



ANNUAL REPORT twenty eleven 2011

 Changing schools **for good**



Schools Development Unit
School of Education

10th Anniversary 2000 - 2010

CONTENTS

SDU ANNUAL REPORT 2011

- 2 Chairperson's foreword
- 3-4 Director's overview
- 5 SDU operational structure
- 6-7 Staff at the SDU
- 8-9 SDU's 10th Anniversary event
- School based work:
 - 10-11 Mathematics and Science Education Project (MSEP)
 - 12 iKwezi (Star) Project
 - 13 Vice Chancellor's 100-UP Project
 - 13 Grasslow-Park
 - 14 Education for Sustainable Development
 - 14 SADC Regional Training Programme in Teacher Environmental and Sustainability Education
- Courses:
 - 15 Advanced Certificate in Education
 - 16 Short courses programme
 - 16 Post Graduate Certificate in Education
- 17 Testing
- 17 Materials development
- 18 Educator support
- 19 Budget matters
- 20 Partnerships 2011
- 21-22 Conferences and publications
- 23 Service activities
- 24 Abbreviations, acronyms and terms

Schools Development Unit

Postal address: Schools Development Unit, University of Cape Town, Private Bag, Rondebosch, 7701
Street address: UCT Upper Campus, Level 5, Hoerikwaggo Building, North Lane, Rondebosch
Tel: 021 650 3368 Fax: 021 650 5330 www.sdu.uct.ac.za

CHAIRPERSON'S FOREWORD

The Schools Development Unit (SDU) celebrated its 10th anniversary in 2011. This coincided with the School of Education's centenary and our collective 110 years meant we had much to celebrate.

As this annual report shows, the SDU-as one of the largest school improvement agencies in the country-is involved in a wide range of activities that grapple with the challenges facing education in South Africa today.



Associate Professor RÜDIGER LAUGKSCH
Chair of SDU Board

The SDU is committed to understanding these problems and finding sustainable solutions to a complex set of contributing factors and contexts. Continuous professional development (CPD), school-based work, and systemic testing were the SDU's main focus in 2011. In our CPD work, almost 330 teachers participated in six offerings of the Advanced Certificate in Education (ACE) in collaboration with colleagues from the School of Education. Moreover, it is most gratifying to see that over 300 education personnel participated in the 14 short courses that were offered in 2011.

Our school-based work has also shown much promise. Our work in high schools with the Mathematics and Science Education Project (MSEP) highlights the many contextual challenges that shape teachers' work and performance in the classroom. The significant number of classroom observations carried out in 2011 attest to the trust between MSEP staff and teachers at the participating schools. The iKwezi project, with funding from the DG Murray Trust, is a primary school development pilot project that provides support to teachers in nine primary schools and to Grade R teachers from six Educare sites. An exciting new school-based initiative is the Grasslow-Park 'Breaking Down the Fences' project which was launched in 2011. This innovative project forges Mathematics and English teachers from a connected group of 26 primary and secondary schools into professional learning communities.

Our continued work in the systemic testing of Grade 3 and 6 learners in numeracy and literacy in the Western Cape confirms the logistic and analytic capacity of the SDU, which is regarded as an increasingly important resource by the WCED.

At an institutional level, the SDU has also been part of important developments in 2011. It has become an integral part of UCT's recently launched Schools Improvement Initiative, and is managing the Vice Chancellor's 100-UP project which focuses on enhancing the academic and life skills of 100 top-achieving learners from Khayelitsha in order to better prepare them to compete for places at UCT.

Our heartfelt thanks go to all who have contributed to our successes and helped us in 2011: the Director, Dr. Jonathan Clark, our staff, colleagues in the School of Education and wider university community, our partners in the Western Cape Education Department, and-most importantly-our funders. May the next decade in the SDU's life be as exciting as the last!

DIRECTOR'S OVERVIEW



DR JONATHAN CLARK

The SDU celebrated many milestones and successes in 2011, not least among them our 10th birthday. This landmark was a reminder of just how much the SDU has become an integral part of the School of Education at UCT, with our major focus on the development of quality teaching and learning in the fields of mathematics, the sciences, literacy and life skills.

Over the years the SDU has been involved in a range of school-based projects in primary and secondary schools, among them the iKwezi (Star) project which continues to focus on isiXhosa mother-tongue instruction and provides support to teachers in Grades R and 1.

The ongoing Mathematics and Science Education Project (MSEP) also operates intensively in five local secondary schools.

The unit also manages the 100-UP project, a three-year undertaking supported by the Vice-Chancellor's Strategic Fund, which provides academic and life skills support to 100 academically gifted Grade 10 learners drawn from all 20 secondary schools in Khayelitsha. Come 2014, these students will be prepared and qualify for a place at UCT. Part of their exposure has been to stay in a UCT residence during their school vacation and participating in an intensive revision programme held in October.

In another exciting development, the Grasslow-Park "Breaking Down the Fences" project was launched. This project involves 26 working-class schools in Grassy Park, Lotus River and Wynberg and was initiated by a group of principals wanting to improve Grade 9 Mathematics results.

For the past few years the SDU has been the service provider responsible for the administering, marking and analysis of the annual Grades 3 and 6 numeracy and literacy tests conducted in all primary schools in the Western Cape. This is an enormous undertaking involving the administration of tests in more than a thousand schools over a fortnight in the eight districts of the Western Cape Education Department.

On the international front, the SDU and the International Christian University of Tokyo continued developing learning modules for Education for Sustainable Development in Japanese and South African schools.

The SDU celebrated many milestones and successes in 2011, not least among them our 10th birthday.

DIRECTOR'S OVERVIEW CONTINUED

With such a broad base to work off, and the generous backing of our funders, we look forward with confidence to the next 10 years.



The Collaborative Action Research for Teachers (CART) Project, in conjunction with the University of Stockholm, culminated in one staff member and two teachers from Spine Road High School in Mitchells Plain spending a week in Sweden in May working alongside teachers from participating Swedish schools.

As part of our contribution towards teacher development, the unit presently offers a range of university-certified Advanced Certificates in Education (ACE) offering on-campus tuition and school-based support. In 2011, 223 students graduated with an ACE qualification, 31 with distinction. The SDU also runs a small, but growing, number of university-certified short courses tailored to meet the subject-specific needs of teachers. In the last year, we offered 14 short courses to 300 educators, ranging from the writing of reports, to practical work for science teachers and stress management.

The production of quality teaching and learning materials is a key component of our work. This is reflected in the highly-regarded series of textbooks, *Maths for All*, written by specialists within the unit. This year saw substantial effort being put into the rewrites of this series, necessitated by the new curriculum to be implemented from 2012.

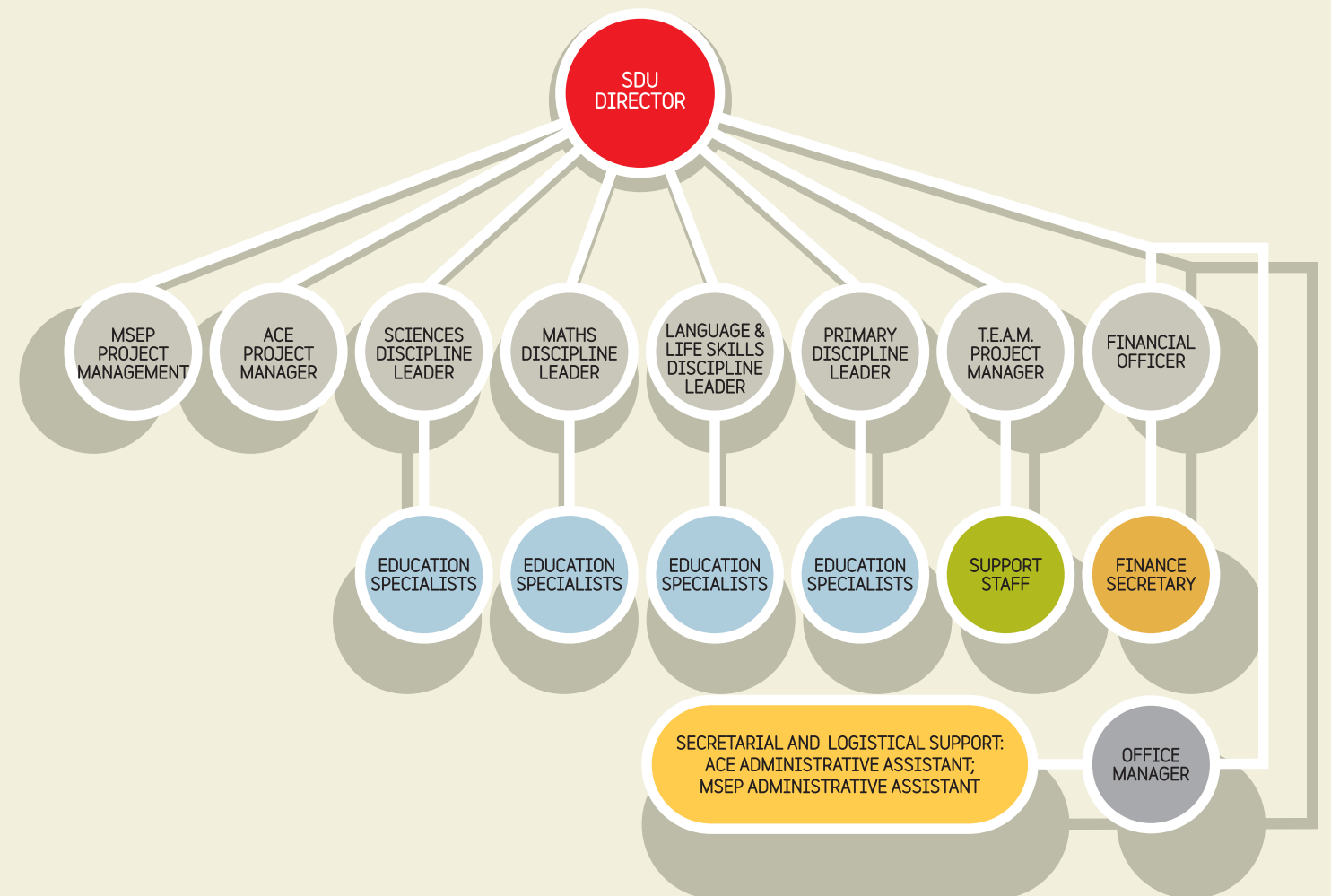
Looking to the future, UCT launched its Schools Improvement Initiative which, with the integral involvement of the SDU and its director, aims to engage as many educators, from both within the university and the broader community.

While all these interventions have been underpinned by a belief that building teacher efficacy lies at the heart of professional engagement, the need to engage in broader curriculum and whole-school development work is factored in to all project design and implementation. As such, the SDU prides itself on a wide spectrum of partnerships from professional bodies to other universities, business and government departments.

With such a broad base to work off, and the generous backing of our funders, we look forward with confidence to the next 10 years. Thank you for your ongoing support!

SDU OPERATIONAL STRUCTURE

The SDU is highly-regarded because of its unique ability to enhance all phases of schooling. Few other organisations are able to cater so comprehensively and creatively for Reception year through to Grade 12. Because the SDU's scope of work is so varied, the professional staff is organised into flexible project teams which change as the need arises. The high levels of co-operation and collaboration between professionals enables the unit to produce and facilitate ground breaking work. But, it's not only the professional staff members who add value. The unit could not function so effectively without the efficient support offered by the administrative team.



STAFF AT THE SDU



01

01
Sandra Adams
Finance officer



02

02
Riana Albertyn
Administrative assistant



03

03
Jonathan Clark
SDU director



04

04
Norman Davies
Science discipline leader



05

05
Gilbert Dolo
Science education specialist



06

06
Jacqui Dornbrack
Language discipline leader



07

07
Marlene Esau
Language education specialist



08

08
Hayley Eyssen
Administrative research assistant



09

09
Cynthia Fakudze
Testing project manager



10

10
Waddeah Fisher
Courses administrator



11

11
Kaashief Hassan
Mathematics education specialist



12

12
Diane Hendricks
Primary education specialist



13

13
Yusuf Johnson
Mathematics education specialist



14

14
Gillian Kay
Science education specialist



15

15
Owen Kiewietz
Administrative research assistant



16

16
Cally Kuhne
Primary discipline leader



17

17
Roger Mac Kay
Mathematics education specialist



18

18
Nomvuyo Mgoqi
Science education specialist



19

19
Tami Mhlati
Primary education specialist



20

20
Thembeqa Mqambeli
Language education specialist



21

21
Ferial Parker
Life skills education specialist



22

22
Nalini Parsotam
Language education specialist



23

23
Andrew Petersen
Science education specialist



24

24
Gary Powell
ACE project manager



25

25
Janine de Villiers
Finance secretary



26

26
Anthea Roberts
Mathematics discipline leader



27

27
Edna Rooth
Life skills education specialist



28

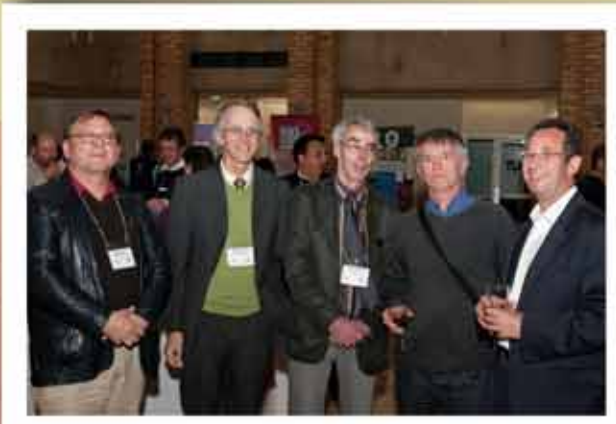
28
Gail September
Office manager



29

29
Kevin Sherman
ICT integration education specialist

SDU'S 10TH ANNIVERSARY EVENT



Launch event

After ten years of ground-breaking work, the SDU had plenty to celebrate when their 10th anniversary came around in 2011. The year-long celebration kicked off in February with an open lecture hosted by the Teacher Enrichment Initiative of the SDU. Rector and VC of the University of the Free State, Prof Jonathan Jansen, argued for better education in a talk provocatively called *What school reform can learn from the rhythm method in sex*. In his well-attended talk, the celebrated author and columnist tackled problems facing education in South Africa, and methods educators can use to reverse its decline.

Main event

The main 10th anniversary event was held in September around the theme *Changing schools for good: what the future holds for teacher professional development in South Africa*. Professor Brahm Fleisch from the division of Education Leadership and Policy Studies at Wits University addressed a packed hall. He spoke about a crisis in primary education, provided analysis of existing classroom practice, and outlined the significance of parental involvement, the future of professional development and a shift in the teaching of literacy.

Staff at the SDU also spoke about the SDU's projects - both past, current and future initiatives planned for the unit. The event was attended by role players from all avenues of education in the Western Cape. This included officials from the WCED such as the Director General, Penny Vinjevold. The SDU was very pleased to host several of their sponsors including the DG Murray Trust, Hosken Consolidated Investments Foundation, Michael and Susan Dell Foundation, Eskom and the Royal Netherlands Embassy.

The director of the Schools Development Unit, Dr Jonathan Clark also gave an insightful presentation about the way forward for the unit and the role that the SDU currently plays within UCT. An exhibition in the foyer showcased the many projects the unit had implemented in the Western Cape over the last ten years.





SCHOOL-BASED WORK

The Mathematics and Science Education Project (MSEP)

Introduction

The Mathematics and Science Education Project (MSEP) is a collaboration between the University of Cape Town (UCT) and the Western Cape Education Department (WCED). Over the past two years the project has been working to improve the quality of teaching and learning in five secondary schools in the Cape Town metropole.

Although the main focus of the project is classroom-based support, MSEP also conducts educational research into various aspects of teaching. In 2011 the expanded project team was able to undertake a more extensive range of school-based activities. The significant number of classroom observations (385) and lessons taught (228) across all schools attests to the growing trust between MSEP staff and teachers at the participating schools.



In addition to working with teachers, the project also provides support to learners from schools in poorer working-class communities who do not traditionally gain access to the university. This is in line with a key transformation strategy for UCT - namely to broaden and extend undergraduate admissions into science, engineering, commerce and the health sciences.

School Management

The school management intervention in 2011 sought to empower, support and strengthen the capacity of the School Management Teams (SMTs). To facilitate this, seven SMT members from three schools were awarded bursaries for the Advanced Certificate in Education (ACE): Education Management and Leadership Development. This is a qualification of applied competence in the workplace.

The participating schools identified issues inhibiting the effective delivery of the curriculum to learners and designed projects to address these issues.

Discipline is a management challenge in most schools and at one school a new model was designed, which is proving very successful.

English First Additional Language (FAL)

The primary aim of the language intervention was to improve the English literacy levels of Grade 8 and 9 English (FAL) learners in three high schools, since improved FAL literacy facilitates greater comprehension in other subjects.

The programme was designed to enhance not only reading and writing, but also the effectiveness of its teaching in schools. Classroom support was provided in the form of team teaching, classroom observations and discussions, teacher workshops and teaching and learning resources. Teachers were financially supported to attend the annual Reading Association of South Africa (RASA) conference. Learners were involved in extra-mural book clubs, reading festivals and a learner intervention programme for those struggling with English. This intervention resulted in improved language results of those learners who attended regularly.



SCHOOL-BASED WORK

Mathematics

In 2011 the teacher intervention strategy focused on assisting teachers when requested. The main focus was on a weekly Learner Programme for Grade 12 learners in the afternoons, as well as a Paper 3 (Optional Content) programme run at UCT. A total of nine research long papers based on these interventions were published in South African Association for Maths, Science and Technology Educators (SAARMSTE) and Association of Mathematics Educators of South Africa (AMESA) conference proceedings.

Science

The MSEP Science component focused on school-based support for teachers. This included overall departmental planning and moderation of assessment, as well as co-teaching, curriculum support and the planning and implementation of practical work at classroom level. Twelve teachers from the MSEP schools attended a short course on practical work. This focused on the prescribed and recommended practical work required for formal and informal assessment purposes for Grade 10 in the Curriculum and Assessment Policy Statement (CAPS).

Information and Communications Technology (ICT) Integration

Building on the success of creating Technology Committees at MSEP schools in 2010, the focus in 2011 shifted from the management of ICT to the actual integration of technology into teaching and learning. Schools' technology committees continued to meet and contribute to decision-making and management of ICT. But the emphasis of the MSEP intervention was to work alongside individual teachers to assist them to use technology effectively. Teachers met with the education specialist to plan technology-rich lessons in Mathematics, Mathematical Literacy, Physical Science and Language.



In addition, a short course programme was rolled out to upskill teachers in the pedagogical uses of technology. Participants in the Google Earth for Educators course, for example, created learning activities that incorporated Google Earth's vast array of visual data sets. For their assessment, teachers submitted a comprehensive lesson plan that explicitly linked the lesson with the curriculum. Internet Basics for Educators, for example, exposed teachers to the challenges of plagiarism and enabled them to develop their own plagiarism policies for classroom and school use. Almost 30 teachers took advantage of these short courses.

Life skills

Fifty five MSEP learners who intended furthering their studies at a Higher Education Institution (HEI) participated in the MSEP learner programme, which focused on intensive revision in core academic subjects. The learners on the programme acquired skills in preparation for tertiary studies. Fifty four of these learners passed the senior certificate, with 45 of them gaining university entrance. Some learners secured places for 2012 at UCT, while others were accepted at the University of the Western Cape (UWC), Cape Peninsula University of Technology (CPUT) and Stellenbosch University.



SCHOOL-BASED WORK

iKwezi (Star) Project “Dream, hope, strive... for a brighter future”

This Early Childhood Development (ECD) and primary school development pilot project is located in the Mfuleni and Strand areas of the Western Cape. The project provides support to teachers in nine primary schools and to Grade R teachers from six Educare community sites.

The project operates from the premise that if learners are well prepared in Grade R and 1 they can build on their knowledge and skills to achieve excellence in the higher grades and beyond. It also presumes that high-quality, accredited professional development programmes are key to enhancing teaching and learning. Another conviction is that collaboration between teachers, effective leadership in schools, parental involvement and support from district officials and other committed partners must contribute to the raising of standards in our schools.



12

iKwezi aims to improve teaching through several programmes that are offered to Foundation and Intermediate Phase teachers. The project focuses on isiXhosa mother-tongue instruction in Grades R to 3 and provides Language and Mathematics content and curriculum planning and implementation support from Grades R to 7.

Programmes

In 2011 Dr Louis Benjamin provided training in the Basic Concepts Programme to 32 Grade R and Grade 1 teachers after school and on Saturdays. Tami Mhlali mentored teachers in their classrooms in the implementation of new ideas and approaches to teaching. Grade 1 learners completed the annual tests in February. These form part of a longitudinal study providing data that will measure the impact of the intervention.

Blossom Ngwevela from the Early Learning Resources Unit (ELRU) offered Literacy, Numeracy and Life Skills electives to Grade R teachers from the community Educare centres. Twenty two Grade R teachers attended training on Saturdays in 2011. Tami visited each teacher once a term to assist with classroom management and curriculum planning.

The project also offers bursaries for the UCT Advanced Certificate in Education (ACE) course. Eighteen Foundation Phase and six Intermediate Phase teachers completed the first year of this two-year part-time programme in 2011. During the term lectures were presented in the afternoons at a primary school venue convenient to teachers and at UCT during the holidays. Tutorials took place at schools and teachers were able to discuss the content of their courses and prepare for assignments and exams with their lecturers. Each teacher received two classroom observations and feedback sessions per year.

Xolisa Guzula and Ntombi Mahobe from The Project for the Study of Alternative Education in South Africa (PRAESA) shared their exciting reading and writing ideas and encouraged Foundation Phase teachers to develop print-rich environments.

An external evaluation of the project will be conducted in 2012.

All programmes support the implementation of the National Department of Basic Education (DBE) and Western Cape Education Department (WCED) policies and programmes.



SCHOOL-BASED WORK

Vice-Chancellor's 100-UP Project

100-UP is a schools' pilot project that aims to build the intellectual, social and cultural capital of 100 top achieving learners, five each from the 20 high schools in Khayelitsha. The project focuses on enhancing the learners' academic performance and life skills in order to better prepare them to compete for places at UCT. The 100 learners are mentored from Grades 10 to 12, and are encouraged to pursue degrees in the sciences, engineering, commerce and related fields.

In 2011 learners engaged in exciting activities that boosted their confidence and fostered a belief in their abilities. The 100 learners were accommodated in a UCT residence during their school vacation and 'lived life as students' for three days. Key to this experience was the mentorship offered by UCT students drawn from similar backgrounds who served as 'big brothers or sisters' to the learners. It was wonderful to observe how they engaged and built lifelong relationships.

The revision camp in October exposed the learners to intense revision in core academic subjects to strengthen their abilities so that they could pass well to continue in the project. Learners appreciated this support immensely. They visited the Science Expo and went to a radio station to be interviewed about the benefits of the project.

Other project activities focused on career guidance. The UCT Careers Open Day and the UCT faculty and departmental career talks and engagements, are aimed at assisting learners to make informed decisions about their future.

A longer-term objective of the project is to use 100-UP to build institutional knowledge and experience, which can better inform the university's bridging programmes.



Grasslow-Park 'Breaking Down the Fences'

Grasslow-Park 'Breaking Down the Fences' was launched in 2011. This project is centred on 26 working-class schools in Grassy Park, Lotus River and Wynberg.

The project was conceptualised by a group of principals from the area wanting to improve their learners' Grade 9 Mathematics results. One of the stumbling blocks to good performance is the gap between primary and secondary school teaching. The Grasslow-Park project was designed to bring together Mathematics and English subject teachers from the secondary and primary schools into professional learning communities.

The main aim of the project is the improvement of teaching and learning in the classroom. The other objective is to minimise the disjuncture between primary and secondary school teachers' approach to the teaching of Mathematics and English.

The role of the SDU has been to offer professional development activities that include the Advanced Certificate in Education (ACE) for GET Mathematics, a series of short courses and in-class curriculum support, the establishment of professional learning communities at individual schools and inter-school learning networks.

The second half of 2011 was devoted to the set-up phase of the project. The main activities included collecting baseline data and forging links with teachers. The most encouraging aspect of working with these schools was the enthusiastic response of principals and the effect of their enthusiasm on teachers. We look forward to strengthening ties as we collaborate with classroom specialists to improve learner performance between 2012 and 2014.

13



SCHOOL-BASED WORK

Education for Sustainable Development

In 2011 the SDU and the International Christian University (ICU) in Tokyo continued working together to develop and implement Education for Sustainable Development (ESD) learning modules in Japanese and South African schools. Over the past year the ESD project has been extended to include secondary school learners.

Rocklands Primary School in Mitchells Plain continued to collaborate with their colleagues at Hanesawa Primary School in Mitaka, Japan.

The culmination of their project was sharing their experiences in lessons on insects and flowers. At Grade 7 level, teachers from South Africa and Japan planned an ESD module on energy together.

During August a delegation of teachers and academics from Mitaka spent a few days at Thandokulu High School developing and implementing modules for ESD at secondary school level. At the end of the year academics from SDU and a teacher from Thandokulu visited Tokyo. SDU staff presented lectures to undergraduate and postgraduate classes at the ICU and participated in an ESD symposium there.

The final activity was the joint planning and implementation of a lesson on extreme weather by a teacher from Thandokulu High School in a Japanese school.

South African Development Community Regional Training Programme in Teacher Environmental and Sustainability Education

Towards the end of 2011 Andrew Petersen, a science education specialist at the SDU, was nominated to attend a residence school at the University of Zambia. The focus was a South African Development Community (SADC) Regional Environmental Education Programme (REEP) on Environmental and Sustainability Education (ESE).

Zambia University has established the Mainstreaming Environmental and Sustainability into African Universities (MESA) chair, with the goal of improving the quality, relevance and knowledge of ESE in African universities.

The residence school was attended by representatives from various universities and schools in different SADC countries. Participants were able to share their successes and challenges in ESE and this was an excellent opportunity to establish networks with other educators.

Another goal of the residence school was to engage with ESE experts and to formulate "change projects", such as designing a short course on sustainability through bio-diversity.

This would further allow all participants to fulfill the mandate of MESA and REEP to integrate ESE into teacher professional development.

It is hoped that this initiative will positively influence the capacity of teachers to implement ESE in schools.



COURSES



The Advanced Certificate in Education

The Advanced Certificate in Education (ACE) is a recognised two-year, part-time teaching qualification aimed at promoting continued professional teacher development. While the objective is to re-skill teachers in subject specialisations, ACE also helps improve teacher qualifications from Relative Education Qualification Value (REQV) 13 to REQV 14.

Our ACE programmes seek to improve teachers' depth of knowledge and insight into the content areas that form part of their studies. This includes extending teachers' content knowledge and looks at more effective ways of teaching relevant subject areas.

Our ACE students also benefit from a school support programme; each student receives four classroom visits over two years. These visits include observation and critique, as well as co-teaching. Many teachers find this aspect of the programme invaluable, as it facilitates the application of newfound knowledge and teaching methodology in their classrooms.

The WCED funded bursaries for the following ACE programmes for the last time in 2011.

- ACE in GET Mathematics
- ACE in FET Mathematics
- ACE in GET Natural Sciences
- ACE in FET Life Orientation
- ACE in Literacy, Numeracy and Curriculum Leadership (FP)
- ACE in Language, Mathematics and Curriculum Leadership (IP)



The implications for the discontinuation of funding are that the SDU has had to source scholarships from private funders. This is particularly challenging because the substantial funding required for such long-term projects is extremely scarce.

Altogether 223 students graduated with an ACE qualification at the end of 2011. Thirty-one of these students graduated with distinction.

We have 107 students continuing with their ACE studies during 2012. Most of these are second year students, and very few are repeating courses.

There were 266 enquiries from potential applicants by the end of November 2011. This indicates that there is huge interest in this type of teacher qualification.

Professional teacher development programmes such as the ACE provide an excellent vehicle for the improvement of schools. The duration of these programmes provides prolonged and frequent contact with participants who have a vested interest in their studies.

More recently, the SDU managed to implement a model for school improvement where three or more teachers from the same school enrol for the same ACE programme. This, in theory, creates a critical mass for positive change, with these teachers supporting not only each other, but also their colleagues, thereby creating a learning community within the school.



COURSES

Short courses programme

Since its launch in 2007, our short courses programme has provided an opportunity for many teachers who wish to further their education, but who do not want to commit to a long period of study. These courses range from six to 36 hours.

This arrangement is dynamic, as it allows for the development of new courses that can address the variety of demands that arise within education.



The high levels of expertise at the University of Cape Town provide a wealth of resources for the development and delivery of these short courses. The Schools Development Unit acts as a hub for the development of these courses.

The following 14 short courses were offered in 2011:

- Effective Report Writing for Educators
- Arithmetic and Algebra for Senior Phase teachers
- Internet Basics for Teachers
- Fundamentals of Inquiry in GET Natural Sciences
- Geometry in the Senior Phase
- GET Natural Sciences
- Teaching Poetry in an English First Additional Language Class
- Stress Management for Teachers
- Physical Science Assessment
- Teaching Visual Literacy in the Senior Phase to English FAL Learners
- Using the Interactive White Board for Teaching Mathematics
- Google Earth for Educators
- Practical Work for Physical Sciences Teachers
- Practical Work for Natural Sciences Teachers

Some of the courses were repeated and more than 300 education personnel benefitted from them.

A majority of the courses were taught at UCT, with a few sessions held off-campus. The short course programme allows for enough flexibility for some courses to be held in other provinces, such as Mpumalanga, the Free State, and Kwazulu-Natal.

In the near future, it is envisaged that these short courses may be delivered as modules which will contribute to formal teacher qualifications such as the Advanced Certificate in Teaching (ACT).

Post Graduate Certificate in Education (PGCE)

The SDU staff lectured in the following method courses run by the School of Education:

- Life Skills
- Mathematics
- English Primary

These courses included modules on pedagogy, lesson planning, practical work, research projects, and assessment.



TESTING MATERIALS DEVELOPMENT

WCED Grade 3 and 6 Testing

As part of its strategic plan for improving numeracy and literacy skills in schools, the WCED embarked on systemic testing in 2002. The SDU contributed by conducting these tests in Grades 3 and 6, and it has been involved ever since. The SDU was selected as a service provider because it has the infrastructure and expertise to carry out a project of this magnitude.

In 2011 testing was administered in 1062 Grade 3 and 1038 Grade 6 schools in the eight districts of the WCED. Test administration was conducted in 2785 Grade 3 classes and 2597 Grade 6 classes. This included 54 Grade 3 and 47 Grade 6 independent schools.

Recruitment of Supervisors

Forty six supervisors were recruited for both Grade 3 and Grade 6. Each supervisor was responsible for the administration of the tests in one or two education districts. Each supervisor worked under an SDU member specifically designated for that region.

Recruitment of Test Administrators (TAs)

Over five hundred unemployed or retired teachers, who had participated in the previous testing processes, were recruited as test administrators, as were additional teachers who lived near the schools. The TAs administered the tests in English, Afrikaans and Xhosa.

Marking and moderation

Marking was from 14-31 October. Verification of the data took place in the first week of November. Scripts were archived immediately afterwards.

Unlike previous years where literacy scripts were marked in the field, the 2011 marking and moderation took place in a central venue. The marking process was closely monitored by a marking centre manager together with other specialised staff with years of subject and marking experience.

The chief markers were responsible for the marking process in their teams and marking was moderated. Markers or senior markers who had more than three errors in their allocated scripts were re-trained and expected to re-mark all their scripts.

Materials Development

At SDU we believe that school mathematics should provide learners with insight into the structure of mathematics. This principle is reflected in the highly-regarded series of textbooks, *Maths for All* written by specialists in the Unit.

The development of the new series, *Solutions for All Mathematics* has culminated in a shift from these grounding principles. This was done in order to meet the requirements of the Curriculum and Assessment Policy Statement (CAPS) with its very tight submission time frames.

The pressure on writers to produce complete learner and teacher books in time for submission has placed us under tremendous strain. Nevertheless, we managed to produce five titles in the space of six months, four of which were accepted onto the National Department of Education's list of approved textbooks.

After the submission of the Grades 1, 2 and 3 *Solutions for All Mathematics*, the Grade 10 *Solutions for All Mathematics* and the Grade 10 *Solutions for All Mathematical Literacy*, development began on the Grades 4, 5, 6 and 11 titles. Writers worked furiously through the Christmas holiday to meet the submission deadlines. In the space of one year the writing team produced ten learner books and ten teacher guides, and also began working on the Grades 7,8,9 and 12 titles!

The pressure on publishers to meet submission requirements has certainly had a ripple effect on the Schools Development Unit and we are very proud of our achievements.



EDUCATOR SUPPORT

Teacher Enrichment Initiative (TEI)

This initiative comprises a series of once-off presentations on education topics.

Some of the goals of this initiative are to:

- expose educators to academic expertise by discussing relevant topics at a deeper level.
- present experienced teachers with fresh insights into current curricular and other issues.
- provide a forum for sharing ideas and engaging in healthy debate around pertinent educational issues.

The following presentations were held:

- *What school reform can learn from the rhythm method in sex* - by Professor Jonathan Jansen from University of the Free State.
- *Teachers: a key to success in maths and science?* - by Professor Sir John Holman from University of York, UK.
- *Action research for teachers: a tool for school improvement?* - by teachers from the Collaborative Action Research Project (CART) and Kevin Sherman at SDU.
- *Making reading enjoyable in the junior classes* - by teachers from Starling Primary School and York Road Primary School.

These presentations were very well-attended and generated much discussion and debate. They also enabled teachers to form networks.

Resource Centre

The Resource Centre houses about 5000 resource materials as well as two computer workstations. Most of the new materials are donations of specimen copies of books from publishers.

A unique feature of the centre is the collection of resources that have historical significance as they were produced in the apartheid era as part of alternative education, and are no longer accessible elsewhere.

The Resource Centre is utilised mostly by the SDU staff, ACE teachers and Post Graduate Certificate in Education students.



BUDGET MATTERS



Income

The SDU's overall operating budget for the year amounted to just over R27 million.

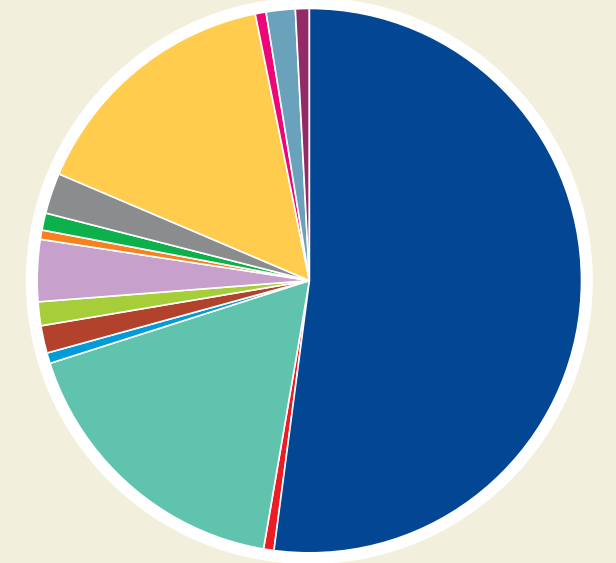
The operating costs of the Unit in 2011 amounted to just over R8.5 million. This included staff salaries, office overheads etc., with the remainder being utilised for the various projects.

The two large-scale Grade 3 and 6 testing exercises undertaken on behalf of the WCED once again accounted for just under half of the total operational spend of the Unit.

The SDU is most grateful for the following funders/clients who have supported us financially over the past year:

TESTING work	Western Cape Education Department.
ACE courses	Department of Basic Education; Western Cape Education Department; Eskom; Hosken Consolidated Investments Foundation; ETDP SETA.
Short Courses	Toyota Foundation.
iKwezi project	DG Murray Trust.
MSEP	The Royal Netherlands Embassy.
Royalties	Macmillan.
100-UP	UCT Vice Chancellor's Strategic Fund; Stella and Paul Loewenstein Educational and Charitable Trust.
Grasslow-Park	The Michael and Susan Dell Foundation.

As a part of the School of Education within the Graduate School of Humanities, the SDU would also like to acknowledge the role which UCT plays in supporting the Unit financially. The two posts, namely the Director and Finance Officer, are fully funded by the University and the Unit continues to enjoy a most generous allocation of office space on the 5th floor of the Hoerikwaggo Building.



2011 INCOME

- Testing - WCED
- ACEs - Eskom
- ACEs - WCED
- ACEs - HCI Foundation
- ACEs - ETDP SETA
- iKwezi project - DG Murray Trust
- Grasslow-Park project - Michael & Susan Dell Foundation
- SII - UCT Office of the Vice Chancellor
- Misc. project income
- Royalties & textbook series rewriting project - Macmillan
- MSEP - Royal Netherlands Embassy
- Toyota Foundation
- 100-UP - UCT Vice Chancellor's Strategic Fund;
Stella & Paul Loewenstein Charitable Educational Trust
- Interest on investments



PARTNERSHIPS 2011

National and local government departments

- Department of Basic Education
- Western Cape Education Department
- Department of Environment and Development Planning City of Cape Town

Professional bodies

- The Association for Mathematics Education in South Africa (AMESA)
- The SA Association of Science and Technology Educators (SAASTE)
- The SA Association of Research into Maths, Science and Technology Education (SAARMSTE)
- Reading Association of South Africa (RASA)
- South African Women In Science and Engineering (SAWISE)
- Society for Information Technology and Teacher Education (SITE)

Universities

- UCT: various faculties, departments and projects
- Cape Peninsula University of Technology
- University of Stellenbosch: IMSTUS, RUMEUS
- University of the Western Cape: SSME, Africa Genome Project
- International Christian University (ICU), Mitaka, Japan
- University of Stockholm, Sweden
- University of Wollongong, New South Wales, Australia

Business and Funding Partners

- Albert Wessels Trust/Toyota SA
- D G Murray Trust
- ETD P SETA (Education, Training and Development Practices Sector Education and Training Authority)
- ESKOM
- Hosken Consolidated Investments Foundation
- Macmillan Publishers
- Michael and Susan Dell Foundation
- Royal Netherlands Embassy
- Western Cape Education Department

Other

- Bargain Books
- Basic Concepts Programme (BCP)
- Early Learning Resource Unit (ELRU)
- Extra-mural Education Project (EMEP)
- Generation of Leaders Discovered (GOLD)
- Globe Learning Communities
- Kirstenbosch National Botanical Gardens
- Mathematics Education Primary Project
- Oxford University Press Southern Africa
- Pearson
- Science And Industrial Leadership Initiative (SAILI)
- Scifest Africa
- Soetwater Environmental Education Centre
- South African Astronomical Observatory
- South African National Museum (Iziko Museum)
- Systemic Education and Extra-Mural Development and Support Consortium (SEEDS)
- Two Oceans Aquarium
- West Coast Fossil Park



CONFERENCES AND PUBLICATIONS

Arendse, N. (2011). Studying the constitution of school mathematics in pedagogic situations that suspend mathematical definitions in favour of inductive descriptions of mathematical objects and processes. Paper presented to the 19th Annual Meeting of the Southern African Association for Research in Mathematics, Science and Technology Education, North West University, Mafikeng Campus, 18 - 21 January 2011.

Chitsike, M. (2011). Towards a description of the constitution of mathematics and learner identity in pedagogic contexts. In Mamiala, T. & Kwayisi, F. (Eds.), *Proceedings of the 19th Annual Meeting of the Southern African Association for Research in Mathematics, Science and Technology Education*, North West University, Mafikeng Campus, 18 - 21 January 2011, pp. 84 - 97.

Chitsike, M. (2011). An investigation of the co-constitution of mathematics and learner identification in the pedagogic situations of schooling, with special reference to the teaching and learning of mathematics in a selection of Grade 10 mathematics lessons at five schools in the Western Cape Province of South Africa. Unpublished M.Ed. Dissertation, School of Education, University of Cape Town.

Davis, Z. (2011). Aspects of a method for the description and analysis of the constitution of mathematics in pedagogic situations. In Mamiala, T. & Kwayisi, F. (Eds.), *Proceedings of the 19th Annual Meeting of the Southern African Association for Research in Mathematics, Science and Technology Education*, North West University, Mafikeng Campus, 18 - 21 January 2011, pp. 97 - 108.

Davis, Z. (2011). Orientations to text and the ground of mathematical activity in schooling. In Venkat, H. and Essien, A. (Eds.), *Proceedings of the 17th National Congress of the Association for Mathematics Education of South Africa*, University of the Witwatersrand, Johannesburg, 11 - 15 July 2011, pp. 310 - 322.

Davis, Z. (2011). Remarks on recent uses of the terms operations, objects and domains in local descriptions of mathematics teaching. In Venkat, H. and Essien, A. (Eds.), *Proceedings of the 17th National Congress of the Association for Mathematics Education of South Africa*, University of the Witwatersrand, Johannesburg, 11 - 15 July 2011, pp. 323 - 335.

Dornbrack, J. (2011). "The book club has changed me into a bookworm": The transformational space of a high school book club. Paper presented at the national Reading Association of South Africa conference. 16 - 18 September 2011, University of Cape Town.

Dornbrack, J and Clark, J. (2011). "Mirror, mirror on the wall, what happens when we look?" Constructing spaces for schools to see themselves differently. Paper presented at Kenton Association of Education Conference. 3 - 6 November 2011, Cape Town.

Esau, M. (2011). An intervention programme for struggling Grade 8 English FAL learners: providing opportunities to practise reading, writing and speaking. Paper presented at the national Reading Association of South Africa conference. 16 - 18 September 2011, University of Cape Town.

CONFERENCES AND PUBLICATIONS

Gripper, D. (2011). Describing and analysing the resources used to solve equations in a Grade 10 mathematics class in a Cape Town school. In Mamiala, T. & Kwayisi, F. (Eds.), *Proceedings of the 19th Annual Meeting of the Southern African Association for Research in Mathematics, Science and Technology Education*, North West University, Mafikeng Campus, 18 - 21 January 2011, pp. 136 - 151.

Gripper, D. (2011). Describing and analysing Grade 10 learners' descriptions of the syntactic resources they use to transform expressions. In Venkat, H. & Essien, A. (Eds.) *Proceedings of the 17th National Congress of the Association for Mathematical Education of South Africa. "Mathematics in a globalised world"*, University of the Witwatersrand, Johannesburg, 11 - 15 July 2011, pp. 81 - 92.

Hendricks, D. (2011). A different perspective on thinking and learning Numeracy / Mathematics. Paper presented at the Overberg Education District Mathematics Solutions Conference. 12 March 2011, Caledon, Cape Town.

Jaffer, S. (2011). Investigating the relationship between pedagogy and learner productions through a description of the constitution of mathematics. In Mamiala, T. & Kwayisi, F. (Eds.), *Proceedings of the 19th Annual Meeting of the Southern African Association for Research in Mathematics, Science and Technology Education*, North West University, Mafikeng Campus, 18 - 21 January 2011, pp. 233 - 246.

Jaffer, S. (2011). Examining the use of Bernstein's notion of classification in Mathematics education research. In Venkat, H. and Essien, A. (Eds.), *Proceedings of the 17th National Congress of the Association for Mathematics Education of South Africa*, University of the Witwatersrand, Johannesburg, 11 - 15 July 2011, pp. 262 - 274.

Kühne, C., Hendricks, D. & Harris, R. (2011). Building a Conceptual Model for teaching 'sequencing' in Literacy: A teaching and learning experiment. Paper presented at the national Reading Association of South Africa (RASA) conference, 16 - 18 September 2011, University of Cape Town.

Mackay, R. (2011). An examination of pupils' performances on computational-type and proof-type geometry problems - a pilot study. In Venkat, H. and Essien, A. (Eds.), *Proceedings of the 17th National Congress of the Association for Mathematics Education of South Africa*, University of the Witwatersrand, Johannesburg, 11 - 15 July 2011, pp. 237 - 248.

Sherman, K (2011). Wiki What? A Practical Introduction to Building Wikis for Teaching and Learning. Paper presented at the ICT in Schools Conference. 4 - 6 July 2011, Johannesburg.

Sherman, K (2011). The Science of PowerPoint: Applying Multi-media Literacy Theory. Paper presented at the ICT in Schools Conference. 4 - 6 July, Johannesburg.

Sherman, K (2011). Overcoming ICT Challenges: A School-Based Solution. Paper presented at ICT in Schools Conference. 4 - 6 July, Johannesburg.

Van der Walt, C. & Dornbrack, J. (2011). Academic biliteracy in South African higher education: strategies and practices of successful students. In *Language, Culture and Curriculum* vol. 24, no.1, pp. 89 - 104.

SERVICE ACTIVITIES



Jonathan Clark UMALUSI, member
Norman Davies CUES UCT, member
Gilbert Dolo SAARMSTE, member
 IKS Working Group, UWC
Jacqui Dornbrack RASA, Executive member
 KENTON ASSOCIATION, member
Marlene Esau RASA, member
Kaashief Hassan AMESA, member
Yusuf Johnson AMESA, member
Gillian Kay SAARMSTE, member
Cally Kühne Persona Doll Training, Board member
 RED INK, Board Member
 PRAESA, member
 ELRU member

Roger MacKay

Nomvuyo Mgoqi

Thembeqa Mqambeli
Ferial Parker

Nalini Parsotam RASA, member
Andrew Petersen Soetwater Environmental Centre, member of Board of Directors
 SAARMSTE, member

Gary Powell AMESA, President, Western Cape
 IMSTUS, member of governing body
 CPUT, Advisory Board member for CPTD

Anthea Roberts AMESA, member
Edna Rooth UMALUSI, member
Kevin Sherman SITE, member





ABBREVIATIONS, ACRONYMS AND TERMS

AMESA	Association of Mathematics Educators of South Africa
ASTSG	After School Tutoring Support Group
ACE	Advanced Certificate in Education
BCP	Basic Concepts Project
CAPS	Curriculum and Assessment Policy Statement
CPTD	Continuous Professional Teacher Development
CPUT	Cape Peninsula University of Technology
CUES	Centre for University Education in Science, at UCT
DBE	Department of Basic Education
DEADP	Department of Environmental Affairs and Development Planning
ECD	Early Childhood Development
ETDP SETA	Education, Training and Development Practices Sector Education and Training Authority
ESD	Education for Sustainable Development
ESE	Environmental and Sustainability Education
ELCD	Early Learning Childhood Development
ELRU	Early Learning Resources Unit
EMEP	Extra-Mural Education Project
FAL	First Additional Language
FET	Further Education Training Band (Grades 10 to 12)
GET	General Education Training Band (Grades R to 9)
HEI	Higher Education Institution
ICTS	Information and Communications Technology Services
ICU	International Christian University, Tokyo
IKS	Indigenous Knowledge Systems
IMSTUS	Institute for Mathematics and Science Teaching, at Stellenbosch University
MESA	Mainstreaming Environmental and Sustainability into African university sites
MSEP	Mathematics and Science Education Project, at UCT
MST	Mathematics, Science, Technology
PRAESA	Project for the Study of Alternative Education in South Africa
RASA	Reading Association of South Africa
REEP	Regional Environmental Education Programme
REQV	Relative Education Qualification Value
RNE	Royal Netherlands Embassy
SAARMSTE	South African Association for Maths, Science and Technology Educators
SAASTE	South African Association of Science and Technology Educators
SAWISE	South African Women in Science Education
SDU	Schools Development Unit
SEEDS	Systemic Education and Extra-Mural Development and Support Consortium
SITE	Society for Information Technology and Teacher Education
SMT	School Management Team
SADC	South African Development Community
SSME	School of Science and Mathematics Education, at UWC
UCT	University of Cape Town
UWC	University of the Western Cape
WCED	Western Cape Education Department

The following environmentally friendly papers on which this Annual Report were printed are as follows:
Masuga is a locally produced paper which is made up of 90% sugar cane waste (bagasse), which is unbleached making it totally chlorine free. The remaining 10% virgin fibre is from FSC (Forest Stewardship Council) certified sources.
Munken Pure and Lynx is a FSC certified paper. The pulp used is sourced from well managed forests and is totally chlorine and acid free.