by the interviewer and responses of participants were used in referencing each analysed response. Interpretive data analysis model was used to interpret those responses. The findings of the study are that most participants (90%) show that single dose pill has proved to be much more convenient such that carrying it around is no longer a problem and has improved the lives of the people including enhancing self-confidence in terms of appearance and weight issues. This study has been able to demonstrate among other things that, fixed dose ARV medication has improved adherence levels so much that they always take their treatment because it is less of a burden even in swallowing.

**Keywords:** Adherence, Ant-retro viral treatment, Fixed dose Combination, Atroiza

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**An evaluation of contracting models between general practitioners and the National Department of Health towards an enhanced primary healthcare service in the O R Tambo district, Eastern Cape Province (GP contracting).**

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South Africa has embarked on a number of health sector reform policies, of significance among these are the introduction of the National Health Insurance (NHI), and the re-engineering of Primary Health Care. A key component of these initiatives requires an investigation of how general practitioners, who predominantly work in the private sector, can be engaged, in order to partner with the state to improve access and ensure financial risk protection as articulated in the NDOH NHI green paper of 2011. This study seeks to investigate whether contracting of general practitioners improves access and quality of health services to the public. This study aspired to find out the process and governance arrangements for contracted GPs within the NHI pilot intervention sites. A mixed method approach was employed and the study was conducted in one of the 10 national the NHI pilot districts, namely OR Tambo in the Eastern Cape. A total of 63 GPs were recruited to participate in the study following an extensive engagement through a number of workshops. Interviews were conducted by trained researchers through structured questionnaires and in depth interviews with selected key informants were also conducted. A total of 63 GPs demonstrated interest in the study. In the end only 42 GPs participated in both the quantitative and qualitative survey, which is equivalent to a 66.6% response rate. In the OR Tambo district, 90.2% of the interviewed GPs are interested in signing a contract with the state provided it was flexible and allowed them to continue with their practice and the remuneration was competitive. **Keywords:** GP Contracting, National Health Insurance, Primary Health Care, General Practitioner, Quality of Health, Health Services
Assessing The Socio-Economic And Environmental Impacts Of Illegal Sand Mining In The Chris Hani District Municipality, Eastern Cape, South Africa.

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Sand mining refers to the process of the removal of sand from a place of its occurrence (Langer, 2003). The increase in demand for sand for construction purposes has placed immense pressure on this valuable resource. Therefore, the extraction of this important construction aggregate is bound to have considerable ramifications on the environs of its occurrence. As a cheap and readily accessible resource many companies are involved in its mining both legally and illegally without considering the damage they are causing to the environment. Sand mining has been one of the serious environmental problems around the globe in recent years. This often results in land degradation, loss of agricultural lands and biodiversity as well increased poverty among people. My research will look at the economic benefit of sand mining in rural areas and environmental impacts related to it. I will also check if ever the sand miners have permits, mining rights, or if ever there are laws and policies that govern sand mining operations. Quantitative and qualitative research designs will be used in a form of questionnaire survey, oral interviews, focus groups and field observation. Questionnaires and focused group interviews will be adopted to investing the economic benefits of the community in sand mining operations and the local sand miners if they adhere to the laws or they extract sand illegally in the Chris Hani district, Eastern Cape, South Africa in Nkanabana location. The findings will be presented through graphs tables and pictures.

**Keywords:** sand mining

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**Assessment of Measures of Preventing School Violence at Auther Mfebe Senior Secondary School.**

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A phenomenon of school violence is skyrocketing at an alarming rate in SA, learners and educators are not immune to the incidences of violence outside and also within school premises. In response to the situation government has to adhere to the principles of human rights as enshrined in the constitution (Act 108 of 1996). Further efforts to find theoretical explanation for the phenomenon and thus proposing measures for uprooting violence had been undertaken unfortunately up to date they have not yielded convincing positive results. This study has aimed to assess measures that are employed for preventing school violence at Auther Mfebe SSS. Respondents had revealed that their relationship with teachers and other students at school tend to range from poor to excellent. When considering safety at school some felt that they are safe while others do not agree. In the study it has also been reported that learners at intervals they can be subjected to random search by the police. Further findings reveals that although students at school agree that they tend to engage themselves in delinquent activities certain teachers had also been witnessed abusing alcohol and/or drugs.

**Keywords:** school violence, administered measures, assessment

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**Correlation Study Between Juvenile Delinquency And Domestic Violence At Zwelibongle Senior Secondary School.**

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In many SA schools there are high rampant incidences of juvenile delinquency. Criminology as a field
of study, in an effort to find causes of this problem of juvenile delinquency among other findings has been established that when parenting is inadequate, a child’s maturational processes will be interrupted and damaged. In addition youth who grow up in households that are characterized by conflict and tension, and where there is dearth of familial love become susceptible to crime-promotion forces (Larry et al. 2012). This article has focused on the correlation between domestic violence and juvenile delinquency amongst pupils at Zwelibongile SSS in Lusikisiki district of Education. The sample consisted of 78 respondents from grade 10, 11, and 12. The researcher for this quantitative study used questionnaire as an instrument of gathering data from the respondents. On the findings it has been revealed that female and male respondents are not equally affected by domestic violence and that also applies to age group. As a consequence of domestic violence at home, findings further revealed that most pupils were involved in various types of juvenile delinquency. They were also not skeptical to report that in different ways they had been victims of abuse by their parents. Some indicated that their family members were using alcohol or drugs. A significant number of these juveniles also admitted that they had visited their family members who were in hospital as a result of violence that was happening at home.

**Keywords:** juvenile delinquency, delinquent, domestic violence, child abuse, victim, parent-child relationship

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**Public Perceptions Towards Police Brutality At Bekela Township, Ugie.**

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This study sought to explain perceptions upheld by community members of Bekela Township, ugie about the brutality of South African police service. It further focuses on the impact of police brutality on the participation of the community members in crime prevention strategies. The study was explanatory and adopted quantitative method. Size of the sample consisted of ninety respondents regardless of race, gender, religion, or political affiliation. The instrument of data collection used was a structured questionnaire which consisted of open ended and closed ended questions. The raw data was analysed statistically with the aid of SPSS. Findings in the study reveal that at bekela township police brutality has been a daily concern. Amongst factors which lead to the situation is the lack of proper training for making law and order in the society and are further accused of being negligent. To a large extent the habit of brutality amongst SAPS is attributed to traditional policing style which did not take the principle of human rights into consideration. As a result of this apparent issue police image has been tarnished and therefore police-community relationship suffers. In essence treatment obtained from the police makes public not to be absolute willing to participate in policing decision making. Measures put in place by the department of police for addressing this quagmire seem not yielding positive results.

**Keywords:** police brutality, police image, differential association, police-community relationship, crime prevention strategies, public perceptions

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**Young people and sexual offences**

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a sexual act that is committed against a person’s will is an unlawful act therefore it calls for punishment. There is a lot of sexual violence committed by and against young people in South Africa. This paper will explore the nature of these violent crimes and touch on the important aspect which is who are these young offenders. This paper also stresses that be no generalization when we speak of young offenders and rule out the assumption that youth sex offending is a single pattern of behaviour however that there are certain characteristics these young offenders have. It is important to note that youth sex offenders form a diverse population and that such offending behaviour may reflect a broad variety of personality types and different factors may have contributed to the offending behaviour such as poverty, patriarchal notions of masculinity, poor parenting, pornography and substance abuse. Furthermore the paper will discuss the sex offender registry and the negative effects it has on the young offender. The juvenile justice system acknowledges that children who break the law should be treated differently from adults, with a greater emphasis on rehabilitation for their subsequent reintegration back into the community. Therefore the treatment programmes must be in line with the juvenile justice principles and develop techniques to prevent young people from them engaging further in violent crimes.

**Keywords:** sexual violence, young people, South Africa, rehabilitation, juvenile justice

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**The Guidelines For Network Security In The Ever Changing Trends Of Information Technology: A Case Of Walter Sisulu University.**

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Network security is of critical importance in safeguarding the information resources of an organisation. An organisation that does not have strong network security is vulnerable to cyber-attacks and threats. Network security is the protection of information, system and hardware that use, store and transmit that information. The constantly evolving information technology (IT) environment brings challenges for network administrators to guarantee sufficient network security for the organisation. It is due to the increasing it security threats with so many cyber-attacks that are organized with expertise hence it is important to have a set of security guidelines to effectively secure the network environment. The network security of the case studied has suffered several cyber-attacks. The goal of the study is to investigate the causes of cyber-attacks and thereafter develop a proposed set of network security guidelines that can assist network administrators to maintain effective security measures in the ever changing network IT environment. A critical qualitative approach will be used for this study whereby the network security mechanisms will be evaluated and coupled with interviews by interviewing students and staff. The content data analysis will be used for this study.

**Keywords:** network security, security threats, security standards, cyber-attacks, network

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Motion or movement: how have pre and post-apartheid eras of South African agricultural and food systems performed?

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South Africa is unlikely to catch attention when the nations with food emergency are mentioned due to
its well-developed commercial farming. There is no lack of well-intended policies to improve agriculture and food security of its citizens. However, with human development index ranking of 118 among 135 countries and human poverty of 13.4% and ranking of 85 amidst all policies and strategies of improving the agriculture and food security issues, it defies logic that South Africa has made a lot of motion but not necessarily movement in the right direction. This study is aimed at reviewing the performance of key indicators per capita land utilization, production and consumption of selected staple foods such as maize, cowpea, potato, canola and apple in the pre and post-apartheid periods of South Africa. We found that there is a declining trend in per capita land cultivation, per capita food production and consumption of major staple food. The study revealed that population growth in South Africa has not been harnessed and there is possibility of worsening food security if the country. We recommend policy strategies targeting per capita improvement of staple food to ensure sustainable food security.

**Keywords:** agriculture, per capita resource, food security, South Africa

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**An explorative study of the challenges faced by single mothers at rabali village, Limpopo Province.**

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The study explores the challenges faced by single mothers. It looks on their perceptions, support systems and coping strategies as single mothers. Participants were drawn from rabali village, using purposive sampling methods. They ranged from 35 to 45 years. The study was qualitative in nature. The phenomenological research design was used on and semi structured interviews was conducted to gather data, which was analysed using phenomenological explication analysis method. The results shows that there are more challenges than benefits for single mothers. Single mothers face challenges such as inability to meet certain needs, feeling of inadequacy, fear, stigmatisation, feeling of guilt, role conflict, inability to disciple children of opposite sex, lack of child father relationships, financial difficulties, social challenge and psychological stress. Government should also put more effort to come up with programmes to empower single mother and ngos should caters single for mothers. Single mothers should also take initiatives to improve their lives.

**Keywords:** explorative, challenges, single mothers

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**The continuous use of pesticides by small-scale farmers despite their environmental impacts: a case of mbizana local municipality.**

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The continuous use of pesticides by farmers has brought benefits such as increment in yields thus more improvement in production and productivity. However, negative outcomes too have increased. The outcomes include damage to the environment, agricultural land, fisheries, fauna and flora. The major problem is the use of toxic insecticides by farmers in the research area. This research will explore the
continuous use of pesticides by farmers in mbizana local municipality which is the coastal municipality with pristine beaches and scenic estuaries. This coast line is part of the famous wild coast and pondoland centre of endemism that boasts of valuable flora and fauna found nowhere else in the world. Quantitative and qualitative research methodologies were used to collect data. Interviews were conducted on extension officers of the department of agriculture in mbizana. Questionnaires were also used for the farmers in order to get first-hand information on how they apply pesticides and how often they do apply them. Secondary data from the department of agriculture, department of agriculture forestry and fisheries, journals, books, government gazettes and internet were used.

**Keywords:** coast; flora; fauna; agriculture; research; pesticides; farmers; continuous

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**Rfid-Based System Design Framework for Combating Impersonation Vulnerability in Africa.**

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Impersonation or identity theft involves using another person’s personal information such as name, identity card, or credit card without their permission in order to commit fraud or other crimes. This form of crime is on the rise globally in recent years and the South African police service (saps) is not an exception. Due to the absence of strong security features on policemen's uniforms and patrol vehicles, saps have felt vulnerable to officers' impersonation and vehicles cloning in recent years. This constitute a serious security breach and the crime rate in the country has skyrocketed. Given the critical context, it is important that policemen and the assets of saps have to be protected from this nature of crime. This research therefore, aim to solve this problem. This research proposes a technique to combat impersonation in the saps using radio frequency identification (rfid) technology. With this technique, policemen and vehicles on duty can be identified and authenticated in a real-time mode. We designed an rfid-based device having both tag and reader integrated together which every policeman and vehicle must have. In addition, we implemented a novel system prototype called police identification system (pis) which offers a number of functionalities to stop this crime. The research also explained the benefits that can be derived from using pis. With its mode of operation, we believed that if the system is adopted for use, it will help to combat impersonation in the saps and reduce crime rates in the country to the minimum.

**Keywords:** radio frequency identification, identity theft, electronic product code, object naming service, police identification system.

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**The protection of environmental interests through corporate governance: a South African company law perspective.**

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The quest to maximize profits by corporate administrators usually leaves behind an unhealthy environment. This trend impacts negatively on long term interests of the company and retards societal
sustainable development. While there are in South Africa pieces of legislation which are geared at protecting the environment, the companies’ act which is the principal legislation that regulates the operations of the company is silent on this matter. The paper argues that the common law responsibility of the directors to protect the interests of the company as presently codified by the companies act should be developed by the courts in South Africa, in the exercise of their powers under the constitution, to include the interests of the environment. This would guarantee the enforcement of the environmental interests within the confines of the companies act as an issue of corporate governance.

**Keywords:** environment, directors, companies, corporate governance, common law, constitution.

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**Analysis of Community Understanding Of the Rule of Law in Democratic Policing: An Unconventional Policing Approach.**

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the preamble of the constitution of the republic of South Africa emphasizes on the improvement of the quality of life of all citizens and free the potential of each person and; build a united and democratic South Africa able to take its rightful place as a sovereign state in the family of nation. Members of the community are seemingly undermining or unaware of the supremacy of constitution while engaging on violence while dealing with issues concerning crime and contemplated criminal activities as they resort to public vigilantism. Furthermore, the constitutional provision is supported by the provisions of the criminal procedure act and the police act which advocates partnership policing. Legislations confers powers to a private person to effect arrest which support the notion of broken window theory, and the shared responsibilities between the police and the community on their common goal which is aimed at crime prevention. The current situation contradicts with the legal mandates, as community members take law into their own hands and it turn to undermine the constitutional values. This paper analyses the available writings, decided court cases and day to day incidents on the community understanding on the rule of law, rights and its applicability.

**Keywords:** constitution, broken window theory, legal mandates, contradictory approach, communities.

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**Nationalism and the outsider question in South Africa.**

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Nationalism is closely knitted to identity and in some cases, it is used to show allegiance or the “we” image of a particular ethnic group to a nation. It is also used to differentiate between locals and foreigners and manifests itself in various forms across the spectrum of any society. Apart from the use of language, violence has been widely used as a separation tool in the nationalism discourse in post-apartheid South Africa. The 1998, 2008 and 2015 xenophobic orchestrated violence in South Africa has reinforced the nationalism discourse and feelings of insecurity amongst foreigners. As observed from previous incidences, locals blamed foreigners for loss of jobs mainly in the informal sector and limiting government in service delivery by attacking them or chasing them away from their homes and taking over those residences. Our paper aims to explain the reason for recurring xenophobic violence in South Africa and why nationalism is used in a “rainbow” nation-not welcoming foreigners? Methodologically,
our papers employs discourse analysis by historicizing xenophobic orchestrated violence. This paper concludes that security needs to be beefed up at the border posts and the government should as a matter of urgency create a department of service delivery to meet the needs of teeming population in South Africa.

**Keywords:** nationalism, outsider, identity, violence, security, service delivery

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Exploring the nature and prevalence of reported cases of direct unfair discrimination in the workplace in post-apartheid South Africa  
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South Africa has reached its twentieth year of democracy following a history of gross inequalities and injustices during the apartheid era. The South African government has implemented legislation prohibiting discrimination, for example the constitution of South Africa (act 108 of 1996), the employment equity act (act 55 of 1998) and the promotion of equality and prevention of unfair discrimination act (act 4 of 2000). However, anti-discrimination legislation has not led to an eradication of unfair discrimination in the post-apartheid state. This study set out to explore the problem of unfair discrimination in the workplace in post-apartheid South Africa by analysing reported unfair discrimination cases during the period 1994-2013. The data obtained from the analysis was coded and entered onto the statistical programme for the social sciences (SPSS) and descriptive statistics results were yielded. The main research findings revealed that unfair discrimination had initially increased and subsequently remained unchanged over the post-apartheid years in the workplace; that a majority of the cases were cases of racial discrimination; that more discrimination was reported in the public sector than in the private sector and that a majority of the cases were reported by previously advantaged rather than previously disadvantaged individuals. These results imply that discrimination in the South African workplace is an ongoing issue that has not improved twenty years after democracy and that employment equity and affirmative action laws and other legislation aimed at eliminating discrimination in the workplace are relatively ineffective in achieving this goal.

**Keywords:** unfair discrimination, post-apartheid, anti-discrimination legislation, constitution, employment equity act, effectiveness of legislation

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Oil Politics, Insecurity And The Nigerian State.  
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crude oil is a natural resource that is being highly sought after by countries across the globe. However, since the discovery of crude oil in Nigeria in 1956, many ethnic militia have sprung up giving the government problems like increased spending on security. Although, the niger delta is largely underdeveloped with environmental degradation despite the fact that it produces most of the crude oil which contributes about eighty percent to the foreign exchange earnings of the nation. The problematic here is that despite huge proceeds from the sale of crude oil, the nigerian government has not done enough to better the lots of niger delta indigenes, thereby making the youths vulnerable to crime and
other vices on the waterways in the region. Despite military and paramilitary interventions, youth restiveness has not abated in the region. What factors are responsible for this trend? Could it be due to government insensitivity to the plight of the niger deltan, corruption or corporate social irresponsibility on the part of multinational oil corporations? Our paper adopts the longitudinal and thematic approaches to explain the un-abating crisis in the region. The paper concludes by advising the government to empower niger deltans and encourage multinational oil corporations to increase its level of social responsibility.

Keywords: crude oil, foreign exchange, environmental degradation, ethnic militia, corporate social responsibility, security

The Challenge Of Nation Building In South Sudan.
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the crisis in south sudan that broke out in december 2013 typifies the general political and social landscape of nation-states that are borne out of armed struggles in Africa. The current civil war gives an insight into the crisis of nation-building and the old fanonian problem of "pitfalls of national consciousness" through the failure of the elite nationalist leaders to define the national question. The government of south sudan the sudan people's liberation movement (splm) claims to be the only political formation that represents the will of the nation of south sudan as the custodian of the liberation struggle against the north (hereafter sudan). The reinvention of history by the splm gives an insight into the twists of the politics of liberation movements as authors of post conflict and colonial nation-states on the continent. South sudan has degenerated into an ethnocracy where the dinkanization of the country has presented an antipathy for nation building thus sowing the seeds for disaffection in minority ethnic groups such as the nuer who have this far transferred political frustration into a full scaled military confrontation with the government. Subsequently there has emerged the manufacturing of political identity and demonization between the splm and opposition political forces as expressed in the twists of the civil war in a manner that has escalated the conflict. Most importantly the splm has employed the machiavellian discourse of maintaining power either by hook or crook thereby delaying any meaningful nation building initiatives.

Keywords: civil war, elite leaders, national question, nation building, politics of manufacturing of identity

Designing A Potentially Sustainable Children And Youth Sport-Based Development Programme In Some Rural Communities Of Vhembe District.
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Various organizations often initiate sport programmes that rarely last, mainly due to mismanagement, tensions and conflicts. In this paper, a detailed step by step account of the process and key imperatives of a potentially successful programme that applies soccer as a tool for achieving sustainable
development within the ngovhela traditional authority area in Vhembe district of Limpopo Province is articulated. The approach was participatory and asset-based. It was used to identify and introduce realistic mechanisms with active involvement of university undergraduate and postgraduate students, children, youth, traditional and civic leaders. All of them participated in a facilitated discussion forum that gathered their collective views on the roles various stakeholders and mechanisms of implementation. Six youth based and children based teams will be formed, and these will play against each other in form of a league. Community governance structures will be put in place to monitor the programme. The preliminary results suggest that this programme which places emphasis on innovative celebration of the youth day holiday, promises to clarify what the key pillars of social cohesion within the community and presumably beyond are.

**Keywords:** children, development, social cohesion, sport, youth

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**Occupational Specific Dispensation (OSD) Scale At Walter Sisulu University (WSU): Ignorance Or Deliberate.**

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Introduction: public sector doctor (including university staff) are entitled for their osd scale since july 2009. It is implemented only for a year. There is need to operate osd scale appropriately as it revise every year. Objective: to highlight the problem of osd scale in WSU. Case history: mr x has written a couple of letter to express his grievances to the hr of the university, but only one reply was received. He was deprived of annual increase at par with osd scale. His basic salary was constant without any annual increment from last 4 years (2010-2014). Mr x allowances were reduced to less than half (< 50%). Therefore, mr x monthly earning has dropped about 30% to 40% less, than his professional colleagues. This has resulted in loss of productivity. The case history, salary scale, and all other allowances have discussed in this case report. Conclusion: there is gross inconsistency and discrimination in payment of mr x. Human resource must look this matter urgently.

**Keywords:** occupation specific dispensation, health professional

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**An Exploratory Study Of Children As Victims Of Rape In Mthatha Community.**

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The study sought to explore the perceptions of Mthatha community towards children as victims of rape. The study aimed to ascertain whether Mthatha community is aware of escalation of children rape in their community; to explore the Mthatha community’s perceptions concerning the causes of children rape in Mthatha; to explore measures employed by Mthatha community in combating child rape. The researcher employed a questionnaire as an instrument of collecting data from a sample of thirty respondents. Thirty respondents were chosen using accidental sampling. Data was analysed using SPSS software version 20.0. The findings of the study depicts that Mthatha community is aware about the escalation of child rape and they are of the view that the escalation is been precipitated by alcohol and drug abuse among the rapists, myth of having sex with a virgin or children cure aids, male domination
over young girls. The study found that measures that are used by Mthatha community in preventing youth rape is vigilantism, reporting the case to the police.

**Keywords:** child victims, victims, rape, community, young girls, alcohol, drugs, myth

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**Admission rules for foreign legal practitioners in South Africa under the new legal practice act 28 of 2014: a gats perspective.**

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Globalisation requires ever closer co–operation between legal professionals hailing from different national jurisdictions. This interactive global environment has fostered growing international training and mobility among legal practitioners and the internationalisation of legal education. Increasing numbers of law students get trained in other countries as part of their undergraduate degrees or even come to foreign shores to obtain law degrees. Many students hailing from other African countries study towards llb degrees at South African universities. Major commercial law firms ensure that they can offer in–house expertise on major foreign legal systems and co–operate with partner firms in other parts of the globe. The general agreement on trade in services (gats), to which South Africa is a party, is a multilateral agreement focusing on the liberalisation of trade in services amongst member countries. Services under the gats system include legal services. The commitments made by South Africa under this agreement require that South Africa allows foreign legal practitioners to establish a commercial presence or be transferred to South Africa. The bill of rights entrenched in chapter 2 of the South African constitution manifests fundamental rights including the right to equality and freedom of trade, occupation and profession. International law is directly relevant to the interpretation of the bill of rights: section 39 (2) (b) of the South African constitution obliges the South African courts to consider international law when interpreting the bill of rights whereas section 233 of the constitution obliges them to prefer any reasonable interpretation of legislation that is compatible with international law over any alternative interpretation that is inconsistent with it. With the coming into force of the new legal practice act 28 of 2014, which provides a legislative framework for regulating the affairs of legal practitioners, including their admission and enrolment; it is necessary to assess the extent to which the act complies with the gats rules. Under the previous legal dispensation provided for under, mainly, the attorneys act 53 of 1979 and the admission of advocates act 74 of 1964, a plethora of possible violations of South Africa’s gats commitments had been observed and pointed out. This paper examines the new legal practice act 28 of 2014, and reviews whether the act addresses the conflicts that have always existed between the regulation of the legal profession and admission of legal practitioners in South Africa with South Africa’s commitments under the gats system. Using the doctrinal legal method, it analyses and evaluates the rules governing the admission of foreign attorneys in South Africa from two perspectives: first, it considers them in the light of the international law obligations of the country and second it evaluates whether they comply with the South African constitution, and more specifically with the bill of rights entrenched in the South African constitution. It concludes with recommendations for the reform of the legal practice act.

**Keywords:** attorneys admission rules, gats, legal practice ac
Perceptions of employees on leadership behaviour during turnaround process.

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The study focused on the perceptions of employees regarding leadership behaviour as the key factor during the turnaround process. A questionnaire was distributed to a randomised sample of staff categorized as academics and non-academics from Walter Sisulu University at Nelson Mandela campus. From the study, a research null hypothesis stating that there were no differences between the responses of the categories of employees was formulated. An alternative hypothesis stated that differences were encountered from the study when the level of significance was set at 0.05. Results revealed that the leader has shown the employees at WSU the discrepancies but there were differences from the respondents concluding that other leaders from the trade unions might have played a role in showing the various stakeholders discrepancies in the institution. Respondents felt that the team of consultants that was brought by the administrator did not assist in financial recovery. Employees were poorly aware of the vision of change. Respondents perceived the vision of change as not well formulated and not feasible. The study supported that the leadership behaviour in an organization is the key to a successful turnaround process.

Keywords: leadership, employees, change management, turnaround process, Walter Sisulu University

The guidelines of optimising network traffic for efficient data flow in the network system: case of WSU.

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network traffic crucial for effective decision making for all sectors that uses information and communication technology (ict). It becomes a good source of decision making when its flow from a source to a destination is classified appropriately. Network traffic is defined as any information for the purpose of conveyance of an electronic communications network in various forms such as voice, video and data (kalyanyakay, 2009). Hence the data flow is defined as path taken by the data within device, network, and organisation as it moves from its source to a data repository or a data user. Challenges of data flow in a network are influenced by a number of factors such as quality of service, bandwidth, network security and network architecture. A researcher as part of the case study observed instances of a slow data flow whereby students struggled to access and save their work in the network server due to overbooking of requests from users. The study is aiming at investigating the cause and effects of the slowness of network traffic in the network. It will further propose the guidelines of optimising the network traffic for efficient data flow in the network system. This will be achieved by employing a qualitative research approach using observation, interviews, and survey and literature review data collection methods. Data analysis will be done through comparative and content analysis.

Keywords: network traffic, data flow, quality of service, firewall, network security, bandwidth
Recent developments on the just and equitable ground for winding-up of companies.

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Although winding up of companies is one of the ‘graveyard’ topics of corporate law, the practical implications are enormous. Most problematic in this respect is the fact that the consequences of winding up go beyond the private interests of shareholders and creditors. The other key stakeholders likely to be adversely affected are employees, customers and the community. Winding up underscores the pivotal role played by companies in the sustainable economic development and transformation of society. Accordingly, when viewed from a broader perspective, the winding up of a solvent company is a drastic and draconian remedy. Until fairly recently, the winding up provisions in sections 79 to 81 of the companies act 71 of 2008 in respect of solvent companies had attracted relatively little attention from the courts. However, with the burgeoning business rescue jurisprudence in the South African corporate law landscape, the scope and application of provisions dealing with winding up and liquidation pursuant to s 81 (1) (d) (iii) of the statute have increasingly been tested before the courts. This contribution seeks to isolate some of the vexed questions concerning the just and equitable ground for the winding up of solvent companies in contemporary corporate law.

Keywords: just and equitable, winding up, solvent, companies, deadlock, partnership, shareholders and substratum

The influence of supervisor-employee relationship, perceived leadership style and job satisfaction on organizational commitment and job performance.

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Organizational commitment and job performance are essential for the survival of organization. Yet, researchers have paid scanty attention to simultaneous investigation of the antecedents of organizational commitment and job performance. This study investigated the influence of supervisor-employee relationship, perceived leadership style, and job satisfaction on organizational commitment and job performance. Two hundred and fifty-five employees of a media organization were conveniently sampled with ages ranging from 20 to 57 years with a mean of 34.29 years. Descriptive statistics were used to analyse the demographic data of the respondents; while hierarchical multiple regression analysis and independent t-test were employed to test the four hypotheses. The result from hierarchical regression analysis revealed that supervisor-employee relation (β = 0.34; p < .001), education (β = -0.23; p < .001), and job satisfaction (β = 0.17; p < .001) had significant independent influence on organizational commitment. However, supervisor-employee relationship contributed most to the explained variation of organizational commitment. While job satisfaction (β = 0.24; p < .001) and age (β = 0.19; p < .001) had significant influence on job performance with job satisfaction contributing more to the explained variation of job performance than age. This finding has implications for employee retention, performance management and incentive strategy.

Keywords: organisational commitment, job performance, leadership style, employee relations, job satisfaction
Model for information technology (it) governance to improve it alignment of multi-campus in South African institutions of higher learning.

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the use of it has increased and became the backbone of public and private sector business processes. The penetration of it has posed a demand on information technology governance (itg) discipline and also increased the urgency in adopting the effective strategic alignment of the organisational goals to the it goals for achieving the organisation’s mandate (pereira & mira da silva, 2012). The evolving it landscape has created a need for unified and effective structures, standards and best practices that ensure effective execution of business processes using it. Itg is defined as the leadership and organisation’s structures and processes ensuring that an organisation’s it sustains and extends the organisation’s strategy and objectives (de haes & van grembergen, 2009). Institutions of higher learning structure are complex by nature; the establishment of itg for such a complex structure poses dual challenges of how itg can work within a culture of inclusiveness and shared decision making while better aligning existing it structures. The aim of the study is to present a proposed itg model for improving the strategic alignment of the institution’s and its goals. The investigation of this premise was triangulated on data collection through qualitative measures such as briefing sessions, observations, document analysis and individual interviews. A content data analysis approach was used. The proposed model will add value to the body of knowledge and also add value to the case studied by improving the processes of executing integrated it strategies.

Keywords: itg, strategic alignment, it, institution of higher learning, best practices

Effects Of Monitoring And Evaluation As Administrative Tools To Improve Public Resource Management In Nyandeni Local Municipality.

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Local government municipalities are a responsible and important sphere of government for service delivery and development. Corporative governance, and inefficiency are symptomatic of irregular and fruitless expenditure, maladministration and corruption in Eastern Cape municipalities. The constitution and other legislation provide for monitoring and support of the municipality by the provincial and national sphere, although most monitoring and evaluation responsibilities are borne by the provincial government. This study focuses on the Eastern Cape with the nyandeni local municipality (nlm) as a selected case-study. This municipality is one of the historically disadvantaged municipalities marked by high levels of maladministration and irregular utilization of the public resources. Nlm is one of the 5 municipalities within the region of o r tambo district municipality. The study investigates the effects of monitoring and evaluation (m&e) as administrative tools to improve public resource management at nlm. M&e are crucial mechanisms meant to serve as administrative tools for all spheres of government and government departments to improve public resource management while in the process achieving good governance. Nlm is one of the municipalities that are trailing behind in as far as the adoption and utilization of the m&e. This research investigated the effects of the adoption of m&e in nlm to improve public resource management. Good governance is at the core of the South African corporative
governance and traditional affairs and is vital for the municipality to monitor and evaluate how scarce public resources are utilized. The research identifies areas which prevent NLM from achieving clean audits.

**Keywords:** governance, m&e, corruption, administrative tool, public resource management

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**Socio-Linguistics And Violence As The 12th Language Of South Africans - An Analysis Of Xenophobia 2015.**

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South Africa’s democracy is the vibrant and raucous interaction between people of different backgrounds and nationalities. Transition to democracy from the brutal apartheid system was an iconic testimony of peaceful co-existence. The causal link between the 2015 violent attacks through parts of South Africa have been attributed to specific speeches calling for foreign nationals to return to their countries of origin as they were perceived to be causing problems in the country. The attacks violated all the values that South Africa embodies such as respect for human life, human rights and human dignity. Socio-linguistics is the descriptive study of the effect and the way language is used, and the effects and use of language in society. The literature review suggests that perceived inflammatory hate speech is a contributory causal factor that precipitates violence. To understand the extent of violence in South Africa, Gould (2014) contends an introspective analysis of the country’s recent history, considering how it has dealt with its violent past and the fact that it has increasing poverty and inequality, and has failed as a country to secure confidence in and respect for the rule of law. Whilst South Africa is not alone when it comes to these kinds of difficult conversations, this qualitative study used triangulation to investigate the root causes instigating black-on-black violence. Interviews were conducted in 3 cities to distinguish xenophobia from afrophobia and the findings are conclusive in the forging of social cohesion and the concept of nationhood.

**Keywords:** afrophobia, hate speech, socio-linguistics, xenophobia, violence

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**Disqualifying Conflict Of Interest: South Africa In A Comparative Perspective.**

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the question whether there is disqualifying conflict of interest arising out of previous professional and fiduciary relationship by reason of potential misuse of confidential information is a thorny issue of both commercial and public law. The issue of disqualifying conflict of interest due to improper disclosure or use of confidential information is often said to pose questions of such unique profundity or complexity as to defy conventional analysis or resolution. Dealing with the question of the use of confidential information requires tackling matters not usually susceptible to proof or disproof. Put simply, the major problem associated with allegations that a former client has been prejudiced by disclosure of confidential information is the inability of the complainant to prove the facts of disclosure or wrongful
use. No doubt, it is often impossible to determine with any measure of precision whether confidential information has been either disclosed or misused. Thus, disqualifying conflict of interest is an elusive proposition. This paper examines the emerging approaches to the determination of disqualifying conflict of interest by reason disclosure of confidential information and breach of fiduciary obligation owed to a former client in South Africa through the prism of commonwealth developments.

**Keywords:** disqualification, conflict of interest, confidential information, fiduciary duties, breach

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**An Evaluation Of Orphans And Vulnerable Children (Ovc) Programme In Thulamela Municipality, Limpopo Province, South Africa.**

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Large numbers of children are growing up without adult protection, nutritional support, or financial support because of the aids epidemic. Most of the children are forced to act as caregivers and providers in their families. Without adequate support, these children are at risk of being affected by malnutrition and some form of sexual exploitation. The orphans and vulnerable children (ovc) programme was developed from the home-based care programme to provide children under the age of 18 years with support in core service areas such as HIV prevention education, access to anti-retroviral treatment and psychological care. The aim of this study was to evaluate the extent to which the services of the ovc programme are reaching the intended target groups, namely orphans and vulnerable children. The study employed a qualitative programme evaluation design to assess the implementation of the ovc programme. The researcher used convenience sampling to select 14 staff members serving in the ovc programme. A random sample of 30 children was selected from 6 wards in Thulamela municipality, South Africa. The study used individual interviews to capture the views of staff members, whereas focus group interviews were used to collect data from the children. The data from both individual interviews and focus group interviews were analysed through content analysis. This process entails exploring the general sense of data and identifying patterns that emerge as themes. The study found that the objectives of the ovc programme were achieved, even though the degrees of achievement differed. The services were to a large extent delivered to the target groups. However, it was found that the ovc programme does not have sufficient capacity and resources. The findings of the evaluation show that service delivery does not depend entirely on the availability of resources, but on the sacrifices and dedication of staff members as well.

**Keywords:** programme evaluation; orphans; vulnerable children; nutritional support; home-based care

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**Application of human rights standards to business.**

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Companies are not subjects of international law. They do not have human rights obligations under international law. And yet, business activities have huge implications for, and often adversely impact, human rights. Nowadays, companies wield enormous power and influence. They seldom use that leverage to the benefit of the societies in which they operate. Globalization thus presents new and
complex challenges for the protection of human rights of persons affected by corporate activity. Until now, the interface between business and society has been framed mainly in terms of business ethics, corporate social responsibility, sustainable development, and corporate civil and criminal liability for environmental harm and damage suffered by victims. Present thinking on the subject has evolved and crystallized into the generally accepted view that individuals need protection against the risk of human rights violation by business, and that victims need available effective remedies for any such violation. Persons affected by business activities are entitled to realise universally recognised human rights in and through those activities. Those who control business have the duty to protect and promote human rights. However, human rights have not yet been sufficiently and systematically integrated into corporate governance and activities. Between 1970 and 2011, the un toiled to create global human rights standards applicable to corporations as well. The labours of the organisation in this regard have achieved a large measure of success. This paper seeks to present a clear, constructed and vigorous conceptual analysis of the theory of human rights applicability to business as a contribution to the emerging scholarship on the business-human rights interface. It hypothesises that companies are not always human-rights compliant and that it is in the interest of the company itself, its workers and the larger community in which it operates that human rights be integrated into the business. Qualitative data for this fundamental research was obtained through desktop work and the results of the study presented using the descriptive analytical approach. The paper concludes that the un soft law document on the subject represents, in spite of some criticisms, sufficient international consensus on the issue and constitutes the minimum standards on which a company may legitimately be held accountable for human rights violation.

**Keywords:** business, corporation, globalization, human rights, influence and power, integrated, standards.

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**Key determinants of success of asian and black African-owned businesses.**

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studies conducted elsewhere in the world have highlighted the fact that asian-owned small, medium and micro enterprises (smmes) always thrive better than those that other racial groups own. In Thulamela municipality in Vhembe district of Limpopo Province, small supermarkets that indians own seem to be performing better than those for black South Africans. This qualitative study was carried out to identify the determinants of success of asian small supermarkets and failure of those that black Africans operated. Thirty-five face-to-face interviews were conducted, involving five municipal officers employed in local economic development departments, six tsHIVenda- and six xitsonga-speaking small supermarket owners, and 11 indians. The snowball sampling technique was used to select the interviewees. Thematic content analysis was used to deriving meaning out of the data collected. Black-owned small supermarkets were performing poorly mainly because of the unfair competition they faced from spaza shops. Other factors hindering the performance of the latter were burglaries and theft, customers defaulting making payments, and also unreasonable and rigid labour laws. In contrast, it was explained that indian-owned small supermarkets were performing better because they used effective and efficient purchasing and supply systems. Their collectivist culture and networking abilities made them realise higher levels of efficiency when purchasing goods than the black entrepreneurs. The results of this study revealed that failure to regulate and monitor the operations of spaza shops would continue to cause the demise of black-owned small supermarkets. The results of this study should help local authorities to make decisions on this matter.

**Keywords:** indians, black South Africans, entrepreneurs, success, performance, small supermarkets


The Impact Of Mdantsane Urban Renewal Programme (Murp) On Socio-Economic Development.

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Research has shown that South Africa, as elsewhere in the world, will witness many changes during the next 15 years. The urban renewal programme (urp) and the integrated sustainable rural development programme were launched as government initiatives that would address the key performance areas (kpa’s) of the integrated development planning (idp). The main aim of urp was to fight poverty and underdevelopment through job creation, and the stimulation of growth through investing in economic, physical and social infrastructure, human resource development and strengthening of the criminal justice system in the identified nodes. This was in response to the global challenges contained in the millennium development goals (mgd’s). This was cascaded down to municipal level and is in this backdrop that the buffalo city metropolitan municipality (bcmm)’s local economic development (led) came up with mdantsane urban renewal programme (murp) with the aim of empowering the poor and marginalised communities. This study aimed at evaluating the impact of murp as a socio-economic mechanism in addressing inequality caused by racial segregation. A mixed methods research approach was employed. The research sample included in the study entailed relevant data that was collected from 30 respondents of selected respondents in bcmm. Systematic sampling was used to select a sample from the various units which have different socio-economic levels. Interviews with residents using structured questionnaires were conducted. Data was analysed using statistical package for the social sciences (SPSS) windows version 8.1, and statistica (statsoft) version 2007 software package. The study noted that the progress in terms of development was very slow due to lack of funding on the municipal side leading to projects not properly disseminated to the communities. It was also noted that the socio-economic standard of the community has significantly improved. However, development agencies should be brought on board to assist with funding. The study can be used as a foundation for longitudinal research to assist the municipality in knowing their gaps within service delivery.

Keywords: impact, evaluate, urban renewal, development, poverty, underdevelopment, racial segregation, integrated, sustainable, community, growth, service delivery

Information security policy development and implementation: the what, how and who.

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The development of information security policy involves more than mere policy formulation and implementation. Unless organisations explicitly recognise the various steps required in the development of a security policy, they run the risk of developing policies that are poorly thought out, incomplete, redundant and irrelevant, and which will not be fully supported by the users. This paper argues that an information security policy has an entire life cycle through which it must pass during its useful lifetime. A content analysis on information security policy development methods was conducted using secondary sources in the relevant literature. Based on the results of the content analysis, a conceptual framework was developed. The proposed framework outlines the various constructs required in the development, implementation and enforcement of an effective information security policy. In the course of this research, a survey of 400 security professionals was conducted in order to validate and refine the concepts contained in the framework.
Keywords: development, information, policy, security

From fit to improper: reflections on the ‘fit and proper’ requirement for admission to and exclusion from the legal profession in South Africa.

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The legal practice act 28 of 2014 requires of any person who wishes to be admitted to the legal profession to satisfy the court that he or she is a fit and proper person. The act also empower the courts to remove any legal practitioner who has ceased to be fit and proper. While it is possible to identify some broad categories of questions relevant to the determination of whether or not a person is fit and proper for admission to the profession, a study of recent case law reveals that the question of determining if a person has ceased to be fit and proper has not been consistently decided by the courts. This paper examines the trends in the application by the courts of the fit and proper requirement and in particular on how the concept has been applied in cases dealing with applications for the striking off of legal practitioners from the roll. The conceptual basis of fit and proper as applied by the courts is critically examined. Given the serious and far reaching implications of a striking off order by the court, this paper argues that the current legal position, which leaves the sole determination of whether or not a person is fit and proper to the discretion of an individual judge, is problematic and should be reconsidered.

Keywords: legal practice, legal practitioner, legal profession, attorney; advocate; fit and proper.

Killing in circumstances of euthanasia: a legal perspective.

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The South African legal system does not permit the killing of one person by another in circumstances of euthanasia. This is despite the recent decision where the pretoria local division of the supreme court concluded that a willing victim can have a lethal dose administered by a qualified and willing medical practitioner, or administer the dose upon himself, in order to end his life. This decision is, sadly, restricted to its area of jurisdiction, and may not apply to other divisions or lower courts across the country as a precedent. The recent decision has been hailed in some quarters as a landmark decision that gives the future direction on the question of euthanasia. There are, however, some influential institutions, including the department of health and the national prosecuting authority, that feel strongly that the court erred in deciding as it did, and that no one, under any circumstances, ought to be permitted to terminate his or her own life, or through another. This paper examines the question whether our law should remain static, and deny any form of cessation of life of a terminally ill person by himself or through a willing agent. The author will look at the history of euthanasia, the competing rights in the bill of rights and their relation to euthanasia. The author strongly advocates for the right of an individual to determine their destiny, including decisions concerning the time, place and manner of death. The author further proposes a living will statute to be introduced as a means to enable South
Africans to determine during their lifetime how they should be treated when they are in a vegetative state or are terminally ill.

**Keywords:** assisted suicide, death wish, dignity, life, self-determination, legislation, courts, bill of rights.
CLIMATE CHANGE, FOOD, WATER AND ENERGY SECURITY
Macro-audit of Energy Use at Walter Sisulu University, NMD campus: A Comparative Analysis.

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Energy management is often relegated to insignificance as compared to other corporate priorities such as labour, materials and other costs. Entities that successfully manage energy have processes to plan, monitor and control energy use. Effective energy management can only be possible if there is an audit of energy use. Reductions in energy consumption and therefore, energy costs flow directly to the bottom line. It also intrinsically assist in reducing emission of GreenHouse gases, principally CO2 into the atmosphere from the generation of electricity. This paper examines energy savings potentials at Walter Sisulu University, NMD campus, after a macro-audit of energy use is carried out through a comparative analysis.

Keywords: Energy Management, Macro-Audit, Comparative Analysis, Savings Potentials, Greenhouse gases, Energy Consumption

Water Service Delivery Performance in King Sabatha Dalindyebo Local Municipality.

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Water security and poor quality of infrastructure is considered to be a major constraint on socio-economic development in South Africa. The study was conducted in the selected wards of the KSD Local Municipality to investigate water security. This included identifying factors influencing water service delivery performance. To explore improvement of health standards in the communities as well as to reduce health hazards amongst community members. It was established that the communities lack adequate water supply. Springs or wells were polluted and unprotected consequently posing a health risk to communities. Through consultation with communities it was made clear that increased access to water and sanitation was the main priority. The present study recommends among other things that political intervention needs to be made by the leadership with regard to water service delivery and more resources need to be committed toward those processes. In addition, more boreholes should be built, springs/ wells be protected and more taps should be installed to avoid risks of drinking contaminated water.

Keywords: Water Security, Health Hazards, Health Standards, Water Access, Households, Water Infrastructure
Variation in intertidal microhabitats and emergent rock limpet species along the Wild Coast of South Africa.

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Rocky shore microhabitats are microcosms of marine life formed by the depression of the rock substrate that fills with water on an outgoing tide. They occur when the soft rocks are worn down and eroded by wave impact thus exposing the harder rocks. Microhabitats found on rocky shores include cracks, crevices, and rock pools and these provide a complexity of habitats that harbor a rich and diverse community of fauna and flora. The Rocky intertidal is a harsh environment therefore microhabitats like cracks, crevices, boulders and rockpools provide protection from desiccation and provide organisms increased time for feeding while boulders offer a secure and stable environment on to which animals and plants can attach. This study compared rock pool communities created due to differences in rock substrate, shape, area and depth in four nature reserves along the wild coast of South Africa. These pools were then quantified by looking at all the species inside. The number of tide pools having limpets increased from Dwesa to Mkhambathi but there were no significant differences between sites and the various shapes. However, Dwesa and Silaka nature reserves were dominated by rectangular rock pool while Hluleka and Mkhambathi were dominated by irregular shaped pools. Of all four reserves, Mkhamabti had the smallest pools, but the size differences were not that significant. No significant differences in surface area between the four sites and the various rock pool shapes. On the other hand Dwesa and Silaka had the shallowest pools while Hluleka had the deepest pools.

Keywords: Rocky shore, rock substrate, microhabitats, shape, area, depth, limpets

Honey to wealth: the concept of community beekeeping value-chain production in the eastern Cape province, South Africa.

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Apiculture is an age-old cultural practice of rearing bees in artificial hives. The practice has been used in several parts of the world to address the pervasive poverty with success. The initiative was introduced in South Africa in the early 1990 to address poverty and unemployment common amongst the youth. The study examined the challenges faced by some of the beneficiaries of the beekeeping initiative program of the government in Amathole District,
Eastern Cape Province, South Africa. Data were collected from four beekeeping cooperative societies from two local municipalities using purposive sampling technique.

Findings revealed the poor farm planning and orientation of the bee farmers, low bee floral vegetation, unsustainable/ inappropriate hive technology; pilfering and vandalization of apiary, poor skills training, poor management technique, lack of market information and destination, absence of corporate market image and poor agricultural extension service support. The study suggested a beekeeping-crop farming integration model as a better alternative and the use of Kenya top bar hive in place of Lang troth.

**Keywords:** Beekeeping, BKCFI Model, Bee floral, Apiary, Eucalypts

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**EPDIP®, a model for enhancing natural intelligence to increase probability of success in any project: Part 1 – Structure, Process, People, Stage Gates, Implementation and Sustainability.**

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A novel stage gate process, the Enneagram Project Design and Implementation Process © (EPDIP), will be presented and explained. That the model is closely based on the Dow Chemical Company’s “Technology Design and Commercialisation Process” (TD&C), gives confidence that it is not an academic speculative theory but describes the actual processes followed by such companies as Dow to minimise risk (and cost) of project failure and increase probability of success at lowest cost. The presentation will first outline the main features of DOW’s TD&C and then briefly describe the author’s adapted and simplified model for use in Chemin (The South African Chemical Technology Business Incubator). Chemin is one of about 8 Technology Incubators that were established by the DST in 2002/3 (part of DTI’s SEDA since 2005), some of which then also incorporated the Chemin stage gate model into their own incubation process. The remainder of the presentation will show how DOW’s TD&C fits “The Intelligent Enneagram” model as elaborated in detail in A E Blake’s 1996 book with that title, and how the EPDIP® novel stage gate process developed by the author is a natural outcome. This is a powerful model for enlarging our natural intelligence in many fields – business, science, arts, personal growth, evolution (biological and cultural), ethics and spirituality – and thus could be particularly useful for trans-disciplinary and cross-cultural collaborative developmental projects.

**Keywords:** Enneagram, project, design, process, implementation, technology, economics, business, collaboration, development
The Effect of Climate Change, Migration and Vegetation Change on the Emerging Trends of Malaria in the Eastern Cape Province.

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Environmental and socio-demographic predictors of malaria transmission have instigated the disease incidence in new areas and highlands. Change in the environmental (climate change, weather and vegetation) and socio demographic (human mobility) determinants, in the Eastern Cape Province, might impact from a free malaria zone to increased proportion of risk and vulnerability for malaria. Thus a correlational and ecological study using predictive modeling of linearmultiple regression analysis between 2000 and 2025 was conducted to estimate the incidence of malaria from combined predictors such as climate change, migration/human mobility and vegetation change. After adjustment for precipitation, enso anomalies, and maximum of maximum temperature and minimum temperature using multivariate linear regression analysis, only lag 1 year minimum temperature was independently associated with incidence density of malaria in the Eastern Cape Province. But, the incidence density of malaria was also significantly correlated with precipitation lag 0 year and annual change in plant density lag 0 year, and with lag 2 year in/out-migration flow. We predicted future outbreaks of malaria in 2017; 2019and 2024. In conclusion increasing temperature and rainfall, climate variability (extreme profile of both El Nino and La Nina), de-seasonality (from summer to early winter), vegetation change (bush encroachment) and human mobility were shown to predict malaria epidemics in the arid highlands of Eastern Cape.

Keywords: incidence density, climate change, bush encroachment, human mobility

Reviewer comments:

The impacts of extreme weather events on rural livelihoods in the O.R Tambo District Municipality, Eastern Cape, South Africa.

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The frequency and magnitude of severe weather events such as hailstorms, droughts and floods are on the increase globally. Extreme weather events are becoming more in terms of frequency and severity and they pose significant risk in terms of loss of life, injury and impact on livelihoods in the O.R Tambo district municipality in the Eastern Cape, South Africa. The vulnerability of communities in the municipality is exacerbated by their limited capital base and marginalization. The aim of the study was to investigate the extent of extreme weather events in the O.R Tambo district municipality. Using historical data on severe storms dating back from 2011 to 2013 records, patterns of the hazard threat and risk to various geographic populations were investigated. A conceptual framework that emphasised the combined role hazard and vulnerability play in describing risk was used. A methodology for ranking the severity of the storms in the historical dataset, based on documented damage/impact, was also
developed. Findings of the study showed that extreme weather events occur throughout the municipality but follows clearly demarcated areas of higher frequency and concentration. The impacts were more severe on impoverished rural populations than urban populations of the municipality. Uncertainty of the climate system implies that these risks may worsen with time. There is an urgent need for capacity building in disaster risk management supported by crucial planning decisions.

**Keywords:** extreme weather events, recommendations, mitigation, early warning, disaster, weather, impoverished populations, management.

**Application Of Environmental Impact Assessment (EIA) In The Landfill Site Of Matatiele, Eastern Cape, South Africa.**

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Waste management and disposal is a critical challenge in the world. Non-compliance to eia recommendations may lead to mismanagement of the landfill sites and could ultimately have wide range of impacts on the environment and surrounding communities. The aim of the study was to assess the application of environmental impact assessment (eia) in the landfill sites of matatiele. This was achieved by identifying the needs, benefits of proper application of eia in the landfill site and challenges faced by the environmental assessment practitioners (eaps). Semi-standardised interviews were conducted on one-on-one basis to managers. Questionnaires were distributed to the communities around the landfill site. A meta-analysis was employed to compare what is recommended by the eia report and what is actually happening in the landfill site. Findings shown that eia was done properly in the landfill site, however, there were failures when it comes to public participation, monitoring and compliance. Results also revealed that sometimes challenges in application of eia in the landfill site come from the competent authority. The responsible authorities should make sure that eia recommendations are followed in the landfill sites’ operational stage and during the landfill site closure.

**Keywords:** public participation, monitoring, compliance, landfill gas, leachate.

**The impact of drought on food security: a case study.**

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This paper seeks to look at the impact of drought on food security at the emathonsini district in eshowe. Droughts render communities vulnerable as they experience food shortages. Drought is a disaster caused by climate change which is regarded as the super wicked problem due to its detrimental effects. The purpose of this study is to investigate food (in) security caused by drought in the rural areas in order to alleviate poverty and recommend suitable interventions. Climate change is irreversible. It is important to note that this particular rural area is dependent on farming and social grants from the government. They farm both in winter and summer for survival. Thus, drought hinders agricultural and pastoral as well as commercial and subsistence modes of farming. Farming is the major economic and social activity in rural areas. Hence, frequent occurrence of droughts in rural areas increases poverty and starvation. Droughts pose major constraints to livestock production, and it also diminishes the quantity and quality of pastures forcing farmers to take their livestock to better areas or buy feeds from commercial farmers. Drought also causes crop failure, water shortage and loss of lives. However,
drought keeps increasing frequently and severely because of climate change. Hence, coping strategies are needed to mitigate the negative impacts of drought in rural areas. Semi-structured interviews will be conducted in a selected rural area and the relevant theory will be used.

**Keywords:** climate change, drought, food security, vulnerability, farming, poverty alleviation.

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**Food Quality And Safety Amongst Government Primary Schools In South Africa: An Exploratory Study On Mdantsane Township.**  
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Research has shown that, malnutrition and hunger tend to hinder the learning process in South African schools. The objective of this study was to investigate the quality and safety of food being supplied by the South African government to the primary schools of Mdantsane township. The research adopts a quantitative approach. Respondents were expected to fill-in structured questionnaires using a random sampling methodology. Two food handlers were selected from each school, made a total of thirty four respondents. The main variables measured were: food quality and hygiene. A national school nutrition programme (NSNP) was designed by the South African government to alleviate the effects of malnutrition and improve educational outcomes by relieving short-term hunger and improving school attendance and participation. Despite such initiatives, there exists a number of challenges that impact on the health of school children in South Africa. The empirical results found significant statistical similarities and differences in relation to the quality of food and hygiene. Overall, the food supplied to the primary schools was not up to standard and good manufacturing practices (GMP) were not being practised by the food handlers which resulted to microbial cross contamination. Consequently, the study advocates for the South African government to implement monitoring systems of the quality of food being supplied to the schools. Furthermore, constant training of food handlers on hygiene monitoring systems such as Hazardous Analysis Critical Control Points (HACCP).

**Keywords:** malnutrition, national school nutrition programme, quality, safety, hygiene, microbial, hazardous analysis critical control points

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**Impact Of Food Security Projects On Poverty Alleviation In Limpopo Province, South Africa.**  
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Despite South Africa’s economic growth having been accelerated considerably in the country, poverty levels have not decreased as one would have experienced. Food security projects initiated by the government of South Africa in order to help alleviate poverty within Limpopo Province have proved unsustainable and difficult to provide for what they were mandated to provide to the satisfaction of the government, which is to create jobs and alleviate poverty. The purpose of this paper is to investigate the impact of food security projects on poverty alleviation in Limpopo Province of South Africa. This paper is largely qualitative but included multi stakeholders. Qualitative method of enquiry in order to
describe and explore, have discussions with respondents and probe deeper into their experiences and perceptions with regard to the impact that food security projects have on poverty alleviation was used. Data on the impact of food security projects were collected through structured interviews with food security projects beneficiaries, extension officers at district level, officials at provincial level as well as tribal council representatives from the five districts. Data was analysed using ms excel in order to obtain all kinds of thematic and statistical information. The findings of this paper revealed that the food security projects have had an impact on the lives of beneficiaries and communities in which they are operating from. This paper will provide policy makers with policy directives on how food security projects can be supported, monitored and evaluated for impact and sustainability. Key words: food security projects; poverty alleviation; integrated food security strategy.

**Keywords:** food security projects; poverty alleviation; integrated food security strategy.

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**Removal of Cyanotoxins from Raw Dam Water Using The Bioaccumulation Potential Of Aquatic Macrophytes.**

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Cyanobacterial blooms and their resultant toxins are known to be a commonplace in South African water impoundments. Several dams in South Africa are eutrophic and present potential health risks to water consumers and users. Cyanobacteria also known as blue-green algae are known to produce toxins that present a threat to human health and wildlife. The study aimed to assess an alternative method for the elimination of cyanotoxins (microcystins and cylindrospermopsin) by applying the bioaccumulation potential of aquatic macrophytes to reduce cyanotoxins concentrations in raw dam water for the remediation of polluted water for ecosystem health and for further processing in rural water supplies. Laboratory assays were conducted with two aquatic macrophytes to assess their potential use for cyanotoxins removal for in-situ remediation. The lemna sp was found to be the more suitable species as it did not suffer any deleterious effects on exposure to high levels of the cyanotoxins. In a second phase, the selected plant species (lemna sp.) was exposed to contaminated raw dam water in a pilot scale pond system with a concentration of 12 ug l-1 (mc-ir; mc-yr and mc-rr) with a plant biomass of 5.6 g l-1. Exposure of the contaminated water to the plants in a period of five days did not show a significant difference in the treatments and the controls (with no plant material) indicating that the lemna sp, was not able to take up the cyanotoxins under the conditions.

**Keywords:** cyanotoxins, aquatic macrophytes, bioaccumulation, lemna sp, microcystins, cylindrospermopsin

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APPROPRIATE TECHNOLOGIES AND ENTREPRENEURSHIP
Optimizing rock phosphate incorporation rate for efficient vermidigestion of cow dung waste paper mixture.

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Addition of rock phosphate (rp) at rates of application above 2\% p had accelerated the bioconversion and humification of different targeted waste/waste mixtures but the optimum rate of rp incorporation was not established. This study sought to establish an optimal rp application rates efficient for rapid vermidigestion of cow dung- paper waste mixtures. A range of rp incorporation rates (0\%, 0.5\%, 1\%, 1.5\%, 2\%, and 4\% p as rp) were evaluated with a view to determine the minimum rate of rp incorporation necessary for the efficient vermidigestion of cow-dung waste paper mixtures. The bioconversion of the waste mixtures was monitored by measuring c: n ratios, polymerization index (pi), and humification index (hi). Application rate of 1\%p as rp yielded fastest bioconversion and maturation of cow dung waste paper mixtures with c: n ratio of 7, pi of 14.4, and hi of 27.1\%, respectively. A germination test revealed that the resultant vermicompost had no inhibitory effect on the germination of tomato, carrot, and radish. A p-fractionation study revealed that the extractability of p increased linearly with the rate of rp application with the water soluble p fraction making the largest (1002.4mg p kg\(^{-1}\)) contribution to the mineralized p.

**Keywords:** vermicompost, carbon to nitrogen ratio, humification indices, germination index, phosphorus fractions, rock phosphate. Polymerization index.

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Sustainable growth framework for construction SMEs in Ghana.

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Growth in a wider sense in economies implies expansion or development. Growth however in the context of firm refers to increase in turnover, products, sales, and employee's size. The growth of the firm is categorized as organic and inorganic. The inorganic growth of firms is the expansion of a company by merging for synergy whiles organic growth takes place as the result of firm's internal activities. In Ghana, the majority of smes are own family businesses who target just their profits rather than sustainable growth. As a result, most of these construction smes do not survive after executing major projects. Also, despite the initial growth of these prolific construction smes firms, no growth framework has been developed to propel growth among construction sme's. It is against this backdrop that this study seek to explore and develop a sustainable growth framework for smes. The use of existing literature was adopted as a significant tool to help achieve the goal of this study. The study revealed that growth framework acts as a roadmap which encourage and depicts the drivers of growth that brings about sustainable growth. Further, sustainable growth among construction smes is assured where there is a reliable feedback system which lights on the performance of product/services rendered by these smes. The study recommends that for firms to be sustainable, there must be efficient collaboration among all teams and stakeholders of firms. Keywords: sustainable, growth, framework, construction smes

**Keywords:** sustainable, growth, framework, construction, smes
Information systems and new technologies have come to be an integral part of conducting business in today’s world. Almost all organisational sectors have adopted the use of it systems and application to conduct business and to stay competitive in the industry they operate. However this it usage exposes them to threats and vulnerabilities if not well managed which later leads to a disaster. It/business continuity plan is a strategy that help organisation to deal with a wide range of unexpected events. It covers a long term plan and strategy that act as a safe wing for a long term survival. Subsequently some organisation are comfortable about their is continuity plan, simply because they believe that they are safe since they have never experience a disaster before or sometimes they believe on their insurance that it would cover them should they encounter a disaster. However they forget the implication of not taking is and business continuity plan in to consideration will result not only financial losses but extended to the implication of bad reputation on company brand, clients and other stakeholders. The paper will be undertaken in industrial development organisation (idz) context. Data collection will be collected via interview and observation with the top it managers and relevant stakeholders within the industry. Semi-structured interview are going to be conducted, to allow the open ended question between the researcher and expects. The potential benefits of the paper will benefit organisation that have experienced similar issues of disaster and continuity plan. The paper will allow them to better understand the implications of not considering continuity plan which may lead to disaster. Moreover foster a better management on the continuity process by understanding the causes of technological disaster and the on-going weaknesses. By doing so future uncertainties will be minimized and easily predicted.

Keywords: risk in is; causes of technological disaster; risk mitigation; is continuity plan; systemic theory

Concepts for business acceleration for Africa.

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Small business owners usually have no business management expertise. They aim at making “fast money” through whatever means, even if unethical. The main objective of this article is to explore ways in which small business can become sustainable in Africa. The methodology used was a systematic education of small business owners including mentorship and introduction of ubuntu philosophy into business. Key findings include: “survival of the fittest” syndrome being the norm in small business with no business ethics; business owners can go to extraordinary lengths to make sure that their businesses thrive; small business owners may attack other businesses or individuals that threaten their survival; inappropriate cash management; accounts receivable not in synch with accounts payable (cash purchases versus credit sales). The survival tactics include: exorbitant pricing: – following from the mentality to get rich quickly the business owners have the belief that the higher the prices the sooner they will get rich. However, they do not understand the law of demand and supply; deceit of customers: – some business owners go to the extent of deceitfully luring customers to their shops promising them value for money service; lack of patience: – business owners sometimes do not conduct their business systematically usually resulting in customer dissatisfaction. Lack of business education results in low business performance leading to attacks on other businesses such as the xenophobic attacks in South Africa.
Africa in 2008 and April 2015. Authors recommend that business education courses may be offered to entrepreneurs by capable tertiary educational institutions and mentored by big business in return for government rebate.

**Keywords:** business, education, ethics, performance, survival, xenophobia

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**Reflections On Alternative Ceramics Technologies In Use By Some Local Potters In The Eastern Cape, South Africa.**

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Dehumanised and ever increasing mechanisation of vast production lines focused on creating dinner and other ceramics utility ware destined for national and international markets is an entrepreneurial model that has found favour in the southern African ceramics industry during the past few decades. This way of creating and marketing ceramics is heavily reliant on electricity and digital technologies. Some potters and potteries in the Eastern Cape, however, have tended towards smaller enterprises based on local knowledge, with products being aimed at niche markets. This paper looks at several local potters and their ceramics technologies, and seeks to highlight ways in which some practice zero-electricity-usage approaches to clay mining, forming, and firing techniques; while others balance out some mechanisation and electricity usage with alternative energy sources as and where desired. It will also be seen that in some cases off-the-grid decisions are made according to an environmental awareness that actively seeks to tread lightly on this planet and impose a minimal carbon footprint. Such potters seek sustainability in both praxis and use of raw materials rather than to employ asset-stripping hit and run tactics that leave environmental destruction as the main legacy.

**Keywords:** alice nongebeza; alternative ceramics technologies; anton van der merwe; david potter; niche ceramics marketing; off the grid ceramics; sustainable natural resources; zero-electricity-usage ceramic practices

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**Efficiency Of Ball Milled South African Bentonite Clay For Remediation Of Acid Mine Drainage.**

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The feasibility of using vibratory ball milled South African bentonite clay for neutralisation and attenuation of inorganic contaminants from acidic and metalliferous mine effluents has been evaluated. Treatment of amd with bentonite clay was done by batch experiments and the parameters optimised included contact time, adsorbent dosage and chemical species concentration. Bentonite clay was mixed with simulated amd at specific solid: liquid (s/l) ratios and agitated in a table shaker. The efficiency of bentonite clay for adsorption of chemical species was assessed over time. Contact of amd with bentonite led to an increase in ph and a significant reduction in concentrations of metal species. At constant agitation time of 30 mins, the ph increased with the increase in dosage of bentonite clay. Removal of m_{n^2+}, a_{l^3+}, and f_{e^{3+}} was greatest after 30 min of agitation. The adsorption affinity obeyed the sequence: fe > al > mn > sulphate. The ph of reacted amd was > 6. Bentonite clay exhibited high
adsorption for Al and Fe at concentration < 500 mg/l, while the capacity for Mn was lower. Adsorption capacity for sulphate was > 50%. Adsorption kinetics revealed that the suitable kinetic paradigm is pseudo second order hence confirming chemisorption. Adsorption isotherms indicated that removal of metals fitted the Langmuir adsorption isotherm for Fe and sulphate and the Freundlich adsorption isotherm for Al and Mn, respectively. Ball-milled bentonite clay showed an excellent capacity in neutralising and lowering the concentrations of inorganic contaminants in acidic mine effluents.

**Keywords:** acid mine drainage; bentonite clay; ball-milling; neutralisation; heavy metals; adsorption

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**Small and medium sized enterprise contractors non-compliance with health and safety regulations in Ghana.**

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The construction industry in Ghana is dominated by small and medium sized (SME’s) contractors. The SME’s contractors’ inability to manage occupational health and safety (OHS) has contributed to their non-compliance with health and safety (H&S). This development has led to occurrence of ill health and accidents in construction industry. Literature review was conducted in the existing body of knowledge. The review enabled the road map to source out information relevant to SME’s contractors health and safety (H&S) practices in Ghana. The purpose of the study was to identify the effects of SME’s contractors’ non-compliance with H&S regulations. The study adopted a Delphi survey method of data collection. List of experts (construction professionals and academics) were generated from peer reviewed conference proceedings and journal articles. A survey questionnaire was administered among the experts through email. Experts were asked to rate the impact of other factors in predicting SME’s contractors non-compliance with (to) H&S in Ghana. The rating was based on either the impact was considered to be high or very high. Data collected were analysed using frequency and ranking method. The findings reveal that limited knowledge of OHS, unavailability of H&S policy and knowledge on H&S policy implementation have high impact on SME’s contractor’s non-compliance with H&S regulations. Others are inability to train employees on H&S regulations and management bottleneck.

**Keywords:** health and safety, non-compliance, regulations, SME’s contractors.

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**Assessing environmental and social risks related to abandoned borrow pits in OR Tambo district, Mthatha, Eastern Cape, South Africa.**

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Indiscriminate roadside excavation of borrow pits for road construction and other civil engineering works without the intention of restoring or reclaiming the pits has left much to be desired in terms of the potential hazards. Once the depletion of their vital resources, borrow pit are often abandoned. The resulting holes can be filled with water and become breeding grounds for mosquitoes. In the study done by Nwachukwu and Osoro (2013), assessing environmental hazards: linking borrow pits, gully erosion, and road failure found that highway failure is linked to the action of erosion initiated by abandoned borrow pits in no small measure affects environmental quality and safety. Hence this study assesses environmental and social risks related to abandoned borrow pits in OR Tambo district,
Mthatha, Eastern Cape, South Africa. To achieve this, recent literature, questionnaire survey and sampling methods to measure environmental change will be evaluated. Questionnaires and interviews will be conducted to investigate social risk to the community and also to investigate whether construction companies comply with laws that govern rehabilitation of borrow pits. In the effort to assess the environmental change, quantification of both plant and animal diversity will be conducted using a quadrant survey. The analysis of the findings will be done using diversity indices, such as the shannon wiener index and simpson’s index. The findings will be presented using tables, charts and graphs.

**Keywords:** key words: abandoned borrow pits; reclaiming; restoration; environmental hazards

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Assessing the State Of Compliance of the Kwa-Nobuhle (Uitenhage) Wastewater Treatment Facility With Regards To Legislation.

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The significance of this study is to assess whether or not kwa-nobuhle wastewater treatment facility is in compliance with applicable legislations. Wastewater is a serious concern especially if left or disposed of in the surrounding environment when not properly treated. Wastewater is classified based upon its place of origin, whether industrial wastewater or domestic wastewater. Industrial wastewater is generated from industrial plants where liquid water serves many purposes including washing and rinsing of equipment, cooling of machinery etc. Domestic wastewater is the water that has been used by a community and which contains all the materials added to the water during its use. It is thus composed of human body wastes (faeces and urine) together with the water used for flushing toilets, and sullage (which is the wastewater resulting from personal washing, laundry, food preparation and the cleaning of kitchen utensils) (mara, 2003). Wastewater in a treatment facility goes through a series of stages of treatment before water is reintroduced to the environment. Because of aging of infrastructure, development and population growth as well as other factors, the carrying capacity as well as the ability of wastewater treatment facilities to treat water is compromised. These factors are the reason why water from these facilities is discharged to the adjacent environment with undesirable effects. Hence then the aim of the study is to assess whether the kwa-nobuhle wastewater treatment plant has the capacity to service the kwa-nobuhle developmental township. Constitution, legislations, policies and strategies in South Africa are there to enforce local municipalities/government to plan, design and implement appropriate structures in this case wastewater treatment facilities that will ensure water discharged to the surrounding environment after treatment does not bear undesirable components. If that is so it means the facility is in compliance with the national environmental management act (act 107 of 1998) commonly known as “nema”, the national environmental waste act (act 59 of 2008), the national water act (act 36 of 1998). Mixed research methods comprising both qualitative and quantitative research methods will be applied to collect and analyze data. Direct observation of the study area will be done; also interviews will be conducted as well as questionnaires to get more in-depth information.

**Keywords:** legislations; wastewater; capacity; compliance

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The Continuous Use Of Pesticides By Small-Scale Farmers Despite Their Environmental Impacts: A Case Of Mbizana Local Municipality.

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The continuous use of pesticides by farmers has brought benefits such as increment in yields thus more improvement in production and productivity. However, negative outcomes too have increased. The outcomes include damage to the environment, agricultural land, fisheries, fauna and flora. The major problem is the use of toxic insecticides by farmers in the research area. This research will explore the continuous use of pesticides by farmers in mbizana local municipality which is the coastal municipality with pristine beaches and scenic estuaries. This coast line is part of the famous wild coast and pondoland centre of endemism that boasts of valuable flora and fauna found nowhere else in the world. Quantitative and qualitative research methodologies will be used to collect data. Interviews will be conducted on extension officers of the department of agriculture in mbizana. Questionnaires will also be used for the farmers in order to get first-hand information on how they apply pesticides and how often they do apply them. Secondary data from the department of agriculture, department of agriculture forestry and fisheries, journals, books, government gazettes and internet will be used.

**Keywords:** pesticides; farmers; agriculture; environment

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**Strategies for Improving Rural Incomes and Poverty Alleviation: Some Insights from The Eastern Cape Empirical Study.**

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This paper presents identified strategies and existing opportunities that can be used to improve rural incomes and alleviate poverty in the Eastern Cape province in South Africa. The findings presented in this paper are based on a research project entitled baseline data on incomes and creation of job opportunities in the rural areas of the Eastern Cape which was carried out by the centre for rural development at Walter Sisulu University in 2012-2013. The study was funded by the provincial department of economic development, environmental affairs & tourism (dedeat). The overarching aim of the research project was to profile sources of income and opportunities that can be used to create jobs in the province. The study was carried out in two local municipalities, namely, mhlontlo and ngqushwa. A host of key informants who participated in the study include the following: provincial and local government officials, non-governmental organisations, councillors, and a total of 1 789 households. Both methods of social enquiry that is quantitative and qualitative were used in this study. Quantitative data obtained through survey questionnaire was analysed using SPSS. Qualitative data obtained through focus groups, in-depth interviews and workshops were analysed using corroborative and complimentary thematic analyses. The findings of the research reveal that social grants, particularly old age pension and child support grants are the most important sources of family income. Findings of the study also reveal that there are various existing resources that are currently underutilized in the rural areas but have potential to create and sustain various job and income generating activities. These resources include indigenous skills such as beading, weaving and tanning natural resources such as clay and many others to be discussed at length in the paper.

**Keywords:** income generation, employment opportunities, agriculture, livelihood, rural development, natural resources, rural industrialisation.

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**Aspiring And Nascent Entrepreneurs’ Venture Creation Stage Criticality Ratings And Implications For Policy Interventions.**

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Statistics and literature on new venture creation in South Africa and other parts of the world indicate that most new small businesses fail between inception and five years of existence. Certainly, new businesses fail at different stages of the venture creation process. This research investigated the stage that aspiring and nascent entrepreneurs find as most difficult in the venture creation and development process. It also aimed at establishing stage-specific interventionist policies targeted at debottlenecking the venture creation process. The research sought the bases for creation of a more effective and targeted intervention framework often lacking in the current efforts being made to support entrepreneurship in the Eastern Cape. A quantitative survey of 120 nascent entrepreneurs drawn from the universe of nascent small, micro, medium entrepreneurs in the Eastern Cape Province was conducted. Numerical data relating to stages identified and ratings of the criticality of the stages in influencing venture success was sought. Questionnaires were used to collect data based on the entrepreneurs’ knowledge and rating of difficulty in navigating the venture creation stages. SPSS software version 20 was used to summarise and analyse data. The study picked up key critical stages viewed as critical stumbling blocks to new venture creation and development and showed that nascent entrepreneurs are critically aware of the stages that require specific targeted interventions recommended in this study. Findings suggest the need for a broader critical incident analysis of Eastern Cape “lived experiences” in the venture creation process.

Keywords: aspiring, criticality, debottlenecking, entrepreneur, generic, nascent, ratings, venture creation stage

Use of mobile technology for citizen engagement beyond elections. Rachel sibande,

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Citizen engagement is one of the key determinants of good governance and community development. Citizens must engage with elected leaders, government and civil society on formulation of policies, development of legislation, design and monitoring of development projects. This paper explores the use of mobile phones and the internet as a tool for citizen engagement with elected leaders, government and civil society. We present a revised version of the ushahidi platform that has previously been used for citizen engagement during general elections in many countries including malawi. The revised ushahidi prototype caters for citizen engagement beyond general elections for continued surveillance of elected leaders, government and the civil society that will ultimately deepen democracy and enhance social change.

Keywords: citizen engagement; governance; mobile phone; internet

Investigating the Contribution Of Road Construction On Soil Erosion, A Case Study Of Engcobo Local Municipality, Chris Hani District, South Africa.

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soil erosion along the roads and/or road riparian areas has become a norm in the Eastern Cape. Soil
erosion refers to the detachment and transportation of soil from one area (onsite) to another (offsite). This displacement or removal of soil can be caused by water, air and sometimes gravity. This will focus on accelerated soil erosion which is the result of human interference with the environment. Engcobo local municipality falls within the Eastern Cape Province in the eastern side of Chris Hani district municipality. The focus road is R61 protruding from the engcobo town outskirts along the nyanga sss on the way to umtata although it will cover few kilometers away from engcobo this research aims at looking at the contribution made by road construction to soil erosion. Steps to achieve the result will involve revisiting the phases of road construction, identifying the types of soil erosion evident in the area, checking the material, utensils and equipment used for road construction, the impacts on surrounding societies and other causes besides road construction that might lead to soil erosion. This research will use a pragmatic approach which combines related methods and consider the flaws of each method so as to ensure validity, precision and accuracy. Both qualitative and quantitative methods will be used. A-horizon reconstruction, natural benchmarks, erosion pins, erosion pipes, sampling and universal soil loss model will be used and analysed using statistical methods, modelling and GIS analysis. Research questionnaires, interviews and focus groups will be used and analysed using statistics and models.

**Keywords:** soil erosion; road riparian; accelerated soil erosion; road construction; a-horizon reconstruction; natural benchmarks; erosion pins; erosion pipes; sampling; universal soil loss model; GIS analysis; focus groups; qualitative; quantitative methods; research questionnaires; interviews; pragmatic approach

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**An Investigation of the Environmental Economic Potential of Umuziwabantu Municipality's Forest Utilized as a Green SOS Response to the Current Crisis.**

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South Africa is currently experiencing a major crisis in terms of energy security, with black-outs becoming a daily routine, there is a need to look into alternative energy. Wood has for many years, been a main source of energy, especially in rural areas. This research is looking at the potential of using timber by-products and general forest litter as a more eco-friendly response to the energy constraint currently experienced. The focus will specifically be the weza merensky forest in umuziwabantu municipality which is located in harding, kwazulu natal, South Africa. Data will be collected using both qualitative and quantitative methodology, these will include the use of questionnaires that will be directed to the adjacent communities to find out how they benefit from the plantations and in the case where plantation expansion would be required, are they willing to give up their land. Interviews will be used to get the views of the merensky forest management. Litter generated from the logging of a single tree will be weighed on a scale in order to investigate the amount of energy that would potentially be generated. Secondary data will be collected from the department of agriculture, forestry and fisheries, department of minerals and energy, books, journals and internet articles will be used.

**Keywords:** forest plantations, timber byproducts and energy

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**An Investigation into Teaching Business Research Using Reflective Diaries.**

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the research module has become a key component in most university courses. In this module students must demonstrate their ability to not only understand key research concepts but also conduct a research study based on their teaching experience. The purpose of this study was to investigate the experiences of a sample of 15 business management students as they were being taught and conducting their first research project. To achieve this objective, a qualitative, action research approach was adopted using reflective diaries filled out by the 15 students as well as the lecturer. A thematic approach was used to analyse the experiences of the students and the lecturer based on diary entries for a semester (six months). Three major themes were found. First, students described the research process to be one that is not only lonely but at best filled with so many challenges. Second, student accounts also reveal the importance and necessity of support structures to buffer the challenges espoused in the first finding. Third, reflective diaries were seen by the students and lecturers as an important tool for reflection during the research process. The implications of these findings not only on teaching practice but also higher education policy are described in this paper.

**Keywords:** business research, diaries, reflexivity, teaching

Survival Strategies For Women-Owned Construction Enterprises In South Africa.

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In this paper, the survival strategies of women-owned construction enterprises in South Africa are discussed. The study originated from the realization that women involved in construction work thrive in a hostile male-dominated industry. A qualitative study was conducted to investigate the motivation, resilience and survival strategies that women applied. The interviews concentrated on views and experiences of the women with respect to factors that discouraged them from succeeding and their associated survival strategies. Data were interpreted through application of tesch method of qualitative content analysis. It was revealed that women used various innovative strategies to survive in the male-dominated terrain of the construction industry.

**Keywords:** women, construction industry, survival strategies
Functional multilingualism in Southern Africa
Harnessing Challenges and Opportunities of Multilingualism for Improved Teaching and Learning in South African Higher Education.

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Although languages no longer define or restrict people to countries and access to employment opportunities or greener pastures, they have an impact on one’s inner-self and abilities. This reality presents a major challenge to universities because they are supposed to breed global citizens through inculcating multilingualism in their graduates. This paper explores the thoughtful models of multilingualism designed to enhance teaching and learning in tertiary institutions. The methodological difficulties faced in promoting the realization of such a concept within the realm of multilingualism out of which positive and negative imperatives are separated and explained. In this context, multilingualism refers to the incorporation of native languages into the teaching and learning structures. A large number of school leaving students, are no longer familiar with their native languages as they escape towards the global language (english). They are also not familiar enough with english, which leads to language ‘in betweenness’ called ‘language attrition’. Schimid (2011:7) described it as one’s loss of grammar and other features of any given language. This is a result of declining use or the attitude of the speakers who have either changed their linguistic environment or have attached some stigma to their native languages. This concept is pregnant with challenges and opportunities, but the fundamental question to address is: how can multilingualism be landscaped into teaching and learning in the South African higher education, given the country’s multicultural nature. Granted; there are inherent weaknesses, but i contend that it is possible to a certain extent, to use native languages as academic languages of command in universities, but this might be more fruitful through a patriotic language based learning (plbl). This concept attaches the learner to a language he/she will identify with or relate to by virtue of sharing the same ancestry, or locations. Students are likely to pay more attention. Hence the major challenge towards achieving multilingualism and can be regarded as an opportunity that language experts if any, can take advantage of. Although such experts must have the ability to zero in the complex academic contexts into native languages, mass employment opportunities will be created, but, will there be readily available experts to meet the expected requirements in South Africa to cater for South African students. Taking all this into account, will it enhance the higher education success rate and will natives be able to harness the opportunities.

**Keywords:** multilingualism, native languages, harnessing, higher education, teaching, learning

Language problems amongst foundation phase learners: what is the role of the English first additional language teacher?

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Language problems amongst the foundation phase learners (age 5-9 years) are difficult to identify as such teachers and parents often leave them unattended. Language problems affect learners and the development of teaching and learning if they are not properly attended or addressed. Thus, unattended language problems turn to become barriers to learning. The study sought to identify language problems, their implication to teaching and learning and the role of the English first additional language teacher. The study adopted a qualitative design in which a sample of ten foundation phase English first additional language teachers participated. Data was collected through an open-ended questionnaire. The study identified problem of fluency, which is rate and rhythm of speech and language problems as common language problems amongst foundation phase learners. The study found out that language problems
affected negatively teaching and learning. The study also found out that the English first additional language teacher has an important role to play in order to help learners experiencing language problems. It is therefore recommended that parents who have children with language problems should communicate with the language teacher, so that together they help the learner learn despite language problems.

**Keywords:** barriers, fluency, rhythm, rate, teaching and learning

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**Multilingualism in Southern Africa: a plus for the education sector.**

Sanction Madambi

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This paper intends to make a panoramic review of the benefits of multilingualism in the education field, with special focus on Southern Africa. The paper will in the process outline the challenges faced by monolinguals in education. Multilingualism in education has many benefits (Mwololo 2008. p.3). Several studies have shown that multilingual people tend to effectively and efficiently operate in their day today activities as compared to monolingual people (Chiswick 2007). Whilst multilingualism has better rewards, monolinguals are at times disadvantaged. There are cases where students, lecturers, educators, etc. are not conversant with languages used in some institutions. They end up using a single language, often English. Although in their places of origin they will be multilingual, in this situation they are forced to operate as monolinguals. This paper intends to outline some of the challenges faced by monolingual people. The paper will give an introduction, objectives of the paper, background, definition of key terms, and a brief review of literature. A review of the benefits of multilingualism in education as well as challenges faced by monolingual people in educational institutions will be given. The paper will conclude by suggesting the way forward and a summary.

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**Teachers understanding of creative writing as dictated by policy documents governing the teaching of English in South African schools.**

Rebecca Manning

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Creative writing is one of the key aspects that can be considered for effective education. For a people to transcend to its educational ideology, creative writing is fundamental. This is because, as a course, it provides opportunities for students to refine their creative writing skills and thinking abilities beyond those developed in the required English Language arts courses. Yet, many South African schools seem to pay less attention in this vital area of study in their educational curriculum. From a study conducted in the Eastern Cape Province of South Africa, the paper investigates teachers understanding of creative writing in High schools as dictated by policy documents governing the teaching of English as a subject. Using the inductive and deductive methods as well as the thematic approach for analyzing data, the paper argues that the difficulty in effectively implementing policy document with regards to Creative writing and many of the problems facing educators in schools are because they do not have sufficient understanding of educational concepts. As a result, education policy only becomes a reality when it is implemented at the classroom level and educators are the key players in the implementation process.
The paper concludes by suggesting that it is important for educators to have an understanding of creative writing as dictated by policy documents governing its teaching in schools. Writing in English is important; the ability to read and write is a status symbol. Furthermore, the paper also found that educators should play an active role in the interpretation and understanding of creative writing as dictated by policy documents as well as selecting and filtering it.

**Keywords:** Creative writing; teachers; policy document; English; South Africa.

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**Functional multilingualism in Southern Africa Significance of Mathematics language in Electrical Systems.**

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Functional multilingualism refers to a practical function of using several languages with a specific purpose of executing normal activities in a systematic, coherent and comprehensive manner. This paper explores the significance of Mathematics language in Electrical Systems. A general policy practice advocates the use of English as a medium of instruction and a language of communication when Electrical Systems yields to a symbolic use of Mathematics language. Electrical Systems is foregrounded in numerical science that requires specific information and comprehension of complex instruction and further demands an ability of an individual for task orientation interaction. This endeavour shifts the perception and the use of appropriate integrative language that links other concepts in the multidisciplinarity of Electrical Systems and Mathematics. Bilingual approach therefore provides a positive effect in understanding concept of Electrical Systems and poses a multidimensional nature when a person is carrying out educational decisions. Data was collected through a qualitative participant observation, interviews and document analysis. Purposive sampling was used when the cohort of pre-service teachers in the EDTE 210 Electrical Systems module was mediated in Kwa-Zulu Natal. Data collected indicated Mathematical connotation in the electrical circuits and it was essential to understand motives behind particular manipulation of different formulas, conversation and fraction implications in calculations. The findings provided a diverse approach to conceptual understanding of Electrical Systems through participative learning informed by Mathematics language and a language of instruction. Findings and recommendations for effective teaching of Electrical Systems through Mathematical language and language of instruction are outlined.

**Keywords:** Multilingualism, Mathematics language Multidisciplinarity, Bilingual, Multidimensional, Formulas, Conversation.

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**Developing a new culture identity for the new higher education student through language practice. Theresa Chisanga**

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The higher education post-independence culture of the hegemony of English in instruction and general communication in Universities in Africa has increasingly come under scrutiny. The belief that proper education can only be transmitted through the medium of a former colonial language has proved to be impractical and counter-productive to the development of the continent and its people. While it has produced a few elite who are up there the majority of Africa's population has been left behind. It is now generally accepted that mother tongue education, or better, still, a multilingual system of education is more empowering and enabling in fostering education and development. However many institutions do not seem to be ready for this and are doing little to embrace the concept. This paper raises a number of questions and serves to start the conversation on the role that universities can play in facilitating this development and attempts to raise awareness on the issue particularly in a University like WSU where it is like a sleeping lion. The paper looks at what some of our sisters institutions have or are doing and shares some of the instinctive views and ideas from students and staff and reflects on the possibilities of how best to start tackling the beast.

It examines the language policy and planning positions at national and Departmental level and how WSU can tap into these while complying with the national imperatives and at the same time responding to the language rights of the entire university community.

**Keywords:** Multilingualism, hegemony-of-English, language-policy, language-rights, language-of-instruction, mother-tongue.
E-SKILLS FOR RURAL DEVELOPMENT
The benefits and challenges of using Telecentres in rural areas: Case women in Eastern Cape Province.

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The advent of Information and Communication Technology (ICT) facilities such as Telecentres have brought new ways to assist people to have access to digital technologies that have the potential to aid communities, economic, educational and social development. This is particularly important in rural areas where the citizens are less likely to have their own technologies. However, this great potential has not been fully realised in the developing provinces such as the Eastern Cape in South Africa. In particular, women seem to benefit the least from such interventions; this is due to a myriad of social factors. This paper seeks to help address the barriers affecting women to use and adopt the telecentres in rural areas. The aim of the paper is to identify the challenges women face in using telecentres and the benefits those who use gain from using the centres. The research employed a qualitative research approach and an interpretivism paradigm where the reality is viewed as a social construction. Data for the study comes from both secondary sources and semi structured interviews. The interviews were conducted with women between the ages of 16 and 50 in the Eastern Cape Rural towns of Cala and Centane. The study concludes that through awareness; improvement of ICT capacity (infrastructure and literacy) and women empowerment in terms of ICT use telecentres can be successfully integrated in rural communities. The findings of the study may be used by those seeking to improve the impact of telecentres especially on women

Keywords: Telecentres, women, rural areas, challenges, benefits, ICT

Need for a Vital Implication of Religious Leaders in Rural Development Efforts: Case Study from Vhembe District, Limpopo Province.

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The attainment of sustainable development has become a current debate across the globe and the human community is still struggling to reinvent the idea of “sustainable development”. Rural communities still facing many challenges which requires collective efforts to be strengthened. Many religious communities have been involved in efforts to mitigate poverty, hunger and disease. While education is very important tool for human liberation and empowerment, religious leaders and communities can play a critical role in advancing developmental initiatives at the grassroots level. As the continent leading economy, South Africa is one of the developing countries, which strive to achieve the eight Millennium Development Goals to meet the target of United Nations. Rural community development is a process conducted by community members. It is a process where local people can not only create more jobs; income and infrastructure, but also help their community become fundamentally better able to manage change. Community members can better mobilise existing skills, reframe problems, work cooperatively and use community assets in new ways. Principles of self-help
and participation guide a flexible process. While there is no recipe, major steps are identifying existing concerns, engagement, self-examination, exploration, prioritisation, planning and action. This study aimed at investigates the role of Religious leaders in developing rural communities in the Vhembe District. Selected religious communities from the Municipality will be taken as a case study. This is the reason a mixed methods using both qualitative and quantitative; exploratory study using semi-structured interviews will be conducted to gather religious leaders and communities’ perceptions of how to contribute and engage in developing rural communities. Purposeful sampling will be conducted which will lead to the inclusion of participants in the Vhembe District, Limpopo Province in South Africa. Field notes will be taken and data will be analysed using the content, thematic analysis method.

**Keywords: Religious leaders, Religious Community, Rural Development.**

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**An analysis of rural women’s electronic skills, post adult literacy classes introduction.**

**Case study of Mutare, Zimbabwe.**

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In most developing countries women were denied their right to go to school mainly due to cultural justifications. However gender equality awareness has resulted in women being assisted to go to school through day and evening adult literacy classes. Some researchers argue that it is incomplete to eliminate illiteracy only without equipping people with electronic skills. Electronic skills do not benefit individuals only, instead it becomes a collective benefit for the development of communities. Recent studies outline the necessity of electronic skills especially in this technologically advanced world. Individuals who are electronically illiterate will not survive if they are to contribute on a fair platform to community development. Some scholars refer it as the survival of the electronically literate. It is against this background that motivated the researcher to pursue a study in this field. The study analyzed the levels of electronic literacy among rural women who attended adult literacy classes in the deep remote areas of Mutare in Zimbabwe. The study revealed that adult literacy classes are lacking courses on electronic skills. Women revealed their difficulties to carry out some of their day to day chores like the payment of bills and business transactions because nowadays it is done electronically. Most women were struggling to use gadgets like cellphones and computers for the betterment of their lives. A few were learning the electronic basic skills through their electronically literate children and grandchildren. Therefore it is important to empower rural women with electronic skills for community development.

**Keywords: Rural development, women, electronic skills, computer literacy.**

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**E-Skills vs e-Services: A generic model for the prioritization of tourism e-cluster services.**

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This study explores the relationship between e-skills of rural Small and medium industries (SMEs) and
individual operators involved in the tourism sector and their choice of e-services, to prioritize the services that could be offered by a tourism e-cluster. A general literature review was conducted to determine the advantages of a rural tourism e-cluster and the e-services that could be offered via the tourism e-cluster. Information and Communications Technology (ICT) skills of individuals were measured using self-reported assessment of competence on ICT-related topics and ability to perform specific ICT tasks. Further information related to frequency of computer use (hours per week), years of computer use, reasons for use and access to computers were also collected. A total of 22 tourism SMEs participated in the study, and their choice of e-services were prioritised using Analytical Hierarchy Process (AHP) to derive a generic model for the prioritization of tourism e-cluster services.

Keywords: e-Skills e-Services e-Cluster SME Tourism eCluster

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The role of information technology in the development of rural tourism.

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Rural tourism is an important sector in the economy contributing around 10% to worldwide gross domestic product. During the last decade, largely due to the spread of mobile phone technology in rural areas, information and communication technology have demonstrated the positive and significant impact they can have on economic development by improving the business environment in rural areas. Information technology is crucial to the rural tourism industry and its success. The aim of the paper is to summarize the influence of contemporary trends on the usage of information technology in rural tourism marketing and communication with tourists. This paper seeks to determine and describe the influence and necessity of effective internet communication in rural tourism. Information technology developments that have taken place with respect to the tourism industry are overviewed in this paper. Challenges they pose for the rural tourism sector generally are also identified. Therefore, in this paper we discuss the role, challenges, and benefits of information and communication technology in the rural areas development efforts and processes in Africa.

Keywords: Rural tourism, Information and Communication Technology, Development.

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Prospects and Constrains of integrating E-Learning at a Rural Based University.

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E-learning is one of the most recently developed forms of technological innovations to education in South and beyond. This often involves both out-of-classroom and in-classroom learning using modern technology namely Computer-Based Training (CBT), Internet-Based Training (IBT) or Web-Based Training (WBT). Against this background, content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM; which might range from self-paced or instructor-led. This paper therefore, explores prospects and constrains of integrating E-Learning in the rural based
institutions of higher learning, using University of Venda as a test case. The overall position for this study is that the University of Venda despite its location in the rural sphere needs to upscale and integrate E-Learning as part of its teaching and learning strategy. This is based on the position that most Universities in South Africa are integrating E-Learning as part of teaching Pedagogy. Theoretically, the study utilises insights from connectivism theory of learning that advances the position that knowledge is collaboratively constructed and that connectivity is the medium of knowledge transfer. Methodologically, the study utilises interviews for data gathering and an inductive qualitative analysis for data processing. It is the argument of this study that the University of Venda should put in place structures and mechanisms to support E-learning, if ever the University is to be a regional hub for knowledge production and dissemination.

**Keywords:** E-learning, internet-based learning, teaching and learning and University of Venda.

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**Using the three core values of development to assess the level of economic development in selected rural areas of Eastern Cape: as case study of KSD Municipality.**

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The study of how economies fare in levels and stages of economic development is an interesting question because economic development is a multidimensional process of changes. Economic development involves changes in social structures, popular attitudes and national institutions, as well as the acceleration of economic growth, the reduction of inequality and the eradication of absolute poverty. But how is rural development measured? This paper seek to use three values of development (sustenance, self-esteem and freedom from servitude) in assessing rural development of the Eastern Cape. These core values represent common goals sought by all individuals in societies and also relate to fundamental human needs that find their expression in almost all societies and cultures at all times. Data will be obtained using questionnaires and regression analysis utilises mixed quantitative econometric methods. It is expected that rural areas’ inhabitants may be lacking proper access to adequate health facilities, lacking sense of self-worth and self-respect. Lastly, people from rural areas are expected to lack a variety of alternatives as far as jobs and available economic resources.

**Keywords:** Core values of development, rural economic development, Eastern Cape, mixed methods, questionnaires, and economic resources

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**The role of information technology in the development of rural tourism.**

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Rural tourism is an important sector in the economy contributing around 10% to worldwide gross domestic product. During the last decade, largely due to the spread of mobile phone technology in rural areas, information and communication technology have demonstrated the positive and significant impact they can have on economic development by improving the business environment in rural areas. Information technology is crucial to the rural tourism industry and its success. The aim of the paper is to summarize the influence of contemporary trends on the usage of information technology in rural tourism marketing and communication with tourists. This paper seeks to determine and describe the influence and necessity of effective internet communication in rural tourism. Information technology developments that have taken place with respect to the tourism industry are overviewed in this paper. Challenges they pose for the rural tourism sector generally are also identified. Therefore, in this paper we discuss the role, challenges, and benefits of information and communication technology in the rural areas development efforts and processes in Africa.

**Keywords:** Rural tourism, Information and Communication Technology, Development.

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**The Potential of Mobile Phone Technology to Support the Socio-Economic Needs of Rural Communities for Sustainable Livelihood, in South Africa.**

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According to South African census 2011 about 40% of South Africa`s population lived in the rural areas in 2011. Despite the fact that all South Africans are covered by the same constitution and socio-economic rights, but in reality rural communities still lag behind when it comes to socio-economic development. In 2013, South Africa`s mobile phone technology penetration rate was over 70%, much higher than other African countries. There is high adoption of mobile phone technology than computer technology in the rural areas of South Africa. Consequently, more people living in the rural areas of South Africa use mobile phones than use a personal computer. Given the widespread use of mobile phone technology in South Africa, socio-economic opportunities exist in using mobile phones for: mobile commerce; e-government; education; entertainment; disaster response; mobile for employment; information; services; traditional affairs; indigenous knowledge, etc. South African rural areas are known for their abundant natural resources and human-capital resources. However, the mobile phone technology seems to be underutilized by the rural communities for driving socio-economic rural development in South Africa. The potential of mobile phone technology for socio-economic rural development has not been fully explored within the South African context. The research study is inline with ICT for Development: Contributing to Millennium Development Goals. The study explores the extent to which mobile phone technology can be harnessed to support the socio-economic needs of rural communities for development within the context of South African rural areas. Secondary data will be drawn from various literature sources, while primary data will be collected from the key informants (mobile phone technology experts, rural practitioners, rural economists, and traditional leaders) through interviews. Analysis of data, discussions and implications of the study will be presented. This will be followed by recommendations and conclusion.

**Keywords:** Mobile Phone Technology; Socio-Economic Needs; Rural Development

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The influence of telecentres on women empowerment in rural communities of South Africa. Abiodun Alao and Prof. Wallace Chigona

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This study will investigate the influence of telecentres on women empowerment in rural communities of South Africa. Telecentres are information centres that consist of computers connected to the internet, along with a variety of other information technologies. Telecentres are usually located in communities where domestic ownership of such equipment is readily affordable. The objective of this study is to understand how women living in rural communities are empowered through telecentres. It will be argued that telecentres are centres that consist of information and communication technology (ICT) tools that can be used for disseminating relevant information for women empowerment. Women having access to information and gaining knowledge through ICTs can share their knowledge, concerns, best practices and experiences, gain a greater understanding of their current situation, and solve issues that were previously beyond their capability and enhance their livelihood. The findings of this research will enable government and NGOs to use telecentres as pathways towards development and will inform the South African government on ways to introduce ICT policies in rural South Africa in order to empower women. The study will use the Individual Difference Theory and Development Support Communication approach as theoretical lens. The case study method will be used because I aim to conduct an in-depth investigation of telecentre usage for women empowerment. Key words: Telecentres, Empowerment, Women, Rural communities, ICTs, South Africa

Keywords: Telecentres, Women, Empowerment, Rural communities, ICTs, South Africa

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Community Radio Stations And Accessibility of Agricultural Information By The Smallholder Farmers In South Africa
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Radio is the most widespread mass-medium in the developing world. It is a powerful communication tool. Empirical evidences abound with community radio stations (CRS) has shown the improvement in the livelihoods of rural people through broadcasting on topical issues. This paper describes the contexts of 87 sample population CRS in South Africa. The changing technology environment that is currently influencing information and communication processes worldwide and the multiple challenges agricultural extension service delivery is facing at the moment. The study also peeped into the effects of rural / community radio stations in some African countries and its contributions to the extension service delivery methods. The findings indicate that CRS is under-utilized in the dissemination of agricultural information to the smallholder farmers. The average time devoted to programming are somehow equally distributed between music (48.98%) and talk show (51.1%). The findings suggest
that the department of agriculture at the national level should take advantage of the high listening audience (37.6 million) of CRS per day to reach out to the farmers with proven agricultural information that will go a long way to revitalize agriculture in South Africa.

**Keywords:** Audience, program, broadcasting, agricultural communication, rural radio

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**The role of rural parental involvement on learner’s attitudes and motivation to attend school and participate in learning.**

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Parental involvement and learner’s attitudes and motivation towards school activities are directly relational to each other. Encouraging parental involvement in school activities plays an important role in encouraging learners’ participation and ownership of the process of learning in and out of school. The relationship and partnership between parents, schools, and learners is important in the success of learners academically and throughout life. Of concern is that although research exist on parental involvement in education internationally, regionally, and locally, little research has been done with a focus on the role that rural parents involvement play in shaping children’s attitudes and motivation to attend school and improve academically. In particular if it is considered that rurality, rural education, and rural schools continue to be marginalised in South Africa, resulting to little information of existing relationships between parents, school and learners. This paper presents data from the B.Ed. Honours research project, which explores the role of rural parental involvement in learner’s attitudes and motivation to attend school and learn. The study is qualitative and collected data using semi-structured interviews with four parents from rural Acornhoek community. To analyse the data inductive thematic analysis is used to identify emerging categories and themes to discuss the findings. Keywords: rural, parental, attitude, motivation, school, learning, performance

**Keywords:** rural, parental, attitude, motivation, school, learning, performance

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Acknowledgements

The university of Venda and Walter Sisulu University Conference organising committees acknowledge the timely and untiring support given by Univen and WSU Executive Management in hosting the 1st Univen-WSU International Research Conference. Without their support, this conference could not have been a success.

The following sponsors are herein acknowledged:

1. Interim Vichancellor & Principal: Walter Sisulu University Prof. K Mfenyana for Gala Dinner
2. Executive Director: Research and Innovation University of Venda for Two Breakawy rooms
3. Old Mutual: Eastern Cape Regional office for the Gifts for guest speakers and all the stationery.
4. Allied Business Solutions for all the Flash Disks
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