

SUNCEP

ANNUAL REPORT



SUNSEP

JAARVERSLAG



UNIVERSITEIT
STELLENBOSCH
UNIVERSITY



SUNSEP • SUNCEP

**SENTRUM VIR PEDAGOGIE / CENTRE FOR PEDAGOGY
UNIVERSITEIT • STELLENBOSCH • UNIVERSITY**

CONTACT US AT:

Centre for Pedagogy (SUNCEP)
Private Bag XI
7602 Matieland
South Africa

Tel: +27 +21 808 3483 Fax: +27 +21 808 3000
www.suncep.sun.ac.za

An electronic version of this Annual Report
is available on the website

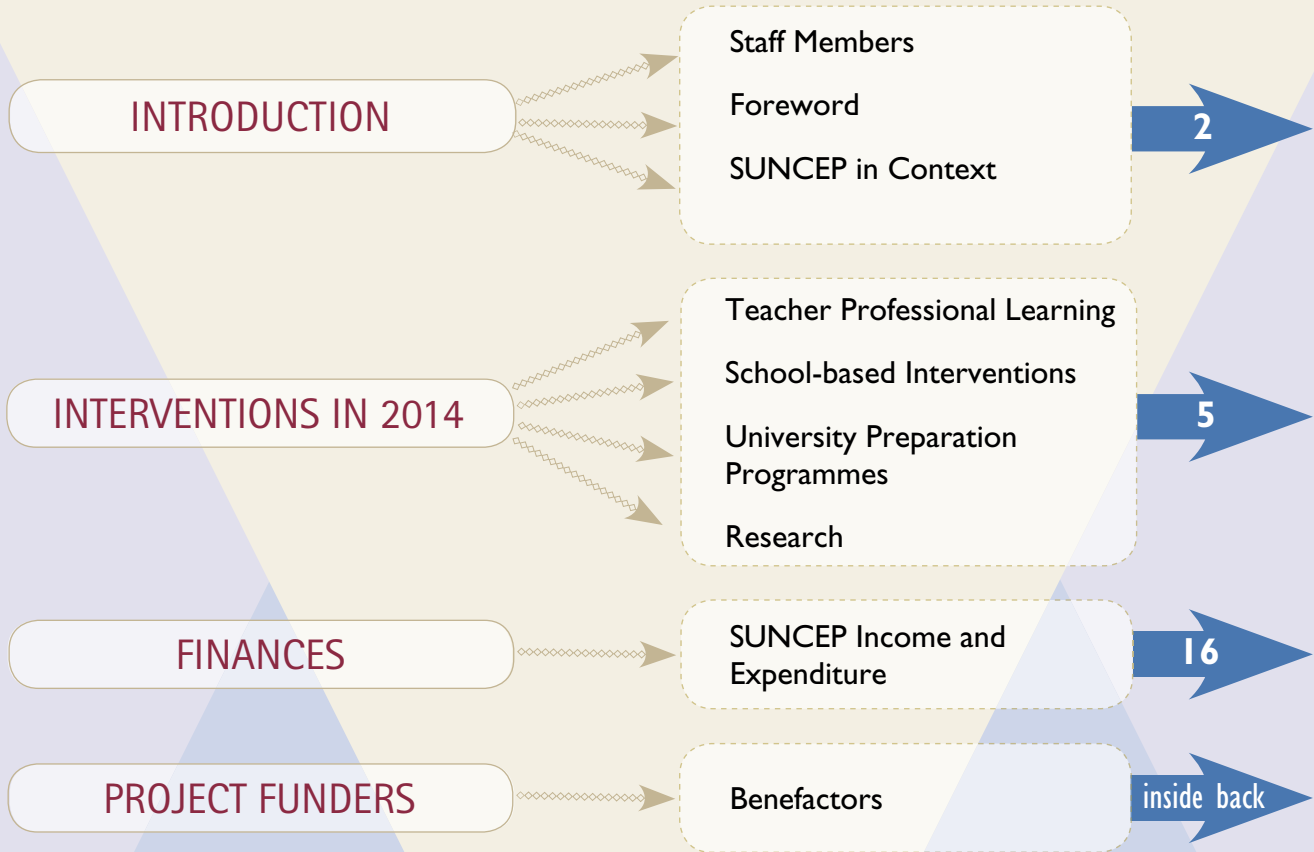
KONTAK ONS BY:

Sentrum vir Pedagogie (SUNSEP)
Privaatsak XI
7602 Matieland
Suid-Afrika

Tel.: +27 +21 808 3483 Faks: +27 +21 808 3000
www.suncep.sun.ac.za

'n Elektroniese weergawe van hierdie Jaarverslag
is op die webblad beskikbaar

CONTENTS



Redakteur / Editor: Anneke Müller
Taalversorging / Language editing: Heloïse Davis
Ontwerp / Design: Heloïse Davis
Drukwerk / Printing: rsamprinters@gmail.com



SUNCEP and its management team



*Trevor van Louw
Director*



*Mdu Ndlovu
Deputy Director*



*Nokwanda Siyengo
Component
Manager: UPP*



*Andrew Fair
Component
Manager: SBI*



*Ramesh Jeram
Component
Manager: TPL*

VOORWOORD

Dit is met trots – en ’n hernieude besef van die kompleksiteit van die onderwys – dat SUNSEP terugkyk op sy werksaamhede van 2014.

Personeellede van elk van SUNSEP se vier komponente (Onderwyser Professionele Leer, Skoolgebaseerde Intervensies, Universiteitsvoorbereidingsprogramme en Navorsing) het in 2014 opnuut getoon dat positiewe verandering in die onderwys kwalik sonder die inisiatief, toewyding en geesdrif – wat hulle werk kenmerk – teweeggebring kan word. Dié komponente word gerugsteun deur hoogs doeltreffende administratiewe en finansiële personeel.

Die Onderwyser Professionele Leer-komponent het in 2014 voortgebou op die werksaamhede waarmee sedert die stigting van SUNSEP in 2013 begin is, en het op minstens twee gebiede baanbrekerswerk verrig. Die ontwikkeling van SUNSEP se eerste vol kwalifikasies (Gevorderde Onderwysdiplomas in Wiskunde, Natuurwetenskappe en Fisiese Wetenskappe) is in 2014 voltooi en deur die Raad op Hoër Onderwys goedgekeur. ’n Tweede inisiatief, wat spesiale vermelding verdien, is ’n e-leer inisiatief wat bovermelde nuwe kwalifikasies, veral vir onderwysers in landelike gebiede, veel meer toeganklik sal maak.

Leeders lê vir SUNSEP baie na aan die hart. Die sukses wat behaal is met die skep van ’n kanaal in 2013 van die laerskool tot in hoër onderwys, het in 2014 van krag tot krag gegaan. Sentra vir aanbieding van die onderskeie programme is reeds in verskillende dorpe in die Wes-Kaap gevestig en uitbreiding na Noord-Kaapland word indringend ondersoek. Die betrokkenheid van ouers is veral vir SUNSEP-fasiliteerders ’n riem onder die hart en ’n aanduiding van wat vermag kan word wanneer hulle, amptenare en diensverskaffers ware vennootskappe, gerig op onderwysverbetering, sluit.

SUNSEP se Universiteitsvoorbereidingsprogramme (Hope@Maties en SciMathUS) is reeds wyd bekend. Meer as 300 studente wat in 2014 by SciMathUS en Hope@Maties onderrig ontvang het, het in 2015 universiteitstoelating gekry.

Die hoë premie wat binne SUNSEP op navorsing geplaas word, word duidelik weerspieël in verskeie navorsingsuitsette, konferensie-optredes, aflewering van M- en D-studente, sowel as in die tempo waarteen SUNSEP-personeel hulle kwalifikasies die afgelope paar jaar verbeter het.

Aan ons befondsers en vennote, by die US en in die breër onderwysgemeenskap, ons innige dank. Sonder u volgehoue ondersteuning en kritiese stem sou die werk van SUNSEP heelwat armer wees.

Ons gaan 2015 tegemoet met groot opgewondenheid en dankbaarheid, asook ’n diepe besef van die enorme omvang van onderwysontwikkelingswerk in ons land...

– Trevor van Louw, Direkteur: SUNSEP

FOREWORD

SUNCEP reflects with pride, as well as with a renewed awareness of the complexity of education, on its activities during 2014.

The output of staff members of each of SUNCEP’s four components (Teacher Professional Learning, School-based Interventions, University Preparation Programmes and Research) in 2014 showed again that positive change in education is hardly possible without initiative, dedication and enthusiasm – all of which characterise their work. These components are supported by highly qualified administrative and financial staff.

In 2014 the Teacher Professional Learning component built on the activities launched at the establishment of SUNCEP in 2013 and it has produced pioneering work in at least two fields. The development of SUNCEP’s first full qualifications (Advanced Diploma in Education in Mathematics, as well as in the Natural and Physical Sciences) was completed in 2014 and approved by the Council for Higher Education. The second field is an e-learning initiative that will make these qualifications more accessible, especially for teachers in far reaching rural areas.

SUNCEP takes the future of the learners themselves very seriously. The success in creating a so-called ‘pipeline’ from the primary school to higher education, instituted in 2013, has grown further in 2014. Centres for presenting the respective programmes have already been established in different towns in the Western Cape and expansion to the Northern Cape is being investigated as a matter of urgency. The involvement of parents is especially heartening for SUNCEP facilitators and is an indication of what can be achieved when they, the officials and the service providers conclude genuine partnerships geared towards the improvement of education.

SUNCEP’s University Preparation Programmes (Hope@Maties and SciMathUS) are already widely known. More than 300 students who received tuition in 2014 from SciMathUS and Hope@Maties have gained university admission in 2015.

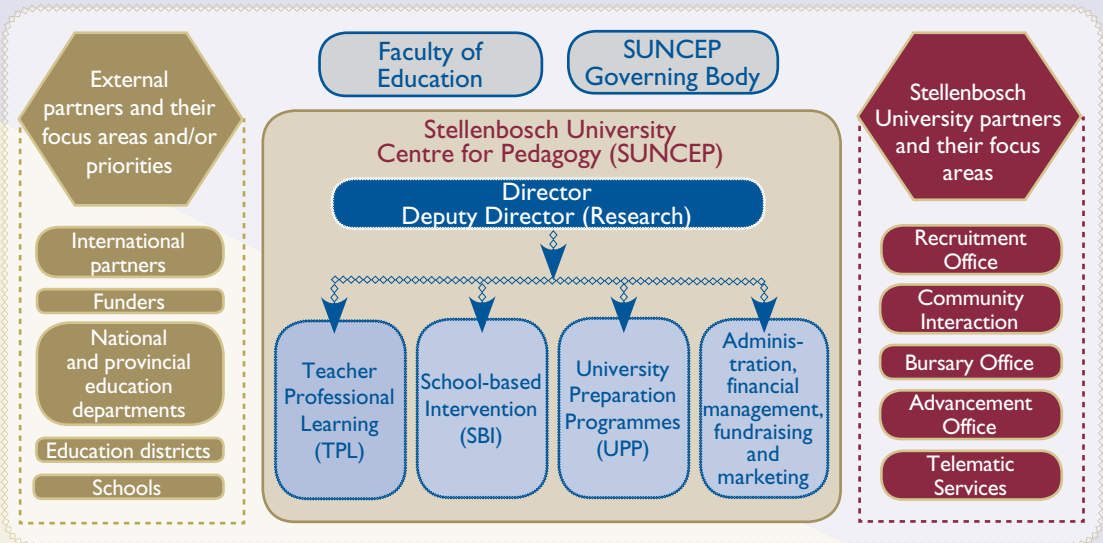
The high premium placed on research within SUNCEP itself is clearly reflected in the various research outputs, conference presentations, finalisation of M and D theses, as well as in the tempo at which SUNCEP staff have improved their own qualifications over the past few years.

We express our heartfelt thanks to our funders and partners, both at SU and in the broader education community. Without your sustained support and critical voice the work of SUNCEP would have been considerably curtailed.

We face 2015 with great excitement and gratitude, as well as a deep awareness of the enormous scope of the task of developing education in our country...

– Trevor van Louw, Director: SUNCEP

SUNCEP IN CONTEXT



FULL TIME STAFF MEMBERS

Mr Clifton Ayford
Ms Elsje Beyers
Ms Marietjie Buys
Ms Tertia du Plessis

Ms Eloise du Preez
Mr Andrew Fair
Ms Merle Festus
Ms Pauline Hanekom
Ms Erika Hoffman
Mr Lynthon Jacobs
Mr Ramesh Jeram
Ms Eva Kayser
Ms Nontyatyambo Kulati
Mrs Elza Lourens
Dr Sharon Malan
Ms Anneke Müller
Dr Mdu Ndlovu
Mr Cerenus Pfeiffer
Ms Christa Philander
Ms Benurita Philips
Ms Adele Pool
Ms Nokwanda Siyengo
Mr Cosmas Tambara
Ms Danelda van Graan
Dr Trevor van Louw

Facilitator: Physical Sciences, SciMathUS (Worcester)
Facilitator: Computer Literacy, SciMathUS
Financial Manager
Facilitator: Computer Literacy and Communication and Life Skills, SciMathUS (Worcester)
Facilitator: Mathematics: SciMathUS (Worcester)
Component Manager: SBI
Assistant
Facilitator: E-Learning
Facilitator: Life and Natural Sciences
Project Manager: SUNCEP
Component Manager: TPL
Assistant
Administrative Officer: SciMathUS
Facilitator: Physical Sciences, SciMathUS
Facilitator: Communication and Life Skills, SciMathUS
Marketing and Fundraising
Deputy Director: SUNCEP
Facilitator: Mathematics: SciMathUS
Project Co-ordinator: Olifants River Project in Vredendal
Administrative Officer: SUNCEP
Administrative Officer: SciMathUS
Component Manager: UPP
Facilitator: Mathematics
Facilitator: Physical Sciences, SciMathUS
Director: SUNCEP

TEACHER PROFESSIONAL LEARNING (TPL)

In this component SU, through SUNCEP, offered accredited short courses and full professional qualifications (Advanced Certificate in Education (ACE)).

The mode of delivery was a blended one, using the practice-based approach to teacher professional learning.

Teachers attended contact sessions.

Experienced mentors supported teachers, either in small group cluster sessions, one-to-one or via E-mentoring, utilising the SU's telematics platform, Whatsapp, Google Hangouts or Facebook.

Communities of learning were sustained via Whatsapp where teachers and facilitators continued to discuss issues and supported one another.

A Moodle website was used as a pilot for Natural Sciences to further facilitate interaction. Content was available and teachers submitted an assignment on this website.

ACE in Leadership and Management

The ACE in Leadership and Management was offered to education managers, i.e. district officials, school principals, deputy principals and HODs to enhance their leadership and management capacities to ensure quality teaching and learning.

Project	Province	District	Number of participants	Certification
ACE Leadership and Management YEAR 2 in 2014	Western Cape	3 districts	79	73 completed qualification in 2014
ACE Leadership and Management YEAR 1 in 2014	Northern Cape	2 districts	76	To complete qualification in 2015
ACE Leadership and Management YEAR 1 in 2014	Western Cape	3 districts	41	To complete qualification in 2015
TOTAL			196	

All courses were offered in collaboration with the provincial departments of education in partnership with the ETDP SETA.

Two school principals who completed this ACE course at Stellenbosch University were honoured for excellence in primary and high school leadership at the 15th annual provincial teaching awards in 2014. Congratulations to:

Mr Simon Speelman, principal of LR Schmidt Primary School in Genadendal (completed the ACE in 2014).

Mr Dennis Karelse, principal of Albertinia High School (completed the ACE in 2012).

Accredited Short Courses

To enable teachers to continue with their professional development, and in the absence of subject specific ACE courses, SUNCEP offered accredited short courses to equip teachers with subject knowledge and pedagogical skills to effectively facilitate the learning of selected problematic/challenging topics in the school curriculum.

Leadership and Management short course, consisting of two modules: Mentoring and Curriculum management

Funder/ Partner	District in the Western Cape	Number of participants	Number of participants awarded certificates
Anglo American Chairman's Fund and WCED	Overberg	45	45

Mathematics short courses

Number of participants						
Funder/ Partner	District in the Western Cape	Senior Phase (teachers)	FET Phase (teachers)	Mathematics (FET college lecturers)	Mathematical literacy (FET college lecturers)	Certificates
USA Department of Health and Human Services' Health Research and Services Administration (HRSA) in partnership with the SU Faculty of Medicine and Health Sciences and the WCED	West Coast, Winelands and Overberg	22	20			36
ETDP SETA and the WCED	All 7	30				25
ETDP SETA and the WCED	Boland, South Cape & West Coast Colleges			23	31	51
Mrs PM Groves and the WCED	Eden Karoo		27			22
TOTAL		52	47	23	31	134

Natural and Physical Sciences short courses

Funder/ Partner	Districts in the Western Cape	Number of participants in Natural Sciences course	Number of participants for Physical Sciences course	Number of participants awarded certificates
USA Department of Health and Human Services' Health Research and Services Administration (HRSA) in partnership with the SU Faculty of Medicine and Health Sciences and the WCED	West Coast, Winelands and Overberg	35	15	41
ETDP SETA and the WCED	All 7	61		53
TOTAL		96	15	94

TPL (Teacher Professional Learning) for Mathematics and Natural Sciences Teachers was offered in two ways in the Olifants River Valley (West Coast District):

Workshops in cluster format, focusing on specific theory and experiments to help teachers to present the same work to their learners.

Teacher support at schools for a selected group of teachers, who voluntarily requested the need for assistance.



SCHOOL-BASED INTERVENTIONS (SBI)

School-based Interventions (SBI) at SUNCEP are all projects that capacitate learners from underserved communities to enable them to access higher education.

Additional Tuition Programme

In 2014 more than 250 talented Grade 7-11 learners were identified by the WCED and offered extra tuition in Mathematics and Natural or Physical Sciences by excellent, high-calibre tutors with a proven track record.

Afternoon schools, Saturday schools and holiday schools were offered in Stellenbosch, Malmesbury, Worcester, Genadendal, Robertson, Mitchell's Plain and Caledon.

Before learners were accepted, parents were engaged by explaining the intervention to them and the possible opportunities it would open up for their children. Close to 100% attendance at initial and follow-up parent evenings confirmed the buy-in from this critical group involved in the development of the learner as a whole.

Learners who qualify with high enough marks at the end of Grade 11 could gain entrance into the Hope@Maties programme (see UPP for more details).

Eskom Expo for Young Scientists in the Stellenbosch Region

Two workshops to guide and empower more than 200 learners and their teachers from the rural districts of the Western Cape (Winelands, Overberg, Eden and Karoo) in the application of the scientific method were offered:

Learners were assisted to conduct curriculum-oriented investigations and encouraged to participate in the 15th Stellenbosch regional Expo for Young Scientists competition on 21 and 22 August 2014, jointly hosted by SUNCEP and the Faculty of Science at SU.

A total of 208 learners from 17 schools exhibited 154 projects at this competition.

Twenty-five research projects by 31 participants from 13 schools were selected as regional representatives for the International Science Fair (ISF) held from 7 to 10 October 2014 at the Birchwood centre in Boksburg. Of these, 25 learners were awarded certificates (4 gold, 11 silver, 9 bronze and 1 for highly commended work) and 6 special prizes. The most prestigious special award, the Derick Gray Memorial Award, was granted to Emlyn Allwright from Bloemhof Girls' High School in Stellenbosch. Winning this award entailed visiting Sweden, presenting her research project, entitled, "The Power of powder: non-destructive poultry hygiene using antimicrobial powder," to the Nobel Prize winners and attending the Nobel Prize winners' ceremony in Stockholm in December 2014.

One more learner was selected for an interview for possible international participation.

Stellenbosch University offered bursaries to the value of R30 000 each to the 20 winners in each category in 2014, should they enroll at SU.

A number of interventions were offered in the Olifants River Valley (West Coast District).
These initiatives also involved the teachers.

Science Kidz created science awareness in the daily lives of 830 Grade 4-7 learners from 7 schools, encouraging them to improve their performance and to consider careers in the Sciences. This initiative included the Science Road Show, presented annually in collaboration with iThemba Labs.

Brave Maths Mouse used specially developed modules to address reading, interpretation, critical thinking and problem-solving needs of more than 400 Grade 7-9 Mathematics learners and five teachers.

2bSMART offered 320 Grade 9 learners the opportunity to enhance their performance in Mathematics after school hours through computer-based remedial tutoring.

Eskom Expo for Young Scientists

109 learners from 14 schools in Malmesbury, Vredenburg, Piketberg, Citrusdal, Clanwilliam, Vredendal and their surroundings participated in the regional competition.

35 judges (teachers and professionals from the region) assessed the 82 projects.

Ten research projects, prepared by 13 learners from 7 schools, were selected for presentation at the Eskom Expo International Science Fair in Boksburg.

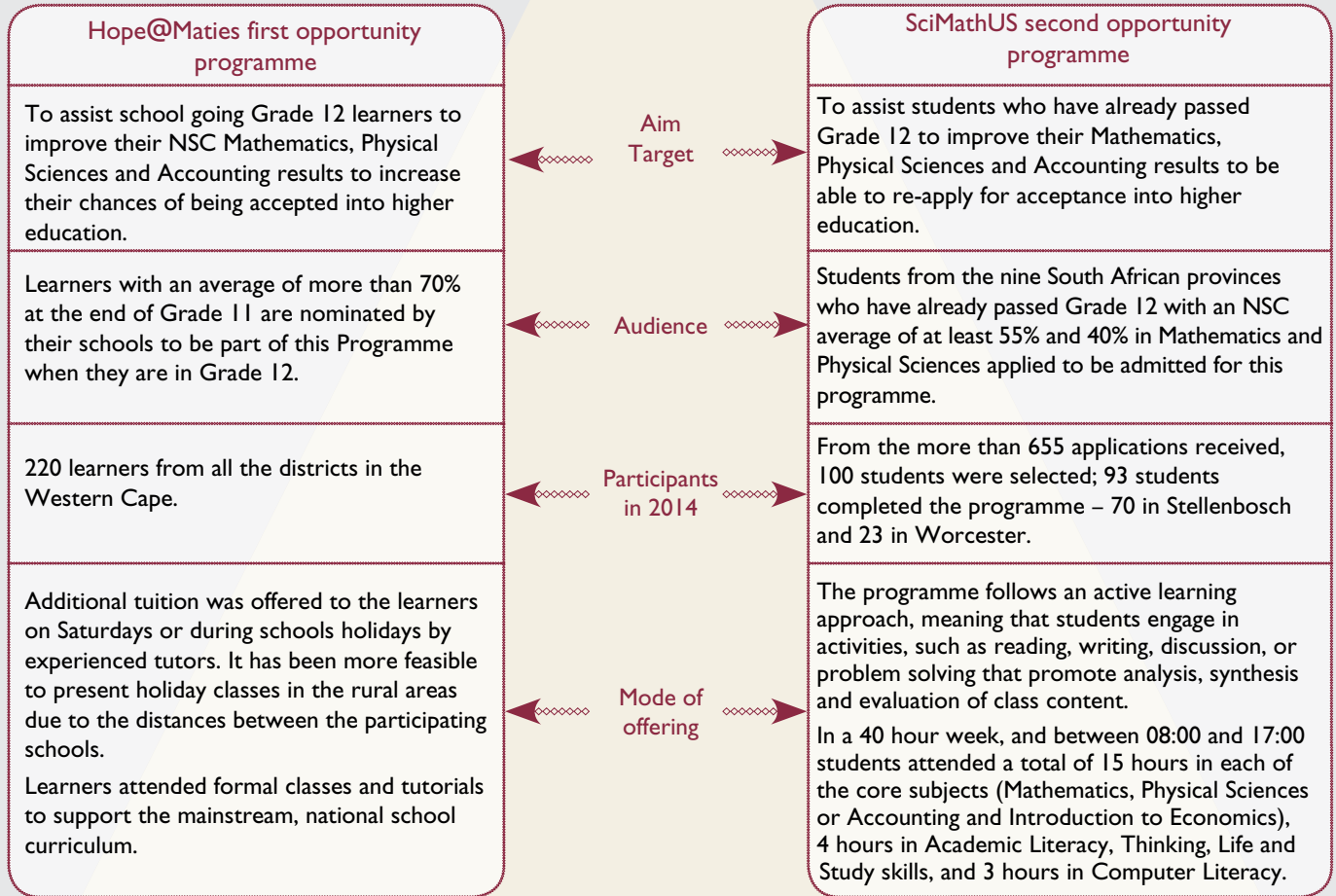
These learners were awarded 2 silver and 4 bronze medals and 1 certificate for highly commended work.

One participant was selected for international participation at the International Science Forum 2015 in London.



UNIVERSITY PREPARATION PROGRAMMES (UPP)

To improve the access of students to higher education, Stellenbosch University – through SUNCEP – offers two university preparation programmes. Hope@Maties is a first opportunity programme and SciMathUS a second opportunity programme.



Participating learners and students were offered

- Career guidance in collaboration with the Centre for Prospective Students of Stellenbosch University – to make informed career choices;
- Assistance with tertiary education applications;
- Psycho-social support;
- Some SciMathUS students received accommodation and/or stipends;
- Parents and families are encouraged to support these learners and students.

Hope@Maties

- 4 learners on the Western Cape Education Department's merit list for 2014
- A pass rate of 100% (this is expected, as they are top performers)
- 61 of 220 (28%) learners with A aggregate
- 58 of 220 (26%) learners with A's in Mathematics
- 39 of 180 (22%) A's in Physical Sciences
- 53 of 106 (50%) A's in Accounting
- 160 of 220 learners (73%) enrolled in degree programmes at SU in 2015
- 160 learners who maintained an aggregate of more than 70% in Grade 12 were awarded SU recruitment bursaries
- 4 enrolled in SciMathUS in 2015
- There is a strong likelihood that the remainder of the cohort enrolled at other institutions.

Results in
2014

SciMathUS

- On average the students improved their Mathematics and Physical Sciences marks by 15 percentage points
- 11 A's in Mathematics with the top performer scoring 87%
- 6 A's in Physical Sciences with the top performer scoring 95%
- 70% of the students obtained more than 60% in Mathematics which is the minimum requirement for admittance to most degree programmes
- 74 of the 93 students (80%) enrolled at Stellenbosch University in 2015
- 50 students received SU recruitment bursaries
- There is a strong likelihood that the remainder of the cohort enrolled at other institutions.



Gerald Maarman is the first former SciMathUS student to receive a PhD.

After he completed SciMathUS successfully at the end of 2003, he enrolled at Stellenbosch University and obtained BSc, BSc Honnours and an MSc degree in medical biology.

Gerald then enrolled in a PhD programme at the University of Cape Town where he investigated melatonin as a novel therapy against pulmonary hypertension at the Hatter Institute for Cardiovascular Research in Africa. Gerald received his PhD at the end of 2014.

We salute you, Gerald!

Left: Elza Lourens, Physical Sciences facilitator at SciMathUS with Gerald at his graduation ceremony in December 2014.

RESEARCH

ARTICLES PUBLISHED OR SUBMITTED

(#Accredited / *Submitted)

#Malan SB, Ndlovu M & Engelbrecht, P. 2014. Introducing problem-based learning (PBL) into a Foundation Programme to develop self-directed learning skills. *South African Journal of Education*, 34 (1): 1-16. ISSN: 0256-0100. Listed on ProQuest's IBSS & ISI's SSCI. Available from http://reference.sabinet.co.za/webx/access/electronic_journals/educat/educat_v34_n1_a3.pdf

#Ndlovu M. 2014. The effectiveness of a teacher professional learning programme: The perceptions and performance of Mathematics teachers. *Pythagoras*, 35(2): 1-10. ISSN: 1012-2346, Indexed in Elsevier Scopus & ProQuest's IBSS. Available from: <http://dx.doi.org/10.4102/pythagoras.v35i2.237>

#Gachago D, Strydom S, Hanekom PW, Simons S, and Walters S. (in print) Crossing boundaries: lecturers'

perspectives on the use of WhatsApp to support teaching and learning in Higher Education. *Progressio, South African Journal for Open and Distance Learning Practice*, ISSN 02568853.

****Ndlovu M.** Lessons from learners' evaluations of their Science Fair Project experience: A case study of a regional Science Fair in South Africa. **Submitted** to the *International Journal of Educational Sciences*. ISSN 0975-1122. Listed on IBSS.

****Lourens E, Fourie-Malherbe M & Ndlovu M.** Using Bronfenbrenner's ecological model to understand the experiences of educationally disadvantaged students. **Submitted** to *Perspectives in Education*. Listed on IBSS & ISI's SSCI.

ATTENDANCE OF CONFERENCES & PUBLICATION OF CONFERENCE PROCEEDINGS INDICATED WHERE APPLICABLE

Jeram R & Tambara C. An exploration of the impact of the Stellenbosch University Centre for Pedagogy's integrated teacher professional development model on the various teacher professional outcomes. *22nd Annual Conference of the Southern African Association of Research in Mathematics, Science and Technology Education (SAARMSTE)*, 13-16 January 2014, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

Ndlovu M. Understanding factors supporting student participation in the Expo for Young Scientists. *22nd Annual Conference of the Southern African Association of Research in Mathematics, Science and Technology Education (SAARMSTE)*, 13-16 January 2014, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa. Paper published in conference proceedings: *Short Papers, Bk 2* (pp. 106-13). Port Elizabeth: South Africa.

Pfeiffer C. Workshop on Using Geogebra in teaching Mathematics. *Congress of the Association of Mathematics Education in South Africa (AMESA Mini-conference)*, 22 February 2014, George, RSA.

Ndlovu M. Definitional conflicts between Euclidean geometry and Dynamic Geometry Environments: Varignon Theorem as an example. *8th International Technology, Education and Development Conference (INTED2014)*, 10-12 March, 2014, Valencia, Spain. Indexed in the Institute for Scientific Information (ISI) Conference Proceedings Citation Index. Available from: <http://library.iated.org/view/NDLOVU2014DEF>

Ndlovu M. Pre-service teachers' understanding of geometrical definitions and class inclusion: An analysis using the Van Hiele model. *8th International Technology, Education and*

Development Conference (INTED2014), 10-12 March, 2014. Valencia, Spain. Indexed in the ISI Conference Proceedings Citation Index. Available from: <http://library.iated.org/view/NDLOVU2014PRE>

Ndlovu M. Modelling the derivative in Sketchpad: an instrumental and TPACK approach. *1st International Congress and Exhibition on Current Trends on Science and Technology Education (SCITEED 2014)*, 24-27 April, 2014, Fethiye-Muğla, Turkey. Available for purchase from: <http://www.proceedings.com/22506.html> – indexed in the ISI Conference Proceedings Citation Index.

Ndlovu M & Mostert I. The potential of MOODLE in a blended-learning management system: A case study of an in-service programme for secondary Mathematics teachers. *6th International Conference on Education and New Learning Technologies EDULEARN2014 conference*, 7-9 July 2014, Barcelona, Spain. Available from: <http://library.iated.org/view/NDLOVU2014POT> – indexed in the ISI Conference Proceedings Citation Index.

Ndlovu M & Hanekom PW. Overcoming the limited interactivity of telematic sessions: A case study of an in-service programme for secondary Mathematics and Science teachers. *6th International Conference on Education and New Learning Technologies (EDULEARN2014)*, 7-9 July 2014, Barcelona, Spain. Virtual presentation. Available from: <http://library.iated.org/view/NDLOVU2014OVE> – indexed in the ISI Conference Proceedings Citation Index.

Tambara C & Jeram R. An exploration of the impact of SUNCEP's integrated teacher professional development model on classroom practice – *20th Congress of the Association of Mathematics Education in South Africa (AMESA)*, 7-11 July 2014, Kimberly, RSA.

Ndlovu M. Theoretical-computational conflicts between Euclidean and dynamic geometry environments: example of Varignon Theorem. *20th Congress of the Association of Mathematics Education in South Africa (AMESA)*, 7-11 July 2014, Kimberly, RSA.

Pfeiffer C. Workshop on Changing the way we teach function transformations with GeoGebra, *20th Congress of the Association of Mathematics Education in South Africa (AMESA)*, 7-11 July 2014, Kimberly, RSA.

Lourens E, Fourie-Malherbe M & Ndlovu M.

Understanding the experiences of educationally disadvantaged students in higher education, *Proceedings of EAIR 36th Annual Forum 2014*, 27-30 August 2014, University of Duisburg-Essen, Essen, Germany. Available from: <http://eairaww.websites.xs4all.nl/forum/essen/PDF/1383.pdf>

Lourens E, Fourie-Malherbe M & Ndlovu M. Understanding the experiences of educationally disadvantaged students at Stellenbosch University, *7th Annual Conference on the Scholarship of Teaching and Learning*, 28-29 October 2014, Stellenbosch, RSA.

Ndlovu M. Tutors' and principals' perceptions of the effectiveness of a qualification-based in-service programme for Mathematics and Science teachers. *ICERI2014 Proceedings: 7th International Conference of Education, Research and Innovation (ICERI2014)*, 17-19 November, 2014, Seville, Spain. Indexed in the ISI Conference Proceedings Citation Index. Available from: <http://library.iated.org/view/NDLOVU2014TUT>

Ndlovu M. Investigating some background factors affecting student participation in Science fairs: a case study of a regional expo for young scientists. *ICERI2014 Proceedings: 7th International Conference of Education, Research and Innovation*, 17-19 November 2014, Seville, Spain. Indexed in the ISI Conference Proceedings Citation Index. Available from: <http://library.iated.org/view/NDLOVU2014INV>

Gachago D, Strydom S, Hanekom PW, Simons S, and Walters S. Boundary crossing: Lecturers' perspectives on the use of WhatsApp to support teaching and learning in Higher Education. Digital Presentation at Conference for Higher Education Teaching and Learning in South Africa (HELTASA), Bloemfontein, 19-21 November. Available from <http://www.slideshare.net/dgachago/whats-app-as-boundary-object-v02>

Van Louw T & Jeram R. Initial learnings of mentoring on a Practice Based Continuous Teacher Professional Learning Programme *Asia Pacific Conference on Educational Management and Leadership (APCEMaL2014)*, 24-26 November 2014, Johor Bahru, Malaysia. Indexed in conference proceedings: ISBN 978-983-2063-93-3

Ndlovu M & Hanekom PW. Implementing Designs for Blended Learning: Early experiences with social media support for accredited in-service short courses for Mathematics and Science teachers. Keynote presentation at the *Blended Learning in Higher Education Conference, 20-21 November 2014, Sandton, Johannesburg, RSA.*

Ndlovu M & Mostert I. Implementing Designs for Blended Learning: Early experiences with Moodle in an in-service Advanced Certificate in Education (ACE) programme for Mathematics teachers. Keynote presentation at the *Blended Learning in Higher Education Conference, 20-21 November 2014, Sandton, Johannesburg, RSA.*

AWARDS

Lourens E: Received Stellenbosch University's medal for the best Master's thesis in the Faculty of Education awarded in 2013: *Understanding the experiences of educationally disadvantaged students at Stellenbosch University.*

SUNCEP RESEARCH WORK COMPLETED OR IN PROGRESS IN 2014

Recently completed research projects:

Fair A. March 2015 MEd full thesis research project based on the SMILES project offered by IMSTUS between 2009 and 2012: *An evaluation of a model of teacher professional development in a Science and Mathematics intervention programme for teachers and learners.*

Tambara C. March 2015. PhD project based on the SMILES project offered by IMSTUS between 2009 and 2012: *Unpacking teachers' pedagogical content knowledge and skills to develop learners' problem solving skills in Mathematics in the Foundation Phase.*

Ndlovu M & Hanekom, PW. *Overcoming the limited interactivity of telematic sessions: a case study of an in-service programme for secondary Mathematics and Science teachers.*

Ndlovu M & Mostert I. ACE in Mathematics research project. *The potential of MOODLE in a blended-learning management system: a case study of an in-service programme for secondary Mathematics teachers.*

Tambara C & Jeram R. AHEC research project. *An exploration of the impact of SUNCEP's integrated teacher professional development model on classroom practice.*

Ongoing research projects

Ndlovu M. FINLO/FIRLT-funded SciMathUS research project: *Understanding the Problem-based Learning (PBL) approach used in a bridging programme at a university in South Africa.*

Ndlovu M. *The effect of in-service programmes for Mathematics and Science teachers in selected schools of the Western Cape Province of South Africa.*

Siyengo N. MEd research project: *The experiences of first generation students in higher education institutions.*

Pfeiffer C. PhD project: *The role of Geogebra in creating a learning environment in which students can construct mathematical knowledge.*

Hanekom PW. PhD project: *Enhancing the effectiveness of in-service Natural Sciences teacher professional development by means of WhatsApp® support.*

Philander C. PhD project: *The effect of a cluster teacher professional development programme in addressing the under-utilization of practical work in the teaching of Natural Sciences in the Vredendal district of the Western Cape Province.*

Jeram R. PhD project: *The effect of a practice based approach to mentoring within teacher professional learning initiatives.*

Lourens E. PhD project: *From graduate to employee: exploring the journeys of first-time entrants into the labour market.*

Van Graan, D. MPhil project: *Adopting inquiry based education in the professional development of Science teachers.*

Malan SB & Lourens E. Research project on the assessment of SciMathUS students.

School-based Interventions (SBI) component research project title: *A comparative analysis of practice-based learning in two case studies involving teachers and learners.*

Teacher Professional Learning (TPL) component research project title: *Reflections on in-service teachers' reflection practices in practice-based teacher professional learning.*

University Preparation Programmes (UPP) component research project title: *A comparison of factors influencing residential and non-residential SciMathUS students' academic performance at two campuses..*

POSTGRADUATE RESEARCH SUPERVISION ACTIVITY

Van Louw T: Supervising one Master's Student in the Department of Educational Policy Studies.

Ndlovu M: Supervising 2 Master's students and Promoter of 4 PhD students in the Department of Curriculum Studies.

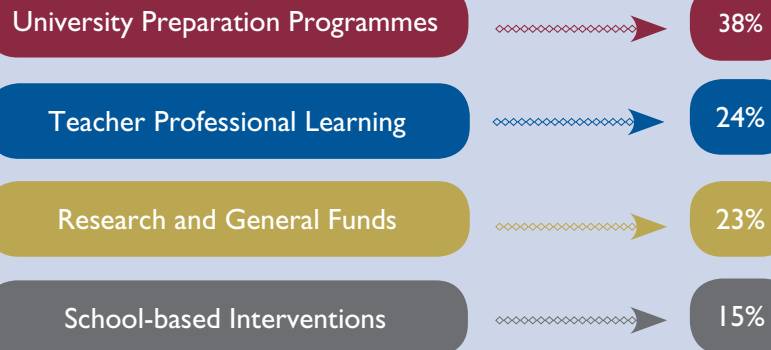
Malan SB. Co-promoter of one PhD student in the Department of Curriculum Studies.

- These staff members are also involved in internal and external examination activities as a service to the communities of practice that they serve.

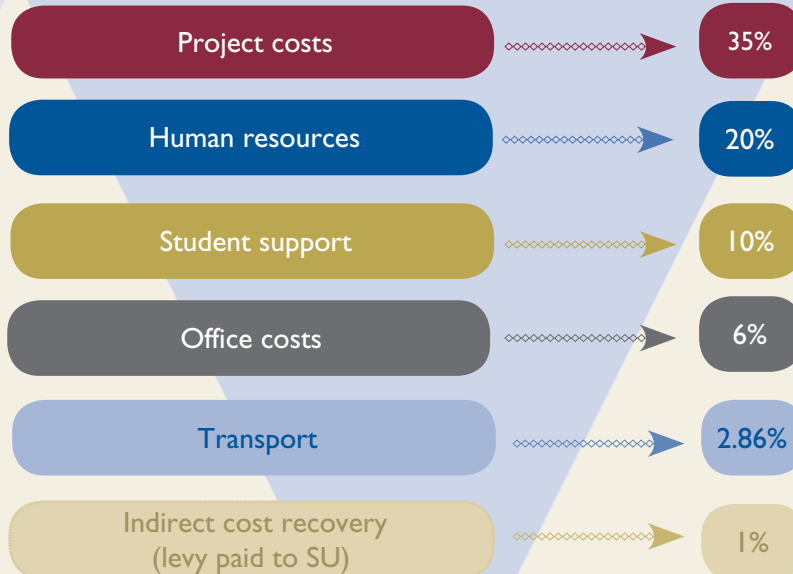


FINANCES

SUNCEP AVAILABLE FUNDS IN 2014: R28.02 m



EXPENDITURE



SUNCEP ACTIVITIES WERE SUPPORTED BY THE FOLLOWING CONCERNS IN 2014

2B Smart Trust

Albert Wessels Trust

Andrew and Mercia le Roux

Anglo American Chairman's Fund

Atlantis Foundries

Cape Teaching and Leadership Institute (CTLI)

Een Aarde Foundation in the Netherlands

EM Software & Systems (EMSS)

Eskom Expo for Young Scientists

Eskom Development Foundation

Eskom Holdings SOC Limited

The Education, Training and Development Practices Sector
Education and Training Authority (ETDP SETA)

Sun International (GrandWest Unit)

Het Jan Marais Nationale Fonds

Investec

Mrs PM Groves

PA en Alize Malan Gedenktrust

Rand Merchant Bank Fund

Remgro

Stellenbosch University

Tronox Namakwa Sands

Upstream Training Trust

US Department of Health and Human Services' Health Research
and Services Administration (HRSA)

Various private donors

Western Cape Education Department (WCED)



SUNSEP • SUNCEP

UNIVERSITY PREPARATION

TEACHER PROFESSIONAL LEARNING

RESEARCH

SCHOOL BASED INTERVENTIONS