



# *Edu-Brief* @UJ

NEWSLETTER

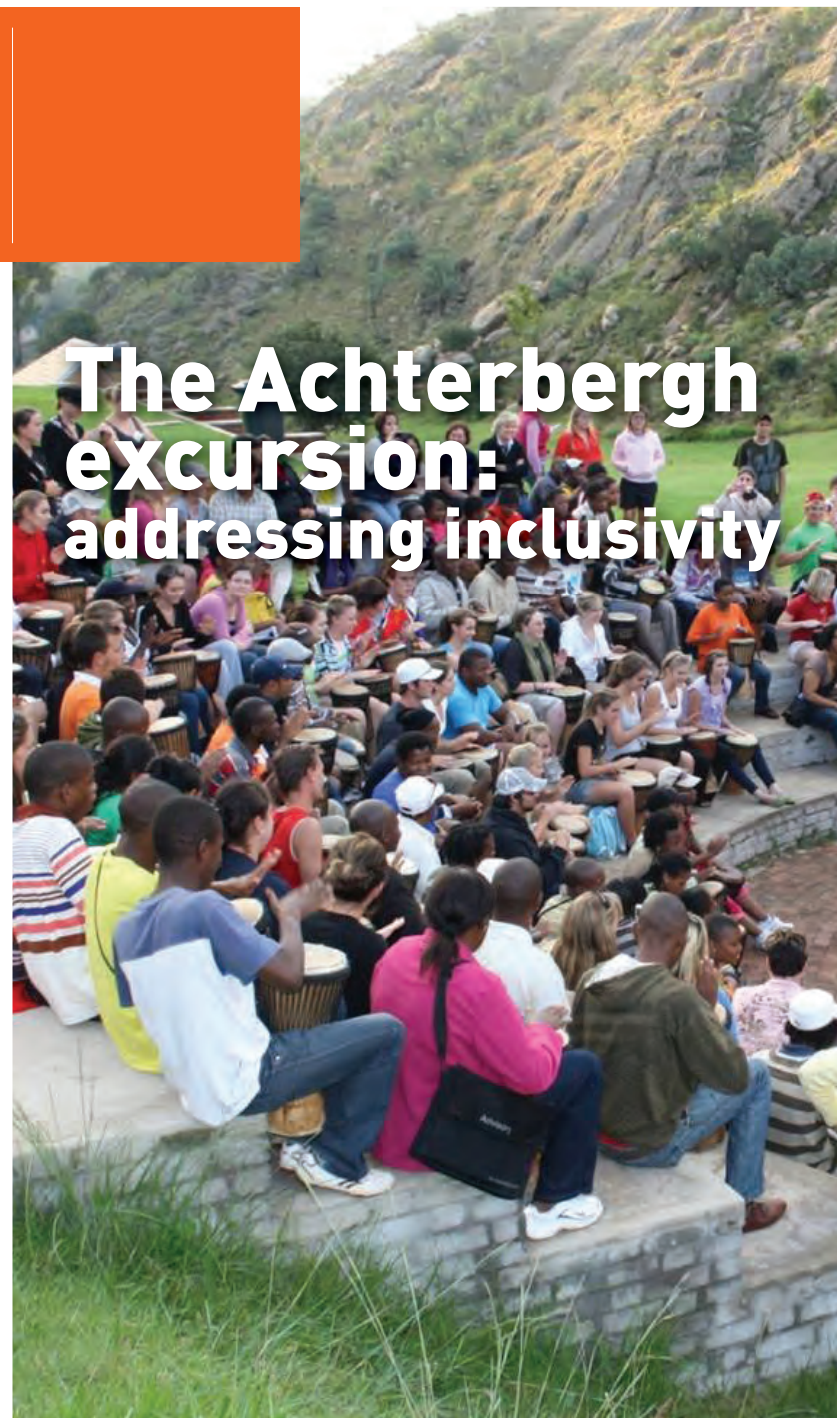
FACULTY OF EDUCATION  
SPRING EDITION ~ 2014



UNIVERSITY  
OF  
JOHANNESBURG

RETHINK. REINVENT.





## The Achterbergh excursion: addressing inclusivity



Khomotso Ntuli



Bush dialogues

### Josef de Beer Department of Science and Technology Education

For the past eight years, the Faculty of Education provided its students with the opportunity to participate in a three-day excursion where the focus is on professional teacher development, engaging with interesting pedagogies, and issues of social justice and inclusivity. This excursion grows from strength to strength. One of the reasons is that the Faculty reflects critically every year on the excursion curriculum, and ensures that any emerging student needs are addressed in the excursion curriculum the following year. Here we highlight two new activities in the programme. In 2013 we introduced a new activity, namely the so-called "bush dialogues", an event scheduled for after dinner one of the evenings. Another innovation was the "vexation and venture" activity in 2014.

#### The bush dialogues

The objective of the bush dialogues is to bring about understanding between people of different backgrounds and views and develop inclusive teachers. After a generic discussion in the hall, that was facilitated by a PGCE student of the Faculty, Mr Khomotso Ntuli, students took the conversations about gender, sexual orientation, culture and race outside, and continued the conversation around the fires (that were made prior to the activity) in smaller groups for the following two or three hours. The bush dialogues were continued using social media (Facebook) on campus the following weeks. It is important to research such interventions. We used a generic qualitative research design that is descriptive and explorative in nature. Data was collected among first year students through participant observation by lecturers and Master's students and qualitative questionnaires of 695 first year students. Through coding we identified a number of emerging themes, one of which is that many students hold narrow views on issues of gender and sexual orientation, and that the bush dialogues seem to sensitize students to also consider alternative views.

#### Five themes were identified, namely:

1. The bush dialogues created awareness for inclusion and diversity among students
2. Students consider possible ways for transfer to the classroom
3. Students became aware of the complexity of the issue of inclusion
4. Students showed evidence of operating on a higher levels of Krathwohl's taxonomy, namely showing a response to issues and valuing inclusion
5. These discussions created discomfort, aiding cognitive dissonance – the first step in addressing their fundamentalist views.

### Vexations and ventures: learning to be agents of change

The Faculty also emphasizes the fact that teachers should be agents of change. We invited Mr Bryan Murray from Georgia State University in the USA to join students at Achterbergh, and to present the 'vexations and venture' activity. Bryan (see photograph) is a scholar of the work of Martin Luther King Jr, and after a generic session that focused on the work of two great freedom fighters- Nelson Mandela and Martin Luther King Jr- students had to identify the problems that they anticipate to face in their teaching practice one day (the vexations), and how they would, as change agents, address this (the ventures). Students reported afterwards how they came to realize that they, as teachers, need to follow in the footsteps of these two giants, and work towards a more just society for all.



Bryan Murray (drumming at Achterbergh)

### What does a visitor from abroad have to say about the excursion?

"I now recognize how your teacher excursion sets a model for excellence in critical intellectual analysis, pedagogical principles and theory, diplomacy, courage, and clarity of expression. Achterbergh is the first teacher training model I have encountered that exposes pre-service educators, at the very beginning of their educational training, to power teaching while also challenging hegemonic concepts which can limit mastery". (Bryan Murray)

## A shift from Senior Phase Technology to Technology in the Further Education and Training band.

### Francois van As Department of Science and Technology Education

#### The Department of Science and Technology Education has been well established in Senior Phase Technology Education since 1998.

With the introduction of the new B.Ed (Senior Phase & FET Technology Teacher Education) programme we have decided to strategically shift our focus to FET Technology, consisting of Engineering Graphics and Design, Civil Technology, Electrical Technology and Mechanical Technology as school subjects. Although Departments of Education did provide training to practicing teachers in these fields they are still in need for continuous professional teacher development (CPTD).

To address these needs the Sub-department Technology Education has established a Community of Practice (CoP) as a strategy to involve the stakeholders in technology education, namely the university, the provincial department of education, the schools and the private sector.

In collaboration with the GDE we invited 30 representatives of the role-players in Civil technology in Gauteng, to our first CoP meeting on Saturday, 15 March 2014 at TechnEd. We presented a workshop on the developing of assessment rubrics and the setting of quality question papers in civil technology.

**When asked how they experienced the CoP, the attendees responded positively. Some of the comments were:**

"It was extremely nice to be treated and spoken to as a professional. The content was outstanding and insightful. Presenters were really well prepared."

"I have been exposed to very interesting concepts like how the formulation of rubrics is undertaken, the 'behind the scene' setting of question papers, etc. It becomes very important to have this new community of practitioners to look into the shortfalls and make recommendations to improve on what we have."

"I had a good experience. You as teacher think you can set question papers and rubrics but these guidelines help a lot to see where we go wrong and how to improve to benefit the learners."

At the end of the meeting possible topics for future discussions have been identified.







## UJ's Africa Day highlights Ubuntu

Ubuntu. We are people only through other people. We need to unite in spite of our superficial differences.

That was the potent message behind University of Johannesburg's Africa Day celebrations. The event, held on 19 May at the university's Auckland Park and Soweto campuses also emphasised the soul, the rhythm and the heart of our continent. Students and performers took to the stage and physically showed the attentive audience what being African was really about.

"Africa Day is a vital event for us," well-known activist and educator Salim Vally, the main speaker, said. "We were taught that Africa is a dark, scary place. We were never told that we belong to this continent. We're rediscovering this place, day by day. And in South Africa we have discovered that the differences between us have made us even richer."

In 1963, on 25 May, the leaders of 32 African nations formed the OAU (Organisation of African Unity.) After 1994, South Africa joined the OAU. And in 2001, also on 25 May, the organisation's name changed to African Unity.

"This is not just an event, but also a day to honour the richness of our continent, to celebrate our victories and our youth," Vally said. "It's about commitment to peace and justice and about standing together. The brutal kidnapping of the Nigerian women by Boko Haram is a prime example, people all

over are standing together against this."

Educating Africa, Vally admitted, was a challenge. "If a kid comes to a classroom hungry, education doesn't make a difference. You can't ignore the social context. A third of our children have no drinking water, and yet we expect them to do homework. Education isn't about theory. Education is about making us human."

Elizabeth Sibongile Rapakgadi, a multi-award winning special needs teacher, was the next speaker. "You are the ones who need to go out there and change the world, and change Africa," she implored. "You can't expect everything to fall in your lap. This spirit of self-entitlement pervading our country and our continent is bad. We need to set ourselves high standards – let's set that bar very high so that we can build Africa up."

"Our speakers made us feel the importance of Africa Day, and our performers made us feel it," Dr Graham Dampier, lecturer at the university, declared at the close of the celebration.

Organiser of the event David Nkosi proclaimed it a great success.

"During the genocide in Rwanda, an Interahamwe or genociders group tried to divide a group of school kids, by asking them which of them were hutus, and which were tutsis," Vally recounted. "The kids answered, 'We are all Rwandan. We are all African. We stand together.'"

## UJ twin sisters prove that Education remains key to success of future generations

Young UJ graduates are taking the teaching field by storm. Refilwe and Keneilwe Mmokwa are among the youngest South African teachers making a difference in local schools. The 24-year-old twin sisters from Daveyton, on the East Rand of Johannesburg, were among the 8 400 University of Johannesburg (UJ) graduates in this year's first series of graduation ceremonies.

Refilwe, better known as Rello, and Keneilwe who is also known as Keylo, both studied towards the four-year Bachelor of Education (BEd) degree at UJ, and they are now working as educators in Jabulani, Soweto. The young teachers started primary school in Daveyton and later moved to North West province where they completed their primary education at Molemoeng Primary School. A few years later they joined Mabuya Secondary School where they matriculated.

The sisters believe that being teachers was a calling. According to them, their cognitive development was always based on teaching and learning from an early age. "When growing up our passion for teaching and learning developed so much that we decided to take this as a profession. In my view, teaching is a tough but fulfilling profession because teachers are responsible for educating the nation. There is nothing as liberating as being a committed life-long learner and transmitter of knowledge to generations of young future leaders," says Refilwe.

The ambitious Keneilwe says she is a big dreamer and a go-getter. Initially, adapting to UJ student life was difficult for her, but she adapted well a few months later during her first year. "My academic journey at UJ was very

overwhelming. The most challenging thing I experienced was adjusting to the fast university life. UJ is fun, stressful and demanding all at the same time, but I feel we all need that exposure at some point in our lives. It's part of growing up," she says.

To Keneilwe, the more one grows older the wiser they become. Looking back at her academic journey at the University, she feels the whole experience was worth it. "Through four years of difficulty during my studies, not only did I master the profession but I also discovered and understood myself," says Keneilwe.

According to the twins, completing their degrees at UJ took prioritising and compromising. "We were those students who would just enjoy studying at the library. We are disciplined individuals; we both wanted to

complete this course in four years, so we remained focus throughout and supported one another."

Whilst working to achieve their dreams, the twins had financial challenges. "We didn't get bursaries. NSFAS paid for our fees for the first two years and the other two years were paid for by our parents. It was steep for our parents because they had to pay for the two of us. There were times where we travelled to classes with all kinds of public transportation. It wasn't always safe but we persevered. We had to adjust and the support system UJ's Psychological Centre for Academic Development (PyCaD) offers helped us a great deal," says Refilwe.

According to Keneilwe, their profession is important to society because "teaching is the mother of all professions. If what we are doing

everyday gives birth to lawyers, engineers, doctors and future leaders then we are doing something purposeful with our lives. That is how we contribute and benefit to our society. There is nothing as gratifying as transmitting knowledge to another human being," says Keneilwe.

The twins believe that the quality of education at UJ is exceptional because it changed their lives in a positive way.



Keneilwe (far left) and Refilwe (far right) with their parents.

## FACULTY NEWS

### Promotions in the faculty

Prof Nadine Petersen has been promoted to Associate Professor

### New staff member

Ms Hayley van der Haar - Department of Childhood Education

### Assistant lecturers

Ms Daphney Mawila, Mr Francois Naude, Mr Kudakwashe Mamutse.



## FACULTY OF EDUCATION STUDENTS EXCEL AT NATIONAL TEACHERS AWARD CEREMONY

**Two of the UJ Faculty of Education's students were honoured at the National Teaching Awards**

**Josef de Beer, Department of Science and Technology Education**

Mr Andonis (Tony) Antoniou received the first prize in the Excellence in Secondary School Teaching Award. Tony now joins ranks with Mr Francois Naude, a current PhD student, who did his PGCE and MEd in the Faculty of Education. He received the same accolades two years ago. Tony is registered for a PhD in the field of science education in the Faculty. Mr Antoniou's PhD research focuses on professional teacher development within communities of practice.

This passionate Life Sciences teacher enriches the lives of children at Mondeor High School. Apart from his duties as Life Sciences teacher, he is also the Science Head of Department. Tony has been a teacher at Mondeor High for the past 15 years. In his own words: "I love teaching curious young minds, and I am at my happiest in the classroom". He also works hard to ensure that there is a supportive environment at school for his colleagues, in which they feel at home. He clearly knows how to build a nest!

Ms Kira Watson was a 2010 PGCE student of the Faculty, and she won the third prize in the

Excellence in Teaching Science Award. She is an agent of change, who teaches Life Sciences at Glenvista using very creative pedagogies, such as edible mitosis demonstrations by using flapjacks and other food. And her students at Glenvista High definitely enjoy the sweet taste of success! Kira recalls, as one of the highlights in her PGCE year, the UJ student visit to Miami University in Ohio, USA, that was arranged by the Faculty of Education. This provided her the opportunity to also spent time in schools in Cincinnati- experiences that contributed to her professional growth. A quote that means a lot to her, is the following wisdom of Socrates: "The shortest and surest way to live with honour in the world, is to be in reality what we would appear to be; and if we observe, we shall find that all human virtues increase and strengthen themselves by the practice and experience of them."

The Faculty of Education salutes these National Teacher Award winners! Through their inspiring teaching, these educators truly touch the future.



## An education delegation from Nepal visits the Faculty of Education

An education delegation from Nepal visited the Faculty of Education on 8 July. Prof Sarah Gravett, was requested by the South African National Commission for UNESCO to host the delegation in her capacity as Chair of the Education Sector of UNESCO in South Africa.

The UNESCO office in Kathmandu is engaged in a project entitled "Planning effective delivery of education in a future federal state" in collaboration with the Ministry of Education in Nepal. The overall purpose of the study tour to South Africa was to enhance the capacity of the Ministry of Education to plan, design, implement and monitor the restructuring of the education system in a future federal state in Nepal.

Prof Gravett addressed the delegation on teacher education and development in South Africa.



## Establishing a footprint in the community surrounding UJ in Auckland Park and Soweto

The postgraduate Educational Psychology programmes offered at the Soweto Campus focus on community psychology, with a strong service component that directly addresses the needs of children and youth from marginalised and poor communities.

Staff members involved in the community engagement credit bearing process is Dr H Dunbar-Krige, Dr Tumi Diale, Dr Dikeledi Sekhukhune, Dr Elzette Fritz (until July 2013), Mrs Jean Fourie and Mrs Nadia Taggart. The Department also makes use of outside supervisors who work in practice.

In 2013 there were only two community engagement projects registered in the Department, which involved the Educational Psychology Honours students completing a six months' internship in partnerships schools whilst the Master's students in Educational Psychology completed practical hours over a period of two years in the partnership schools. These partnerships will have to be reconsidered as the financial climate of the country is challenging to students and they cannot afford to not work whilst studying. In this regard a meeting with the Head of Support Services in the GDE will be set up to establish whether students may be used in schools and be paid whilst completing an internship. We also have to re-evaluate the sites as not all sites have been providing sufficient experience for the students.

Being placed in school communities exposes the students to the world of children and adolescents and the challenges teachers and parents/care-givers are confronted with on a daily basis. They therefore engage with the interrelationship between emotional well-being, cognitive functioning and behaviour, considering a child's developmental stages and family, school and community context.

The majority of the sites cater for lower income, diverse cultural and linguistic populations – schools such as Piet van Vuuren and Kingsway Primary.

Six sites (Hope, Elandspark, Cedarwood, Sparrow Foundation and Sparrow Combined, Frances Vorwerk) cater for learners with special educational needs. UJ Metropolitan Academy is a Faculty school that caters for learners from disadvantaged backgrounds that show potential in Science and Mathematics. Due to the fact that students work and rely on a steady income, some master's students have arranged with their





schools to complete their practicum hours at their school under the strict supervision of the University. These schools were Eden College, Randburg Hoër, Linden Hoër, Swartkop High, Parktown Primary, Rynfield Primary and Edenglen. Three students completed their practical hours at full service schools – Eldoradopark, and Bosmont Primary. Some students complete their practicum at Leigh Matthew Trauma Centre due to the fact that they were teaching part-time. One student was granted permission to complete her practical hours at PsyCAD on the Aucklandpark campus. One student was involved at Funda Ujubule, the Faculty of Education's teaching school and another involved at the hospital school at Weskoppies Psychiatric Hospital. Through the placement in these diverse school contexts, students were exposed to a wide variety of community needs, which they in turn shared amongst one another during case presentations and supervision sessions.

The training of students was thus community-based, and not institutionally based. The work of the students at these sites culminated in internships at some of the schools and/or further employment.

We encourage students to work from an asset-based approach as they have to find the assets in the community that will support their work within the school context. Examples are to ascertain where a feeding scheme or HIV/AIDS clinics and health clinics was; to identify their local police station and the officers that work with abuse and family violence; churches and other community organisations, such as Read for Africa or Childline or the Teddy Bear Clinic. Each student should also be able to identify a social worker that they can consult with in case of poverty, unemployment and violence.

Within the school system, students work in conjunction with school based support teams and support services in the district offices. These educational psychology students need to work with teachers and parents in order to effectively support learners with diverse barriers. For example, when bullying is identified as a challenge in a primary school, students may organise a systemic intervention to address this issue. In this regard, a bullying intervention can include the development of a bullying policy and contracts, workshops on how to deal with bullying, and social skills training. Another example may be the identification in a secondary school of the need to understand career pathways. Career days and career assessment as well as job shadowing may be organised. In 2013 the new cohort of students, under the supervision of Dr Tumi Diale, completed career assessments for all Grade 8 learners that applied at UJ Metropolitan Academy as well as Grade 11 learners.

Since 2007, working within a community-based and systemic theoretical framework has

challenged the educational psychology group to make a shift from working purely within a medical model to working more systemically. Examples of challenges are lecturers traveling to and from community sites and managing the test library where tests need to be taken out by students and transported to sites. Purchasing of test material to have enough tests available at various sites requires an on-going budget. Keeping track of tests is difficult as tests are often not available for students when required and some tests have been stolen by students. Students cannot afford to buy many psychological tests as there is a monopoly of test distributors, resulting in tests being expensive. Tests and score sheets are a huge part of the budget of the programmes every year.

Obtaining informed consent in disadvantaged communities where parents are not available for consultation is very difficult as parents have low literacy levels, and long work hours. Students experience challenges working in some schools where there is inadequate basic teaching and poor general classroom management which impacts on students' recommendations regarding learning support and classroom interventions. Another challenge is that there are no supervisors on some sites which means that lecturers are on call at all times to deal with crises and ethical dilemmas.

Students have difficulty accessing resources in some sites. They are sometimes not provided with therapy rooms or locked cupboards for record safekeeping. Students thus transport their therapeutic and assessment tools in their cars. We encourage students to use a locked suitcase or toolbox to keep their tools safe. Since students conduct their work in community sites, they are required to video record their sessions with clients, so that these sessions may be discussed in supervision. This poses challenges of obtaining consent and assent from parents and children to be video recorded.

Whilst this might sound like a problem-saturated narrative, we have witnessed the positive aspects of training from this community psychology approach. Deep insights into the multi-dimensional needs of diverse communities is seen in students' work as they are flexible in adapting assessments and interventions according to the systemic needs of these communities. The supervisors involved are constantly challenged with regard to the type of intervention and assessments to be utilised in these diverse contexts. The supervisors therefore have to read and do research constantly to keep updated to support the students effectively. This constant updating enhances their development as clinical supervisors and the relevancy of the work in communities.

## EDUCATION CONVERSTATION TOP ACHIEVER FUNCTION





## TEACHERS UPFRONT



## International Conference on Learning Environment for Excellence in Education (LEEE – 2014)



This conference was hosted by SRM University, Chennai, India and Mother Teresa Women's University, India. Prof Raj Mestry and Prof Devika were invited to this conference as international keynote speakers. Dr Solomon Arulraj David facilitated this cooperation.



Prof Raj Mestry and Dr Solomon Arulraj David gave a one day seminar at Meston College of Education, Chennai, India on Emerging Trends on Educational Research. There were about 150 young scholars on education from Chennai and around participated and benefited in this seminar. Meston College of Education is one of the old colleges of education in India.



Prof Raj Mestry and Dr Solomon Arulraj David gave a one day seminar at St. Xavier's College of Education, Palayamkottai, India. The seminar was on the impact of globalization for education. St. Xavier's College of Education is a leading college in India.



US NATIONAL  
PRINCIPALS  
LEADERSHIP  
INSTITUTE  
EDUCATION  
LEADERSHIP AND  
MANAGEMENT

**Clive Smith**  
Department  
of Education  
Leadership and  
Management

Dr Clive Smith and Dr Lloyd Conley participated in the US National Principals Leadership Institute in New York in July. While the Institute was, understandably, strongly US focused the theme of "What constitutes success in schooling" has universal relevance. Highlights were a debate between proponents and antagonists of the new US common core curriculum and a joint presentation by Andy Hargreaves – whose presence will be the highlight of the ELI/DELM school leadership institute at UJ in October this year – and Pasi Sahlberg from Finland of their research on what are considered to be the most successful school systems internationally. Lloyd, as well as participants from Canada and Denmark, also participated in this presentation. The Institute leadership, that includes Lloyd, are keen to have SA principals participate in the 2015 Institute on Designing schools for the future – thinking out of the box.

## CONVERSATION ANALYSIS RESEARCH GROUP ESTABLISHED

**Gert van der Westhuizen,**  
Department of Educational  
Psychology

The Conversation Analysis Research Group is a growing UJ group coordinated by staff and students from the Department of Educational Psychology. The purpose is to use and study conversation analysis methods in learning interactions in order to promote ideals of social and cognitive justice.

The first formal event took place on 30th July, on the topic: HOW THE PROFESSORS TALK TO STUDENTS AND HOW STUDENTS DON'T TALK BACK. Annatjie Pretorius shared findings from her studies on how mentors create conversational spaces in mentoring, and Dr. Martyn van der Merwe his findings of a CA study on invitational styles of mentoring. The session included a discussion on prevailing practices and the institutional limitations of mentoring conversations.

The call for participation in CARG activities had a positive response with colleagues from other disciplines and Faculties indicating their interest and participation. Activities planned include monthly meetings, workshops on Jefferson notations of transcription, and contributions to the CARG blog <http://blogs.uj.ac.za/carg>.

CARG is looking forward to sessions which include a presentation by Prof Kevin Whitehead from Wits on racial categories in interactions, a session on the study of a Traditional Healer's conversation with an adolescent girl by Ms Moms Metsing and Dr. Dunbar-Krige, one on the role on knowledge in professional conversations, and sessions on conversations for learning between community knowledge holders and children outside of school (Gert van der Westhuizen and Thobani Mancini).

Staff and students are welcome to participate. An email to [gertvdw@uj.ac.za](mailto:gertvdw@uj.ac.za) will get you on CARG mailing list.

**Authors:**  
**Dr Erica Spangenberg**  
(SciTechEd) and **Andrew**  
**Einhorn** (Numeric)

For every 100 Grade one learners entering the South African schooling system, approximately only 48 will continue to Grade 12. Of these 48, only 22 will write the National Senior Certificate mathematics examination. Of the 22 who write this examination, only 10 will pass and of the 10 who pass, only 5 will pass with a mark above 50%. In other words, just five out of every 100 children entering the South African schooling system will leave the system with a meaningful understanding of this important subject.

The consequence of the numbers above is that not sufficient engineers, accountants, scientists, teachers and business people are being produced to make South Africa a growing, thriving economy. More importantly, for the learners who have fallen off the mathematics bandwagon somewhere along the way, career and study opportunities are dramatically reduced.

To address the above challenges the department SciTechEd in the Faculty of Education of the University of Johannesburg has partnered with a non-profit company called Numeric to bring Khan Academy to Soweto. A series of after-school mathematics programmes at 10 schools in Soweto were launched. The programmes target Grade 7 and 8 learners intending to provide learners with a strong mathematical foundation which will equip them with the content, confidence and enthusiasm to embrace the high school mathematics curriculum.

At the core of these programs is a powerful and free online learning platform called Khan Academy ([www.khanacademy.org](http://www.khanacademy.org)). With over 4000 instructional videos, 750 exercise modules, and 10 million unique users every month, Khan Academy is perhaps the largest online learning platform of its kind, and is gaining rapid adoption around the world by some of the best teachers and lecturers in mathematics and science.

A typical Numeric after-school programme runs for one school year. Interested learners at partner schools apply in

## SciTechEd is bringing Khan Academy to Soweto

January, and upon acceptance into the program, attend two 90 minute sessions each week through the course of the school year.

Even though the technology is an important component of Numeric's programmes, we realise that no matter how exciting or well-crafted a piece of technology is, it will never replace the role of the teacher in the classroom. As such, Numeric sources coaches from various Bachelor of Education (B.Ed) programs, the majority of whom come from the UJ BEd mathematics stream in SciTechEd. The role of these coaches is to motivate learners, encourage them when they are stuck, support them when they need help, and – perhaps most importantly – to praise them when they do well.

With over 160 applicants for just 20 coaching positions, these coaching positions are not only highly prized because they are remunerated, but because they afford the B.Ed students applying with a valuable opportunity to gain classroom experience and to develop pedagogical content knowledge in mathematics. Successful applicants attend an intensive two-week training programme in early December in preparation for their year-long coaching commitment. Thereafter they attend bi-monthly coach meetings where they share experiences, know-how and best practice.

SciTechEd and numeric are currently into their first year of running programmes in Soweto. In spite of not having Khan Academy available due to the scarcity of computer lab infrastructure and connectivity in Soweto, the coaches have done an excellent job with a paper-and-pencil equivalent. Attendance rates are unusually high (over 90%), the drop-out rates unusually low (<10%), and progress on periodically administered term tests is good.

Across the 10 partner schools, there are just over 400 Grade 7s and 8s who attend these programmes and who make them the vibrant and enriching learning environments as aspiring towards. Yet while the focus is on strengthening the learners' mathematics abilities, SciTechEd and Numeric are also acutely aware of the value of these experiences for the teachers-in-training who coach the programmes. This is perhaps one of the least appreciated facets of the Numeric programmes, but one which SciTechEd and Numeric are extremely excited about. To paraphrase something Lee Iacocca (1984) once said: "In any rational society, the best of us would be teachers, and the rest of us would make do with something else." Numeric and SciTechEd are glad to be using this initiative to enrich the development of these important young members of society.

FACULTY OF EDUCATION  
**SCITECHED**  
DEPARTMENT OF SCIENCE AND TECHNOLOGY EDUCATION



The coaching team



Couch training