Our ever-expanding weight issues
Super-sizing SA?

Learning *from* **experience**

INVESTING
IN OUR
CHILDREN'S
FUTURE

Clashing systems of authority
Modern vs traditional

THE CEO NOTES

Improving education to better life opportunities

Quality education is an indisputable prerequisite for development to occur and, similarly, development is a prerequisite for improvement of education. Development offers opportunities for improvement of infrastructure necessary for education to take place, and also offers opportunities for production of qualified teachers, as well as learners who can learn. When teachers lack basic resources to teach, learners are less likely to benefit from education.

South Africa is a middle income country, yet it has such immense inequalities, where some areas are very underdeveloped and others are world-class. If one was sitting in Washington DC watching the 2010 Soccer World Cup being played in Cape Town, one would not imagine that ten kilometers away is the sprawling Crossroads township, where people live in makeshift houses, lack proper sanitation and access to water in their homes. These inequalities are reflected in our development indicators of unemployment of more than 40% if we include those who have simply given up trying to find work, a Gini-coefficient of 0.68 and the fact that 30% of our population live on social grants.

The high inequality in our country advantages those who live in formal housing, have income and enjoy access to educational material. Those living on the fringe of society are unlikely to benefit from education. It is no surprise that the matric results are better in former Model C schools, which are almost entirely located in better neighbourhoods. Unfortunately, the Model C schools are in the minority. It is therefore of the utmost importance that the government has prioritised education and prescribed solutions to ensure effective teaching takes place.

Since 1994, the South African government has initiated many policies and programmes to improve the state of education, but with limited success. There have been strides in increasing access to education but quality education remains elusive. The present government has prioritised education, and Outcome One of the government's set of priorities is the improved quality of basic education for all.

Education research and evidence-based policy recommendations could support government by providing insights and knowledge for new or modified programme interventions, and also provide insights into the impact of policies designed to improve the quality of education.

In September 2006, an education consortium comprising the Human Sciences Research Council (HSRC), Education Policy Consortium (EPC), JET Education Services (JET), and the Project for the Study of Alternative Education in South Africa (PRAESA), successfully submitted a proposal to the Royal Netherlands Embassy to conduct research on the literacy and numeracy challenge in South African schools. The purpose was to arrive at specific policy options and to establish models of good practice to support the Department of Education in its ongoing efforts to improve the quality of education.

The HSRC was appointed the lead agency of what became known as the 3Rs Project. Recognising the importance of a coordinated research effort, the consortium partners designed a research project that would investigate different dimensions of the literacy and numeracy challenge.

Unique to this investigation was that research would be undertaken at a school, family and community level. In addition to producing knowledge, this project also embraced a capacity development dimension: this included both research capacity and institutional development.

In this edition of the HSRC Review we focus on the results of this project, which comes to an end in December 2011. The articles, presented on pages 21 to 41, offer an opportunity for reflection on both the process and the knowledge generated by this five-year project.

The finalisation of the projects culminates in a research conference in October 2011, where the synthesis report from the study will be presented to the director general of the Department of Basic Education.

We believe this research will be of great interest to researchers, policymakers and practitioners.

Training 21ˢᵗ century maths teachers

The South African arm of an international study, the Mathematics Teachers for the 21st-century (MT21) study, involving six other countries (USA, Germany, Bulgaria, Mexico, Taiwan and South Korea), recently gained momentum following a workshop conducted by the HSRC's Education and Skills Development programme and the Michigan State University in the United States.

The study, which is supported by the Department of Higher Education and Training and the SA University Deans' Forum, examines how five South African universities prepare their future mathematics teachers for the general education and training (GET) and the further education and training (FET) bands.

The workshop mainly focused on sharing high-level research skills, such as the conceptual and methodological framework of the MT21 study, and data coding for junior researchers.

The MT21 builds on another international study, the Third International Mathematics and Science Study (TIMSS), conducted in 1999 among 38 countries, with the South African study also led by the HSRC. It measured the mathematics and science achievements of eighth-grade students (aged 13 and 14 years) and collected extensive information from students, teachers, and school principals about mathematics and science curricula, instruction, home contexts, and school characteristics and policies.

The choice of countries participating in the MT21 study is calculated on the basis of their ranking as high, middle or low in the TIMSS study. South African falls in the low-ranking category.

This is the first large-scale international study to examine how future mathematics teachers are prepared. It examines links between teacher education policies, practices and outcomes.

For the participating universities, the benefits are twofold: they are presented with an opportunity to conduct research on their own teacher education programmes and systems; and to learn from other universities and other countries. The study presents a strong capacity-development opportunity for researchers, and the potential to create room for more studies, as well as publishing projects.

> **This is the first large-scale international study to examine how future mathematics teachers are prepared**

Erratum

In the HSRC Review, Vol 9 No 2, page 10, the article *Social networks: Connecting young fathers* by James Hamilton Harding, refers to the research behind the publication of *Teenage Tata: Voices of Young Fathers.* The article omitted to add that this publication was commissioned and funded by Save the Children (Sweden), who are joint copyright holders of the report.

SAHARA experts translate research into actions

The executive director of the International AIDS Society, Mr Bertrand Audoin, is set to speak at the 6th SAHARA Conference 2011 at the end of November. With nearly 20 years in the HIV field, Mr Audoin first became involved in the response to the epidemic at grassroots level in the early 1990s. He will address the social, political and economic landscape of HIV prevention and response.

The Social Aspects of HIV/AIDS Research Alliance (SAHARA) is a network with a strong Africa focus that facilitates the sharing of research expertise and knowledge that could contribute to the prevention and mitigation of the HIV/AIDS epidemic. To this end SAHARA also conducts multi-site, multi-country research projects to generate new social science evidence on HIV/AIDS interventions.

The 6th SAHARA Conference goes beyond the biomedical deliberations to allow interaction between experts and people on the ground, leading to an exchange of principles and findings to be communicated in an understandable manner. These findings are not merely communicated: SAHARA ensures that there are outcomes which allow the research to be translated into action plans.

This unique trait of the conference presents an opportunity for the dissemination of findings in a different way: it captures innovations arising from practical experiences, research and programmes in different contexts.

A capacity-building component is included through skills-building workshops of emerging scientists during the conference and activities after the conference in the hope of addressing deficiencies in the understanding of research finding and building bridges between research and practice.

For more information, visit www.sahara.org.za

DR DIMITRI TSSIOPOULOS (MBA and PhD, Stellenbosch University) has been appointed as the chief research manager at the Social Aspects of HIV/AIDS Research Alliance (SAHARA). Previously, he was an associate director at the School of Tourism and Hospitality, Walter Sisulu University (WSU) in East London, South Africa. He has spent most of his academic career as a head of a school or as departmental chairperson.

DR EBRAHIM HOOSAIN (MBChB, MEDUNSA) took up the position as chief research manager in the SAHARA network, which falls under the HIV/AIDS, STIs and TB (HAST) research programme. Before joining the HSRC he was director of Primary Health Care Services at the Nelson Mandela Bay Metropolitan Municipality.

MR MARK FRIER (B.LIS (Hons), UCT) has been appointed as information consultant in the Information Services division of the HSRC. Mark spent four years working at UCT and 14 years working as a librarian and library manager at the Cape Peninsula University of Technology (CPUT).

PROFESSOR THELMAH MALULEKE (DPhil, UNISA), previously an associate professor in the Faculty of Health Sciences, Mthatha campus, NMMU, took up the position as a senior researcher in the Population Health, Health Sysytems and Innovation (PHHSI) research programme.

DR ZANDILE MCHIZA (PhD in Med Nutrition and Dietetics, UCT) has been appointed as the chief researcher in the PHHSI research programme. Before joining the HSRC, she was a part-time lecturer at UCT's Human Nutrition Unit.

DR GUGU MCHUNU (PhD in Nursing/Health Promotion, UKZN), formerly an executive director of the Durban Chamber Foundation at the Durban Chamber of Commerce, has been appointed as a senior research specialist in the HIV/AIDS, STIs and TB (HAST) research programme.

PROFESSOR HENDRICK KANYANE (DPhil, Public Administration, UP) took up the position of acting director in the Democracy, Governance and Service Delivery programme. Before joining the HSRC he was an associate professor and the head of the Department of Public Administration at the University of Fort Hare, Bisho campus.

Adherence to antiretroviral therapy a challenge

Treating AIDS patients with anti-retroviral therapy (ART) has been shown, in some instances, to pro-long the lives of people, but its success depends largely on adhering to treatment protocols.

If patients default or do not comply with these protocols it could lead to treatment failure, as well as causing resistant strains in HIV in some cases.

It was against this background that the Department of Health wanted to measure non-adherence among patients in a three- to five-year period in Mpumalanga. Ninety ART patients agreed to participate in a study commissioned by the Department of Science and Technology.

The results revealed that 48% of the participants adhered to their ARV treatment, 30% adhered somewhat, and 22% did not adhere at all.

Reasons for adhering to ARV treatment were related to motivated patients; a good understanding of HIV, symptomatic HIV, fewer tablets (not too many), and support from family, friends, partners and community.

Non-adherence was related to the cost of transport and need for food; stigma and discrimination, asymptomatic disease, large number of tablets to take, patients' preference to spiritual and alternative therapy, and poor support services and long waiting times. In terms of drug resistance, very few participants knew what it means, and this was typical among non-adherent patients.

The study concluded that it is crucial to increase education on drug resistance, and that HIV disclosure counselling should address different types of relationships of patients on ART.

To this end, the study will assist in identifying best practices and ways to improve adherence to medication, as well as inform HIV/AIDS education policy.

IN AGREEMENT Dr Olive Shisana, CEO, HSRC, and Dr Sandra Harris-Hooker (PhD), vice-president and associate dean for Sponsored Research Administration at the Morehouse School of Medicine (MSM), Atlanta, Georgia, sign a memorandum of understanding between the two organisations, which agreed to create a cooperative and collaborative framework through which the parties will manage their working relationship in selected areas of research, development, administrative initiatives, sharing of facilities and other resources.

Dieticians and community service

In 2002, the Department of Health implemented compulsory community service for a period of one year for allied health professionals, including dieticians, after completing their undergraduate degree. The department commissioned the HSRC to evaluate the competencies and experiences of community service dieticians.

Of the 168 dieticians placed in communities in 2009, 134 (80%) participated in a quantitative survey. In-depth interviews were held with five dieticians in each province (n=45), while 16 nutrition coordinators also took part in the study.

The majority of community service dieticians reported that their institutions provided a good overview of all aspects of training. Provincial coordinators rated their knowledge and competencies highly. However, dieticians claimed that their job descriptions were confusing, saying that this uncertainty was not limited to themselves, but extended to receiving institutions, as well as the district offices. They pointed out that this had to be attended to before placement.

On another level, dieticians said they spent far more time providing therapeutic nutrition services than preventive nutrition services, which is a government priority. Training programmes should therefore be adapted to pro-vide preventative services, namely on public health and community nutrition.

Other problems were related to staff shortages, language barriers, the lack of referrals, issues related to the transparency and clarity of the placement process, as well as those related to the location of placement.

Overall, the dieticians reported experiencing their community service year positively (60%). This included practical experience (34%), professional development and personal growth (28%), good supervision and support structures (15%), exposure to all aspects of dietetics (5%), good remuneration (4%), and reduced anxiety of finding employment (3%).

This research identifies gaps in the training of dieticians, providing recommendations to address these to better equip future dieticians during their community service years. It also evaluates the experiences and challenges that dieticians face during community service and provides recommendations to the department on improving both service delivery and overall community service experience.

This study ratified the need for community service programmes and provided important recommendations regarding the placement process, the orientation programme, supervision, and the resources associated with this programme. •

How diverse are our diets?

For many South Africans, particularly those living in rural areas and informal settlements, their diets are simply not diverse enough, find **DEMETRE LABADARIOS, NELIA PATRICIA STEYN** and **JOHANNA NEL**.

South Africans, particularly those living in tribal areas and informal settlements, do not eat well. In terms of dietary variety, our meals are not diverse enough, lacking particularly in eggs, legumes and vitamin A-rich fruit and vegetables, which raises serious concerns about the nation's household food security.

Since no single food contains all nutrients required for optimal health, only a sufficiently diverse diet is nutritionally adequate. Monotonous diets based mainly on starches are closely associated with food insecurity, while dietary diversity is an outcome measure of food security at the individual or household level. Food security is defined as access by all people at all times to enough food for an active, healthy life.

STUNTING IN TRIBAL AREAS

Past nutritional surveys have shown that stunting is most prevalent in tribal areas in the Eastern Cape, Northern Cape and Limpopo, where the most commonly consumed foods are maize, tea, sugar and bread – a highly monotonous diet. The diet of many children is low in energy and certain essential micronutrients, and dietary diversity is poor, indicating poor food security.

This study does not evaluate nutrition security or show whether other factors such as access to health care and safe water are adequate. To evaluate nutrition security, these factors also have to be evaluated. However, the findings on dietary variety and, by association, food security, are causes for concern.

NOT ENOUGH VEGGIES AND FRUIT

Findings were that variety is low overall and certainly not in line with the guidelines promoted by the Department of Health. It was particularly poor in the low income group and among black people. The most neglected food groups were vitamin A-rich fruit and vegetables, and legumes and nuts.

It is possible that the government's health messages are either not reaching people or are not understood. Poor people often do not have access to a variety of foods and, unless access is addressed, knowledge of dietary guidelines will probably have little effect. It also needs to be realised that a greater variety will probably increase costs.

The results indicate that environmental factors are important determinants of household food security, though improving the environment is not necessarily going to lead to better household food security if people do not have access to food. Moreover, nutrition security cannot be achieved without food security, knowledge and skills.

MARKETING THE MESSAGE

It is important to evaluate how effective the marketing of the national dietary guidelines are and whether better knowledge will favourably affect households that are food insecure due to lack of access. There is much evidence for school curriculum-based nutrition education to improve knowledge, self-sufficiency and attitudes leading to improved nutritional behaviour. If this is coupled with healthy foods and adequate variety in the primary school nutrition programme, one would be able to provide both knowledge and access to food. It is also essential that schools reinforce healthy eating behaviour through the types of foods sold at the school.

It is clear that nutrition security of individuals and households is influenced by many factors, particularly those related to the immediate environment. Ideally, South Africa should strive for all households to have access to food, water, sanitation and health-care, but this can only happen if economic growth takes place and there are employment opportunities for all. ◄◄

[Summary of an article that appeared in *Nutrition Journal* (2011).]

AUTHORS: Demetre Labadarios, Nelia Patricia Steyn, Centre for the Study of Social and Environmental Determinants of Nutrition, HSRC; and Johanna Nel, researcher, Department of Logistics, University of Stellenbosch.

What's in the lunchbox?

Preparing a lunchbox for school-going children may have significant advantages for their eating behaviour and long-term health prospects, says **ZULFA ABRAHAMS** and her research team, following a study at disadvantaged schools in the Western Cape.

A joint study by the HSRC and the Medical Research Council on dietary habits of learners from disadvantaged schools in the Western Cape found that lunchboxes play an important role in the nutritional status of school-aged children.

Learners who take a lunchbox to school are more likely to consume a diet adequate in nutrients and are less likely to be overweight or obese, whereas learners who do not take a lunchbox to school are more likely to eat unhealthy snack foods sold at tuck shops or by vendors. Globally, non-communicable diseases are increasingly being recognised as major causes of illness and death, especially in low-income regions such as sub-Saharan Africa.

The burden of non-communicable diseases is growing in South Africa, where a complex mix of over-nutrition and under-nutrition is found. This has resulted in nutrition-related conditions such as underweight and overweight /obesity co-existing in primary schools.

In this study the researchers sought to identify and describe factors associated with tuck shops and lunchbox behaviours of primary school learners. Data from a cross-sectional survey of 717 learners (10 to 12 years) at 16 primary schools in the Western Cape was analysed.

DIETARY DIVERSITY

Most learners (69%) took a lunchbox to school. Children who took a lunchbox to school appeared to have greater dietary diversity, consumed more regular meals, had a higher standard of living and greater nutrition-

al self-sufficiency (competency) compared with those who did not. Learners who did not take a lunchbox to school would either not eat anything during the school day or would buy food from tuck shops or vendors.

Items commonly sold at schools were found to be high in energy, such as chips/crisps, sweets/candy and soft drinks, and high in fat.

The majority of learners who ate items from the tuck shop/vendor had a lower standard of living than those who did not. This suggested that learners from disadvantaged settings did not have control over their lunchbox behaviour. Thus provision of nutritionally adequate meals to these schoolchildren is essential.

> **Children who took a lunchbox to school appeared to have greater dietary diversity, consumed more regular meals, had a higher standard of living and greater nutritional self-efficacy.**

NUTRITIONAL KNOWLEDGE

Learners who did bring lunchboxes to school knew significantly more about nutrition compared with those who did not.

These learners displayed better nutritional behaviour, identified fewer barriers to healthy eating, and were more prepared to make healthy food choices.

Since this study sample represented children from disadvantaged settings, their lunch-

box behaviour may be completely unrelated to their lack of knowledge of nutrition, and it may be influenced largely by the family's financial situation.

It appears that lower-income households may not always have enough money to buy items needed to prepare a healthy lunchbox, but may have enough money to pay for cheaper, energy-dense snack items commonly sold at tuck shops. The dietary behaviour of disadvantaged children warrants attention in terms of nutritional health promotion, especially with regard to the importance of a healthy lunchbox.

[Summary of article published in *Public Health Nutrition* (2011).]

AUTHORS: Zulfa Abrahams (corresponding), Nelia Steyn and Lucinda Dalais of the Centre for the Study of Social and Environmental Determinants of Nutrition, HSRC; Anniza de Villiers, Jean Fourie and Jillian Hill of the Chronic Diseases of Lifestyle Unit, Medical Research Council, Tygerberg; and Catherine Draper and Estelle Lambert of the UCT/MRC Research Unit for Exercise Science and Sports Medicine, Department of Human Biology, Faculty of Health Sciences, University of Cape Town.

Like mother, like daughter

Do perceptions run in the family?

The effects of family environment and ethnicity on body image should be considered when designing health interventions to prevent the development of obesity, suggest the findings of a study by **ZANDILE MCHIZA, JULIA GOEDECKE** and **ESTELLE LAMBERT**.

In South Africa, as in many other developing countries, more and more adult women tend to be obese, a condition which is an important risk factor for chronic non-communicable diseases globally. International studies suggest that ethnic differences in the prevalence of obesity may be due, in part, to differences between groups in body image and dissatisfaction with their body size.

On evidence of a family resemblance in body image, the aim of this study was to identify the extent to which family status (presented as mother-daughter resemblance) and ethnicity explains differences or similarities in the body image and perceptions of South African mothers and their pre-adolescent daughters.

Internationally, there is substantial evidence associating body image to women's responses to weight changes and attitudes towards weight control. In South Africa, women are less likely to see themselves as overweight, irrespective of body size. In their survey of the demographics of obesity, T Puoane et al. found that only 22,1% of South African women of all races perceived themselves as being overweight, when in fact 56,6% of women interviewed were classified as overweight or obese.

BODY SIZE DISSATISFACTION

These findings were influenced by ethnicity in that only 27% of overweight or obese black women correctly perceived themselves as overweight, compared with 65% of women of mixed ancestry and 100% of white overweight or obese women. Similar results have previously been observed in urban South African adolescent girls in that black girls were less dissatisfied with their body size and shape, and were less likely to desire a smaller body size than mixed ancestry and white girls.

Similar results have been observed in the USA where low-income African-American women of different ages tend to have fewer weight-related body image concerns than their white counterparts. Similarly, KJ Flynn and M Fitzgibbon showed that black adolescent girls of normal weight have a preference for a larger body size compared with white adolescent American girls.

In a study comparing overweight white and black adult American women, J Stevens et al found that black women were 40% less likely to feel guilty after eating, were two and a half times more likely to be satisfied with their weight, and 2,7 times more likely to consider themselves attractive than white women.

There is, however, little research directed at exploring the sociocultural factors influencing body-size perceptions and attitudes between mothers and daughters in relation to obesity in countries undergoing epidemiological transition, such as South Africa.

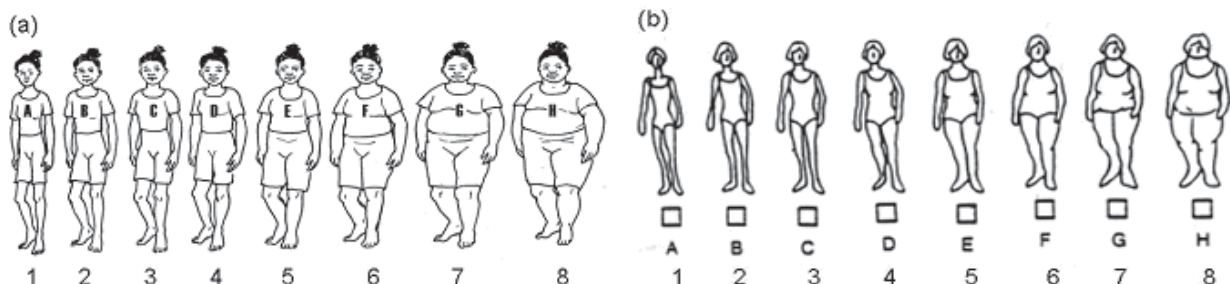This may be considered in the context of the coexistence of maternal over-nutrition and childhood under-nutrition, which has been described in Africa.
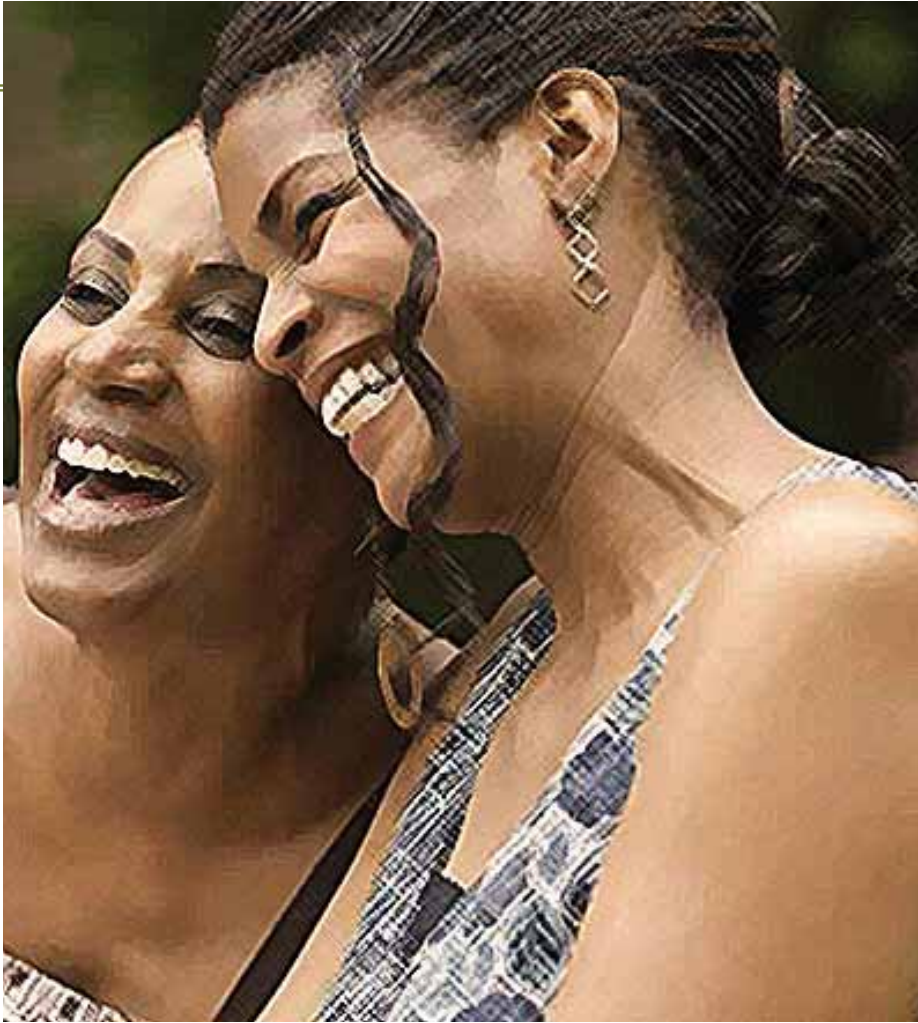
WOMEN'S SILHOUETTES

In our previous study of 204 South African women and 333 pre-adolescent girls from different ethnic groups we showed that, overall, participants had appropriate perceptual body size. Positive correlations were found between the silhouettes chosen by the participants to represent their 'feel' and their actual body size and body fat percentage. However, these relationships were altered by ethnicity in that black girls did not display the same degree of unhappiness with a bigger body size than white and mixed ancestry girls.

The women and girls had to choose from the silhouettes below ▼

This study provides novel insight into the important and respective roles of family membership, maternal modelling and ethnicity on different dimensions of body image, such as body size perception, and body size dissatisfaction in South African women and their daughters. What emerged was that mothers and daughters from black families demonstrated an overall greater body size tolerance than their white and mixed ancestry counter-

parts. To our knowledge, this is the first time in South Africa that these two constructs – family membership and ethnicity – have been compared in the same population with respect to different dimensions of body image in relation to obesity. These results corroborate those of international studies.

Striking findings from this study were that black girls seemed to differ from their mothers in terms of body size preference. In this study, black girls were leaner, yet they preferred a larger silhouette.

On the other hand, most black mothers were obese, yet they preferred leaner silhouettes. What is of concern is that South African studies suggest that overweight black women are resistant to adopt healthier behaviours despite knowing that they are at an increased risk for non-communicable diseases.

This resistance may be partly endorsed by the weight-loss stigma associated with the HIV/AIDS wasting syndrome, as well as the fact that being overweight in the black culture is a symbol of wealth, autonomy, attractiveness and happiness.

Based on these beliefs, black South African women may be more reluctant to lose weight than women of different ethnic origin. White and mixed ancestry families participating in

> **This resistance may be partly endorsed by the weight-loss stigma associated with the HIV/AIDS wasting syndrome and the fact that being overweight in the black culture is a symbol of wealth.**

this research associated a leaner body size with beauty, health and happiness.

This study shows that, despite South African pre-adolescent girls being significantly less dissatisfied about their body size compared to their mothers, intra-familial resemblances of body size dissatisfaction existed when the potential confounding differences in maternal body size were removed. Further, this study highlights that society and culture influences body size dissatisfaction.

DEVELOPMENT OF OBESITY

These results have important implications for the development of obesity in South Africa,

given the high prevalence of obesity in women, which also differs between ethnic groups. This strongly suggests that in South Africa health promotion needs to be ethnic-specific and should always involve families.

Strategies and interventions should be directed at increasing the awareness of a healthy body size status and maintaining it to prevent obesity. This is highly important for those populations that are at the highest risk of becoming overweight and obese but may not be concerned that they are overweight – black South African women in particular.

It must be noted that eating and exercising behaviours and attitudes were not analysed. This is relevant, since international studies have shown that family environment and parental modelling influence a child's diet and exercise. Second, the study surveyed only pre-adolescent girls.

The inclusion of adolescents may have provided further insight regarding children's attitudes and perceptions towards body image, which has been shown to be influenced by children's sexual maturity.

The study suggests that South African researchers, educators and health promoters should consider the effects of family environment and ethnicity on body image when developing intra-personal and targeted interventions for the prevention and management of obesity.

Most particularly, health education should not only be directed at the overweight or obese, but include the whole family so as to help dispel the myth and stereotype suggesting "big" to be beautiful, healthy and respected.

More focus is to be directed to under-served and vulnerable communities, and young black South African pre-adolescent children in particular, who are at risk of becoming overweight adults. ◄

AUTHORS: Zandile Mchiza, Population Health, Health Systems and Innovation Unit, HSRC; Julia Goedecke, UCT/MRC Research Unit for Exercise Science and Sports Medicine, Department of Human Biology, Faculty of Health Sciences, and Sports Science Institute of South Africa; Estelle Lambert, UCT/MRC Research Unit for Exercise Science and Sports Medicine, Department of Human Biology, Faculty of Health Sciences.

PRIDE and PREJUDICE
Gay men who are HIV-positive fear 'double discrimination'

South Africa's Constitutional protections against discrimination for sexual orientation afford countless opportunities to bring men who have sex with men (MSM) out of the shadows and into the reach of public health interventions. Fear of disclosing sexual orientation remains commonplace, with MSM experiencing a sense of vulnerability that they could fall victim to stigmatisation and discrimination. The pressing concealment of sexual orientation also creates barriers to seeking healthcare, and AIDS stigmas add a layer of concealment that ultimately propagates the spread of HIV. This study by **ALLANISE CLOETE** and her co-authors examined the stigma and discrimination experiences of MSM living with HIV/AIDS.

Currently, it is unknown how many people living with HIV in South Africa are MSM, and even less is known about the stigmatisation and discrimination suffered by HIV-positive MSM.

This study examined the stigma and discrimination experiences of MSM living with HIV/AIDS in South Africa.

Anonymous venue-based surveys were collected from 92 HIV-positive MSM and 330 HIV-positive men who only reported sex with women (MSW). Internalised stigma was high among all HIV-positive men who took part in the survey, with 56% of men reporting that they concealed their HIV status from others.

STIGMA AND DISCRIMINATION

Previous research has found that black African South African MSM are highly vulnerable to HIV infection, and also revealed that fear of being HIV-positive and fear of being assumed to be gay presents barriers to making use of the available voluntary HIV testing and counselling services.

Although South African MSM are recognised as at risk for HIV/AIDS, this population remains marginalised and to a large extent neglected in current HIV/AIDS-prevention campaigns and research.

This study found that HIV-positive MSM generally experienced more discrimination related to their HIV status than their non-MSM counterparts. It therefore appears that HIV-positive MSM suffer double or multiple discrimination, or 'superdiscrimination'.

However, contrary to our hypotheses, there were no differences between MSM and MSW on the internalised stigma items.

TAKING UP THE CHALLENGE

Interventions are needed that can assist HIV-positive MSM to better adapt and adjust to their condition and the social environment. In particular, coping efficacy training to address managing social stigma and reducing internalised stigma should be developed and tested. In the development of risk-reduction interventions for HIV-positive MSM, a component focusing on reducing the use of injection drugs is also important in tailoring the intervention for HIV-positive MSM.

HIV-positive MSM may also benefit from interventions designed to broaden and strengthen their social support networks. For example, support groups, which are already common in South Africa, especially among MSM living with HIV/AIDS, may be used as starting points for the development of social support interventions.

However, the ultimate solution to HIV/AIDS stigma, especially among MSM, does not lie in the hands of HIV-positive men alone. Structural interventions are needed to change both the social climate of HIV/AIDS and sexual politics around sexual practices of MSM. Reducing the combined HIV/AIDS and MSM stigmas at the societal level could impact on the internalised stigmas that are clearly magnified in MSM living with HIV/AIDS. ◄◄

EXPERIENCE	MSN n = 92		MSW n = 330	
	n	%	n	%
Difficulty of disclosure	59	64	213	66
Feeling 'dirty' due to being HIV+	34	37	102	32
Feelings of guilt	46	50	148	46
Feelings of shame	41	45	139	43
Feelings of worthlessness	34	37	121	38
Feelings of self-blame	42	46	170	53
Hides HIV+ status	51	55	188	58
Certainty of disclosing to partner	59	64	203	63
Talking to a friend about it	53	58	239	74
Treated differently by friends and family	42	46	124	38
No visits after HIV+ status disclosure	37	40	107	33
Loss of employment	41	45	72	22
Discriminatory experiences	58	64	131	40
Concealment of HIV+ status	64	59	193	60

> **Currently, it is unknown how many people living with HIV/AIDS in South Africa are MSM, and even less is known about the stigmatisation and discrimination suffered by HIV-positive MSM.**

AUTHORS: Allanise Cloete, Leickness Simbayi and Nomvo Henda, HIV/AIDS, STIs and TB research progamme, HSRC; Seth Kalichman, Department of Psychology, University of Connecticut, Storrs, USA.

Devil makes work for idle hands

Leisure-time sedentary behaviour is strongly associated with alcohol, tobacco and drug use among adolescents, writes **KARL PELTZER**, research director in the HIV/AIDS, STIs and TB research programme, HSRC.

Physical inactivity leads to higher levels of illness (morbidity) and deaths (mortality) from chronic non-communicable diseases. In high-income countries, studies have measured physical activity and substance use among school-goers, but comparable data is lacking from most African countries.

The purpose of this study was to look at the relationship between the frequency of leisure-time physical activity and sedentary behaviour, and alcohol, tobacco and drug use among schoolchildren.

We conducted a nationally representative survey among a sample of 24 593 schoolchildren in the age group 13 to 15 years from eight African countries, namely Botswana, Kenya, Namibia, Senegal, Swaziland, Uganda, Zambia and Zimbabwe.

In the findings, only 14,2% of the schoolchildren were frequently physically active (five days and more per week, at least 60 minutes a day) during leisure time. This was significantly higher among boys than girls.

Frequency of alcohol consumption and higher socioeconomic status were significantly associated with leisure-time physical activity levels, while tobacco, illicit drug use, and mental health variables were not. Leisure-time sedentary behaviour of five or more hours spent sitting down on an average day was highly associated with all forms of substance use.

PHYSICAL VS SEDENTARY ACTIVITY

Leisure-time physical activity was described as: 'Any activity that increases your heart rate and makes you get out of breath some of the time', whether in sports, playing with friends, or walking to school. Some examples are running, fast walking, riding a bike, dancing and football.

Leisure-time sedentary behaviour was described as mostly sitting when not in school or doing homework, for example: 'How much time do you spend during a typical or usual day sitting and watching television, playing computer games, talking with friends, or doing other seated activities?'

> **Five or more hours spent sitting on an average day during leisure time were highly associated with substance use of all kinds.**

ALCOHOL AND DRUG USE

Overall, 15% reported past month alcohol use. The highest frequency of alcohol use was reported by Zambian and Namibian schoolchildren (42,3% and 32,8% past month, 5,6% and 3,7% typically five or more drinks a day, respectively), and the lowest frequency among Senegalese school children (3,2% past month and 0,2% who drank five or more drinks a day).

Similarly, illegal drug use was highest among Zambian and Namibian schoolchildren (38,1% and 28,8%, respectively) and the lowest among Senegalese schoolchildren (0,6%). Boys reported tobacco and alcohol use significantly more often than girls, while there was no significant gender difference for illegal drug use.

Regular and frequent physical activity levels were associated with lower use of alcohol, and five or more hours spent sitting on an average day during leisure time were highly associated with substance use of all kinds. This has implications for the promotion of physical activity and prevention of substance abuse. In addition, children should be discouraged from sitting for extended periods.

GETTING THEM OFF THE COUCH

More research is needed on the cognitive, social, and environmental factors that may influence physical activity, time spent sitting, and substance use levels among adolescents so that effective interventions can be developed that may help children and adolescents become more active.

It is also imperative to consider exercise and physical activity as a means to prevent and combat the childhood obesity epidemic.

In African countries, different kinds of interventions targeting 'total physical activity' in the domains of work, active transport, reduced sitting time, as well as leisure-time physical activity promotion are needed. ◄◄

Summary of an article, *Leisure time physical activity and sedentary behaviour and substance use among school adolescents in eight African countries*, published in the *International Journal of Behavioural Medicine* (2010).

Striking a **balance** between the **old** and the **new**

Most African countries are governed by two systems: formal state-sanctioned (modern) institutions of governance; and traditional institutions that mostly govern rural populations. The fragmentation of institutions has created a number of serious socioeconomic problems. How can this be solved? **KIDANE MENGISTEAB** and **GERARD HAGG** report on a study that tries to do exactly that.

The study – a partnership between the HSRC and Pennsylvania State University – was conducted by a consortium of researchers from South Africa, Ethiopia, Kenya and Somaliland.

It investigated the following: firstly, the structure of traditional authority systems and the extent to which African populations rely on these; secondly, how traditional institutions overlap with or deviate from democratic principles; and thirdly, how aspects of traditional institutions might be reconciled with formal institutions to create coherent and effective systems of institutions in Africa.

Why is fragmentation a problem? African countries have been operating under fragmented institutional and socioeconomic systems since colonisation, with no clear vision of how to bridge this divide. The political economies of many of them seem to be dysfunctional. The most serious socioeconomic problems associated with lasting institutional fragmentation are the following:

POLICY INCOHERENCE

It is highly challenging for policy to cater to fragmented economic and institutional systems. Most African governments operate under the formal institutional system and essentially neglect the plight and interests of the populations in the traditional sector, condemning that segment of the population to deprivation and poverty. By so doing, they fail to facilitate the transition which would harmonise the fragmented economic and institutional systems. Under these circumstances the transitional fragmentation is transformed into a permanent condition.

WEAK STATE LEGITIMACY

A critical outcome of institutional fragmentation and the consequent neglect of the traditional sector is the institutional detachment of the state from the overwhelming majority of the population and the loss of legitimacy,

placing the state at risk. Any insurrection by a segment of the population has the potential to bring about not only the fall of governments, but also the collapse of the whole state structure because the popular foundation of the state is weak.

GENDER RELATIONS

Marginalisation of the traditional sector tends to disproportionately hurt women and other vulnerable segments of society. Women's rights are hard to safeguard without transforming their position in the labour sector, since their marginalisation in that sector is largely determined by the socioeconomic system.

ETHNIC CONFLICTS

Often the marginalisation of the traditional sector tends to disproportionately impact on certain ethnic groups for a variety of reasons. ►►

Effectiveness of traditional and modern institutions in conflict resolution
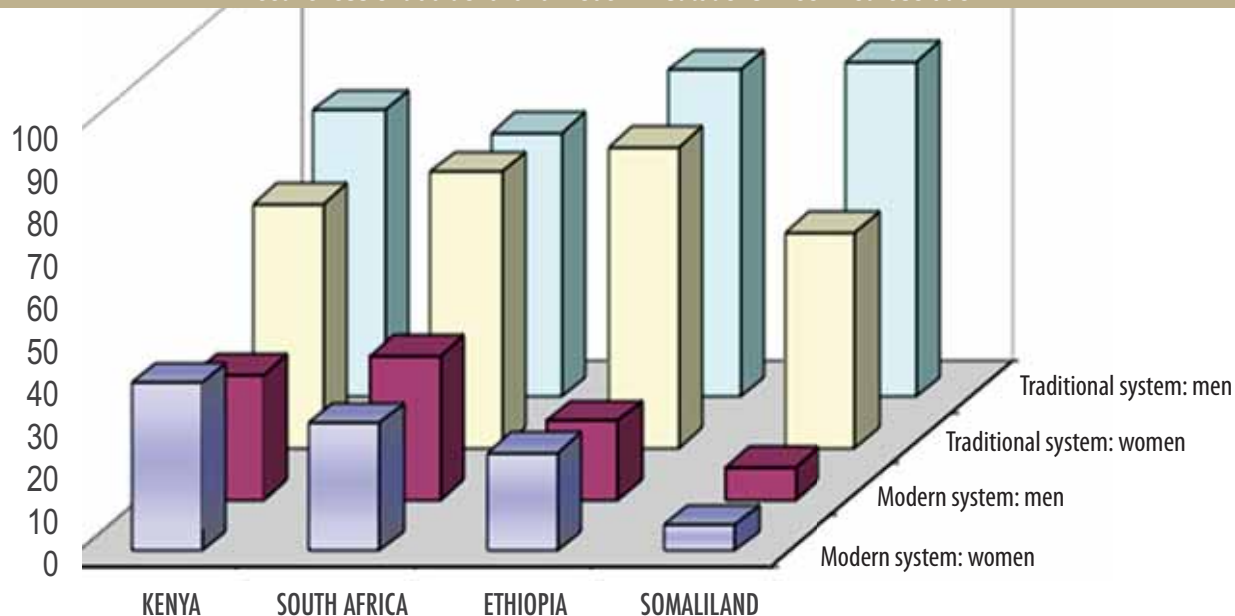
GIVING CONSENT A respondent from Giyani, Limpopo, completing the consent form for the household survey for the project, Reconciling Africa's fragmented institutions of governance.

The disparities have propelled ethnic conflicts in many countries. Ethiopia and Kenya are two countries in our study that are vulnerable to such conflicts.

NATION-BUILDING AND DEMOCRACY

The combined effect of the above-identified conditions has also undermined peaceful nation-building and democratisation. There is no doubt that rural communities participate in elections, albeit at low levels, as our findings reveal. However, their participation in the electoral process has not enabled them to influence policy and overcome their deprivation. Under such conditions, the democratisation effort in much of Africa has remained rather shallow, limited to basic elections which are often marred by fraud and rigging, and often followed by violence, as in Kenya and Ethiopia.

METHODS AND FINDINGS

The study combined an extensive literature survey, interviews with key informants, focus group interviews and random household surveys in South Africa, Ethiopia, Kenya and Somaliland.

The findings revealed that traditional institutions in all four countries are resilient, despite efforts in many states to remove or ignore them. Traditional institutions persist for a number of reasons, such as sharing the same cultural and historical roots as their communities; transaction costs to use them are low; state institutions, for example judicial services, are weak or difficult to access; and the high success rate and speed of traditional institutions.

Traditional institutions are also widely trusted by communities, in part because their decision-making systems are participatory and their conflict resolution mechanisms are primarily geared at reconciling parties in conflict, rather than merely punishing guilty parties. The majority of respondents (both men and women) perceived traditional institutions

to be more effective in resolving conflict than modern ones (Figure 1 on page 11).

The table below shows that traditional institutions are mostly equally effective in addressing community concerns.

On the downside, traditional institutions are challenged by liberal democratic representatives for their perceived patriarchal despotism and lack of gender equality. The research found that traditional institutions tend to treat women unequally to men. In spite of this, many female respondents perceived the traditional institutions as more effective in addressing community problems than modern state institutions.

LESSONS LEARNT

Reconciliation approaches are more likely to succeed when they take into account those grassroots approaches already underway, and reinforce them with state recognition of customary law, especially with respect to land ownership.

Here are some of the lessons learnt about approaches to reconciliation:

▶ Building bridges between the two systems and possibly integrating them implies some similarities to anchor them. But there are some significant differences in the nature of the two systems. Modern institutions are based on codification, text, fixed structures and prescribed processes and procedures. Traditional institutions – with a number of variations – tend to be based on communal memory, often that of the elders, and the interpretation of such memories. Applying living customary law makes the traditional institution flexible, but also allows for manipulation.

▶ External challenges are set by Constitutional and legislative frameworks that have been adopted by the state, as well as contextual factors, such as power struggles over resources; the role of human rights organisations in court cases; high costs of contestations of state institutions; levels of literacy and education among communities; and the impact of mass media and global trends.

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African countries have been operating under fragmented institutional and socioeconomic systems since colonisation, with no clear vision of how to bridge this divide.

CONDITIONS FOR RECONCILIATION

In view of the ratification of universal declarations and conventions by most African states, it is obvious that democratic principles should be the dominant guides in the reconciliation of the two types of institutions. However, liberal democracy is but one version of democracy, and the discourse on democracy is an open one, and needs to be located within the nation-state discourse within the African context. Those democratic principles that are inherent to traditional institutions should be recognised. The concepts that deal with reconciliation use specific language that has to be taken into account when reconciliation is proposed and implemented.

Traditional communities and their subgroups use language structures that deal with the complexities of their livelihoods. Often such language is lost in the more academic, legal and policy-oriented documents. This could result in generalisations which may not fit the specificities within particular communities. Language of reconciliation and terminology should thus be based on shared understanding.

The implementation of Constitutions is regularly tested through court cases, which guide the way forward. In some countries attempts have been made to codify traditional law. The success of codification depends on the uniformity of communities, and the potential of codified law to provide for all citizens in a country or state.

Where substantial cultural differences exist in a country, the state may need to remain flexible in the reconciliation of traditional institutions themselves in order to achieve integrated national legislation.

The development of reconciliatory institutions should thus be viewed as an ongoing process, combining practices and political constructs.

A framework for reconciliation should make provision for principles of reconciliation, consensual policy-making processes, appropriate structures and organisations, and universal participatory processes. ◄◄

Country	Traditional authorities are more effective	Government authorities are more effective
Kenya	49%	51%
Ethiopia	50,7%	49,3%
South Africa	39,4%	46,2
Somaliland	77,6	15,3

AUTHORS: Professor Kidane Mengisteab, Department of African Studies, Pennsylvania State University; Dr Gerard Hagg, Human Sciences Research Council.

Orphans and vulnerable children
Service provision in Lesotho

Astonishing results of Lesotho's most recent population census reveals that the small country experienced a 70% increase in the number of orphans during the ten-year period from 1996 to 2006. Eye-catching too is the fact that more than 20% of Lesotho's orphans had lost both parents, and that AIDS-related illnesses account for the vast majority of these cases, writes **DUNCAN SCOTT.** Against this background, the state of service provision for orphans and other vulnerable children (OVC) in the impoverished country has come under the spotlight. [An AIDS orphan is understood as a child who is an orphan because one or both parents died from AIDS.]

The HSRC, in association with the Joint Economics, AIDS and Poverty Programme (JE-APP), examined services for OVC with the main aim of distinguishing their efficacy, distribution and focus. This study has illuminated, among other things, how a lack of information gathering and sharing among service providers has contributed to undermining the support base that does exist. More than anything, the mindset of 'going it alone' emerged as the central theme of the study.

Having conducted in-depth interviews with representatives from locally-based non-governmental organisations (NGOs), international NGOs and government ministries, it emerged that what primarily hobbles Lesotho's OVC services is not a lack of interventions.

Rather, a fragmented field of organisations vying for limited resources frequently stunts efforts to reach as many children as possible. Moreover, it surfaced that several institutes' own definition of OVC was slightly at odds with that of the government. In a nutshell, the state of OVC services is fragmentary and under-resourced, the geographi-

cal coverage is inadequate, and emphasis needs to be placed on expanding psychosocial interventions. The three policy suggestions outlined below provide a way forward.

The Department of Social Welfare in Lesotho launched its internal monitoring structures in 2008, but the system has struggled to gain momentum. By increasing its capacity the department should firstly be able to determine the precise needs of orphans in Lesotho.

Secondly, while the HSRC was able to compile a preliminary list of OVC service providers, it is important that a longer-term operation update this inventory. Only then will Lesotho be able to regulate the conditions under which civil society engages with OVC. For example, in 2003, South Africa instituted guidelines for establishing child care forums.

A lack of synchronisation, besides resulting in duplication of services, also increases the chances that services will be inconsistently distributed. Lesotho has ten districts, but the majority of service providers are based in the predominantly urban Maseru area. This is despite the fact that more than

three quarters of the population lives in rural and often remote areas.

It was common for representatives of government ministries to bemoan the lack of resources available to them. Too few staff members, insufficient training and inadequate motor vehicles were at the top of the list. However, to date, NGOs have been highly instrumental in ensuring OVC receive the services they need.

While their expertise should be retained, a better-resourced state able to steer the sector and implement its own OVC policies would benefit all parties involved, not least OVC themselves.

Service provision for OVC in Lesotho is by no means in a state of disrepair. It is clear, however, that service providers need to act together to ensure they reach the children who currently have inadequate or no support. Going it alone is no longer an option. ◄◄

AUTHOR: Duncan Scott is a Master's intern in the Human and Social Development research programme, HSRC.

The **HSRC** and **open access**
to scholarly journal articles

Traditionally, journals have been sold on a subscription basis to academic institutions. This meant that only researchers in institutions that could afford to pay the subscription charges were able to read journal articles. But a revolution is taking place with the introduction of open access publishing, writes ALISON BULLEN.

Even though the internet has changed how we conduct and share research, and potentially increased the global reach of scholarly communication, it has not resulted in significant reduction in costs of journals. This is in part because the bulk of the cost of producing academic journals lies in the peer-review process and other costs not related to the printing and distribution of journals

The advent of the internet has therefore not resulted in wider distribution of scholarly work, but rather an expansion of the deep or hidden web where material is available but only at a price, and these high costs, along with patchy internet access in many developing countries have only served to widen the gap between northern and southern hemisphere countries.

However, pressure from the 'open access' movement and a general move towards seeing knowledge as for the common good rather than having proprietary value, has forced scholarly journal publishers to explore new business models which make research more available while still allowing them to recoup their costs. There has also been pressure from donor organisations and governments who are increasingly demanding that there be open access to articles that report on research that is funded by public monies.

A number of different models have emerged:
► Full open access – open access journals such as *South African Medical Journal* and the *South African Journal of Clinical Nutrition* (note that both of these journals are published by professional associations and not commercial publishers).
► Open access after an embargo of 12 months – for example AIDS, which is published by Aidsonline.
► 'Author pays' option, where the publisher charges authors (or their institutions) a fee which allows others free access to that specific article through the publisher's website; fees can go up to € 3 000 per article.
► Free access to pre-prints (articles before the peer-review process) or post-prints (articles after the peer-review process) that can be loaded onto an institutional or personal website, or institutional repository, either immediately or af-

ter an embargo period decided by the publisher.

While publishers search for sustainable business models, institutions such as the HSRC find themselves in a situation where it sometimes pays twice for an article: the library pays to purchase a subscription to a journal, and then the institution pays the 'author pays' fee to the journal publisher to allow others to access the journal article without cost.

The Information Services unit of the HSRC pays a substantial amount per annum for access to scholarly journals from a range of publishers. And even though these are the reduced fees negotiated by the South African Library and Information Consortium (SANLiC), of which the HSRC is a member, the cost of paying additional fees for others to access our research is something we can ill afford.

WHY PAY FOR OPEN ACCESS?

So why pay these 'author pays' fees? Elsewhere in this issue you will see various articles based on research done by the HSRC and published in various open access journals. This article was one of the top ten downloads from Aids Care in 2010. This is a remarkable achieve-ment considering that the journal ranks 12th out of 33 journals indexed by Thompson Reuters in the social sciences, biomedical category, with an impact factor (average number of citations to articles published in a specific journal in a given year) of 1,539 in 2010.

The fact that the 'author pays' fee was paid for this article so that it could be available for free to anyone with internet access greatly increased its exposure and furthered the impact of the research.

A list of the main publishers and journals and their policies on open access can be found at http://www.sherpa.ac.uk/romeo/ More information on open access is available on http://www.earlham.edu/~peters/fos/overview.htm; and http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0020961

AUTHOR: Alison Bullen, Research Use and Impact Assessment programme, HSRC.

Rethinking the role of state-owned enterprises

South Africa has, like many developing economies, made significant gains in addressing a range of socioeconomic challenges over the past decade and a half. Yet high levels of poverty and an unacceptably high level of unemployment persist, compounded by income inequality levels that are now recognised as among the highest in the world.

Presented with serious challenges, the government recently proposed a number of targeted interventions to accelerate economic growth, create new employment opportunities, improve access to basic services, and reduce poverty. In emerging policy debates, thinking has begun to converge on a new (or more specifically defined) role for state-owned enterprises (SOEs) to address some of the challenges described above. SOEs are commonly defined in South Africa as business entities owned wholly or partly by the state and run by a public authority, generating the bulk of their revenue from selling goods and services.

South Africa – still a transitional democracy – has a long history of using SOEs as instruments of socioeconomic advancement, and their contribution to the development of the country has been significant.

They have, however, been plagued by structural and operational problems, resulting in irregular and unequal patterns of development, and an uneven delivery of services and infrastructure. These problems, stemming from what many consider to be sub-optimal modes of operation and inefficient management practices, coupled with a limited human resource base and quite narrowly targeted constituencies, have given rise to considerable debate and discussion about the place and role of SOEs in the country's mixed economy and evolving system of democracy.

Consequently, government has started a process of articulating a more specific vision for SOEs as entities that need to make a direct contribution in improving the standard of living of the population by creating sustainable economic and social benefits. An immediate need, it is argued, is for infrastructure and services

to be provided at the lowest cost and highest quality, with access being extended to historically disadvantaged groups in the community.

DEFINING THE DEVELOPMENTAL STATE

Of wider and longer-term significance is the belief that SOEs should ideally be equipped to lead the way in promoting an African Renaissance by providing world-class expertise, resources, services and infrastructure to a developing continent. This vision is based on the country's ambitions to become a true developmental state, defined at its most basic level as a state that derives its political legitimacy from its record in economic development, which it tries to achieve mainly by means of selective industrial policy.

A more expansive definition, and one taking root in development discourse in South Africa, is a state whose political and bureaucratic elite have the genuine developmental determination and autonomous capacity to define, pursue or implement policies that seek to address a plurality of developmental goals.

It follows, then, that a key question currently being debated in both political and economic circles is whether SOEs in their current form produce the outcomes of a developmental state. As discussed above, the strategic foundational mandate of SOEs in South Africa has always been socioeconomic development. Given that this goal intersects with the outcomes of a developmental state, it would appear axiomatic that the mandate of SOEs should produce the intended goals of a developmental state.

The answer to this question, however, is not obvious, and lies in the ideological and strategic orientation of the SOEs; how they conduct their operations; how they understand their mandates; what their governance, leadership and management structures look like; what type of staffing and procurement practices are evident; what the nature of strategic partnerships looks like; and what investment is made in human capital and technology. It is necessary that this analytic framework be used in determining any strategic repositioning of SOEs as pillars of economic growth and social development.

It has been a key contention that the primary objective of South Africa's developmental state should be to transform the structure of opportunity in the context of a strong and vibrant mixed economy: one in which private sector invest-

> The performance of SOEs against their strategic objectives needs urgent attention. Alignment to current economic policy and national outcomes is also critical; so is a longer-term approach to strategic planning.

ment and activity will offer essential dynamism technological innovation and advancement; and where the state's wide and effective provision of social and economic infrastructure and services becomes a necessary pre-condition for broad-based participation in economic processes.

The combination of such private and public sector potential for development will be crucial to achieving the socioeconomic objectives of a developmental state. Furthermore, such an approach is essential if the country is to meet the challenges associated with integration into the global economy, where the ability to compete increasingly requires productivity gains through investment in human capital and new technologies.

THE ROLE OF SOEs

SOEs have a crucial role to play in the above processes. With the recent 'return of the state' following the failure of global markets, and shifts away from the hegemony of neoliberal ideology, SOEs are likely to be at the centre of development in order to assert the role of the state in this process. Factors that hinder SOEs from contributing optimally to development therefore need to be investigated, whether these be ideological contestations, a lack of overarching legislation, unstructured systems of accountability, complicated lines of reporting, or ownership and governance challenges.

Ultimately, the performance of SOEs against their strategic objectives needs urgent attention. Alignment to current economic policy and national outcomes is also critical; so is a longer-term approach to strategic planning. Reliable and accurate performance information is also critical to assess delivery on mandates.

The New Growth Path and the Industrial Policy Action Plan aptly illustrate government's recent intentions to address – through heightened levels of economic growth – South Africa's job creation challenges in order to mitigate stubborn levels of poverty and growing levels

of inequality. The centrality of SOEs in this process is key, and any attempt to review or rethink their role needs to be supported.

KEY OUTCOMES

If the above necessitates a process of restructuring, it is crucial that three unambiguous outcomes emerge. Firstly, at an enterprise level, efficiency and effectiveness of individual SOEs need to be ensured by searching for private sector expertise and capital, and adopting globally competitive technologies. Recent proposals, for example, to strip Transnet of its rail infrastructure assets (Transnet's inefficient freight operations have caused a bottleneck in the economy) and become an operator competing with the private sector need further investigation.

Secondly, at a broader macroeconomic level, more foreign direct investment (FDI) needs to be attracted to minimise public borrowing tendencies and enhance the economy in ways that encourage financial growth and industrial competitiveness.

Thirdly, at a social level, employment levels need to rise dramatically, and the development of new skills must be enhanced and deployed throughout the economy.

On 12 May 2010, President Zuma announced the establishment of the Presidential Review Committee (PRC) on State-Owned Enterprises, with the main objective of reviewing the role of SOEs in a developmental state. The analytic framework currently used by the committee is analogous to the one cited above, providing a sound basis for enquiry and investigation.

The work of the PRC represents the first real and coordinated attempt in the country's 17 years as a transitional democracy to review the role of SOEs against our national priorities, and its recommendations are eagerly awaited.

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Dr Udesh Pillay is executive director, Democracy, Governance and Service Delivery (DGSD) programme, HSRC. He is also senior research advisor to the PRC, and principal investigator of an SOE project, supported by the Royal Netherlands Embassy (RNE).

Safe snipping

Medical vs traditional circumcision: changing risky sexual habits

It is now indisputable that male circumcision performed in a medical facility protects against HIV. But there is also evidence that the protective benefits of male circumcision are undermined by 'risk compensation', or a lack of restraint when it comes to sexual behaviour. **KARL PELTZER, LEICKNESS SIMBAYI, MERCY BANYINI** and **QUEEN KEKANA** undertook two studies – among the first of their kind – to investigate whether counselling could limit this phenomenon among both medically circumcised and traditionally circumcised men.

These studies were in response to the urgent need for interventions that could prevent men from taking sexual risks after circumcision. Both studies were conducted among young men: one among those who had medical circumcisions and the other among those who underwent traditional circumcision. The mean age of both groups was 20 to 21.

Both studies were designed as follows: The day before circumcision a sample of 150 men in both studies was randomly chosen – 75 in an experimental group and 75 in a control group. The first group attended a three-hour motivational skills-building session, and the control group a 60-minute health improvement education session, with a brief segment on HIV prevention. Three months later both groups were again assessed on key behavioural issues.

INTERVENTION AMONG MEDICALLY CIRCUMCISED MEN

The results of the three-hour risk-reduction counselling session was positive. For example, when analysed it was found that after three months participants had significantly less (59%) unprotected vaginal intercourse. Knowledge about HIV was high before and after the assessment. It also showed that AIDS-related stigma was reduced by 32,4%.

This study concluded that a relatively brief and focused counselling session can have at least short-term effects on reducing the risky sexual behaviour among men who undergo medical circumcision.

INTERVENTION AMONG TRADITIONALLY CIRCUMCISED MEN

Some research has shown that traditional male circumcision seems to protect men from HIV infection, but a population-based survey among predominantly traditionally circumcised men in South Africa did not have the same positive results.

There are several important differences between traditional circumcision procedures and clinical procedures. These include differences in equipment used and counselling provided to the men before and after surgery.

Another difference is how much of the foreskin is removed. Some traditional circumcision involves only a partial removal of the foreskin, while the medical procedure removes sufficient foreskin that the glans remains fully exposed even on a non-erect penis.

It is not known exactly how much foreskin should be removed to reduce the risk of HIV infection in men, but complete removal seems to be the norm. The practice of partial removal of the skin may help explain why some cultures that practise traditional circumcision still have high rates of HIV prevalence.

> **South African men are very resistant to change due to sociocultural values dictating how men should behave.**

METHODS OF COUNSELLING

Recruitment was done at a traditional school with the assistance of the traditional attendant. This is a provisional structure far from the community. Initiates stay at the initiation school for almost two months.

The intervention of HIV risk-reduction counselling was provided toward the end of the stay in the traditional school so as to integrate the intervention with other teachings on manhood. The two counsellors were men who had been circumcised according to the same culture; they were told not to divulge anything about what was happening regarding the study as it would seem they were unveiling what was seen as sacred in the community.

INTERVENTION

The three-hour intervention was similar to that used in the medical circumcision study, which included male circumcision risk reduction content through skills building, personal goal setting, and addressing gender roles, particularly exploring meanings of masculinity and reducing adversarial attitudes toward women.

Condom use skills were explored through interactive group activities, and sexual communication skills were rehearsed in response to sexual risk scenarios. Participants provided feedback in behavioural rehearsal enactments and worked toward setting goals for HIV risk reduction. Alcohol use in sexual contexts was specifically discussed in relation to risk situations.

IN A NUTSHELL

• Traditionally performed circumcisions in South Africa may not provide the same level of HIV protection as medically performed circumcisions for several reasons.
• Traditionally performed circumcisions in South Africa include education that may decrease HIV-related stigma.
• Health providers must assess the knowledge, attitudes, and behaviour of men who have undergone traditional circumcision to determine the need for additional HIV-prevention education.
• Men who have undergone medical circumcision may not have had education or support to help them reduce HIV-related risks. Health providers need to assess this deficit and implement plans to educate these men about continued HIV risks.

RESISTANCE TO CHANGE

The intervention did not have any effect on this sample of traditionally circumcised men.

Why? Possibly because the two-month initiation into manhood teachings were more powerful than the one session of HIV risk-reduction counselling toward the end of the traditional initiation period.

However, from previous research in the same ethnic groups, most traditional circumcision providers did not include HIV/STI education and counselling , and most traditionally circumcised men were not aware of the HIV protective effect of male circumcision, although most believed in protective effects of male circumcision against STIs .

Surprising, however, was the finding that there was a decrease in HIV-related stigma.

PERVASIVE MACHO ATTITUDES

The lack of change in male role norms in both these studies is interesting. It suggests that these South African men are very resistant to change due to sociocultural values dictating how men should behave.

Similar resistance has also been noted with another intervention by our research team addressing gender-based violence and HIV risk reduction. There is therefore a need for a multi-level intervention with theory-based behavioural HIV risk reduction counselling targeting men who have undergone circumcision.

Another intervention would target both men and women at the community level to reinforce what the men learned in their counselling groups.

LIMITATIONS

Study limitations include that interventions in the current research were tested in trials with small sample sizes. In addition, the current studies represented an initial efficacy test of an adapted counselling model to male circumcision and therefore had a short follow-up period.

Finally, the study relied on self-report measures of sexual risk and alcohol use behaviours, which might not always be reliable.

CONCLUSIONS

These cluster randomised trials were the first to study a theory-based HIV intervention to reduce risk among circumcised men in South Africa. There is an urgent need for a larger randomised controlled trial to be conducted, followed by operational research as medical circumcision is being rolled out by the Department of Health nationally.

As for traditional circumcision, there is a need to find ways to moderate the social norms and values inculcated during traditional male circumcision rituals. ◄◄

AUTHORS: Karl Peltzer, Leickness Simbayi, Mercy Banyini and Queen Kekana, HIV/AIDS, STIs and TB (HAST) research programme, HSRC.

The 3Rs Project

Improving the quality of education: the literacy and numeracy challenge

South Africa has made considerable advances in its quest for attaining quality education.

A wide range of policies have been put in place, as wells new curricula, to meet the needs of a post-apartheid society in the 21st century.

Of concern is that changes in policy have not resulted in significant improvement in learner performance. There is a growing consensus among policy makers and experts that, although South Africa has well-established education and other policies, effective implementation remains a challenge. This has ramifications for improving learner performance, particularly as it relates to literacy and numeracy.

Within this context, in 2006 the Education Policy Consortium (EPC), the Human Sciences Research Council (HSRC), JET Education Services, and the Project for the Study of Alternative Education in South Africa (PRAESA), with the support of the Department of Education (DoE), formed a research consortium to explore the various dimensions of the literacy and numeracy challenge in South African schools with a view to arriving at specific recommendations or options and establishing models of good practice as contributions to improving the quality of education.

The results of this five-year project, known as the 3Rs project, funded by the Royal Netherlands Government (RNE), is presented in the following section of the *HSRC Review*, grouped together under four themes.

Each theme consists of different research studies, each highlighting different aspects of the findings. The full report will be made available on www.hsrc.ac.za and on the 3Rs website at www.3Rs.org.za in October 2011.

Assessment plays a prominent role in educational reform because of the desire to initiate improvements of standards in terms of knowledge, skills and attitudes, and to measure what has been attained. Measurement of educational reform is easier to achieve if assessment is tied to standards.

It is increasingly acknowledged, both internationally and in South Africa, that assessment has a direct influence on teaching and learning, and that this power can be harnessed and directed to achieve positive impact.

The studies under this theme were designed to develop – and pilot – an integrated national assessment system that could provide relevant and timely information that all interested parties could apply to improve the decisions made on all levels of the schooling system; in other words, in the classroom, schools, districts, provinces and nationally.

The goal was also to develop and pilot classroom assessment resources, and to implement the Grade 9 Systemic Evaluation Study by modifying and piloting a systems model for monitoring the education system.

Three articles based on the study, *Enhancing teaching and learning in South African schools through assessment: challenges and possibilities*, are presented on pages 21 to 25.

Enhancing teaching and learning in schools through assessment: challenges and possibilities

Lessons from the Western Cape and Gauteng provinces

As part of the literacy and numeracy project, the HSRC conducted a qualitative case study to investigate how the Gauteng and Western Cape Provincial Departments of Education (GDoE and WCDoE) prepare and support teachers to cope with the demands of the curriculum and assessment practices. We also looked at how the information collected is used to improve the quality of teaching and learning. **NOLUTHO DIKO** reports on the findings.

The study participants ranged from the level of deputy director-general to that of curriculum advisor. Data gathering methods included individual and focus group interviews, document collection and document reviews, and, to some extent, observations.

A reporting framework was devised, using the following headings: Policy, organising structure and systems; Strategic plans, resources, curriculum, instruments and tools; Capacity development and training; Reporting and dissemination; and Effective use of information.

There are different schools of thought regarding curriculum and assessment approach; one school of thought is that the two functions are inseparable, while the other approach is that these functions should be separate.

The Western Cape Department of Education (WCDoE) subscribes to the former. District officials in the curriculum sub-directorate, regardless of rank, are assessment savvy; they are trained assessors. When conducting school visits, the curriculum implementers are able to provide teachers with both curricular and assessment support at any given point.

Gauteng approaches the situation differently. There are both curriculum and assessment specialists, and these officials have to complement each other.

STRUCTURES

The structure and organisation of assessment systems largely determines how well they function. The Western Cape structures have increased their emphasis on the importance and visibility of assessment in the system, both in terms of staffing and in the way the system has been structured.

The curriculum sub-directorate at the district level is headed by a curriculum specialist, and curriculum implementers are headed by assessment specialists. The two functions are intertwined and both are given prominence.

In Gauteng, the organogram is skewed toward curriculum. The provision of assessment support and guidance is the primary responsibility of assessment implementers, who are fewer and have their own reporting and training structures. If there is a shortage in supply, assessment is put on the back burner and curriculum services get preferential treatment.

USE OF INFORMATION

The participants emphasised that collecting information of formative value (data that can be used, evaluated and utilised by the system) is key to the improvement of teaching and learning. Both systems have research units but the research agendas point to the differences between the visions of the two systems.

The WCDoE research unit focuses on assessment: collecting, processing and analysing assessment data and feeding it back to the system for utilisation, while the GDoE is more curriculum based. The e-system features heavily in this regard even though Gauteng Online had problems at the time of the study. The WCDoE takes advantage of its up-and-running e-system, and the technology it uses to collect and disseminate information is integrated. Communicating with the schools is facilitated by extensive use of technology.

RESOURCES

Availability of resources for providing basic and essential services was uneven. GDoE officials reported that they felt the district needs to be allocated more money than it currently receives. Its budget only covers operational issues and the running of the office. Officials have limited access to cars, computers and telephones, and not all have access to e-mail. WCDoE interviewees felt they had sufficient basic facilities such as stationery, cars, telephones, computers and printers. Communication is encouraged, and officials receive a subsidy for cellphones. This is especially relevant as a considerable amount of communication is done electronically.

There are barriers that continue to negatively affect and that can even stall the benefits assessment can bring to the education system. The following measures are recommended:

The curriculum and assessment implementation processes need to be properly coordinated and aligned with the system's goals. In both provinces they are coordinated by the provincial and district offices, and there are times when the two systems do not speak to each other, even though there is an important national intervention specifically designed by the Department of Basic Education for teaching and learning improvement.

The communication between the system, the available resources and the assessment structures is not optimal, but can be improved and the systems can generate relevant and timely information if correctly implemented.

For the GDoE, there is a need for improved planning and an increase in financial and human resources is essential.

The WCDoE needs to improve coordination between the systems to reap maximum rewards from its current resources.

The differences in the implementation of assessment call for specific provincial intervention plans as well as a national integrated system that recognises the differences. For that reason, the study ought to be replicated in all the other provinces. ◄◄

Making the grade

Classroom assessment is a critical component of the learning and teaching process and crucial to providing teachers with relevant information to better understand what their learners know and can do. However, the ability of teachers to effectively conduct high-quality classroom assessment is a matter of concern. **MATTHEWS MAKGAMATHA** and **MASEABATA MOLEFE** report on a study which determined how assessment was understood and applied in primary schools.

In this article we report on some of the findings from a pilot study conducted on teachers' classroom assessment practices. The study was conducted during 2008 to obtain information on the assessment beliefs, needs and practices of primary school teachers in South Africa. During this period, schools in the country were implementing a revised national assessment policy aligned to the National Curriculum Statement (NCS).

Schools selected to take part in the study were representing different geographical locations and quintile ranks. Teachers who participated in the study were teaching English Literacy and Numeracy in Foundation Phase (FP) (or grades 1 to 3), and English First Additional Language (FAL) and Mathematics in the Intermediate Phase (IP) (or grades 4 to 6). The data was collected from these teachers using survey questionnaires, interviews, lesson observations and learner document reviews. The findings we report were obtained from all teachers across the two phases and the subjects they were teaching and cover the following issues:

Teachers' beliefs about classroom assessment;
Teachers' beliefs about the assessment policy;
Teachers' classroom assessment practices.
We conclude by making suggestions for using classroom assessments to improve teaching and learning.

TEACHERS' BELIEFS ABOUT CLASSROOM ASSESSMENT

Both foundation and intermediate phase teachers expressed strong beliefs in classroom assessment with regard to the following:

First, teachers regarded assessment information as being useful to them and to their learners. This belief relates to the teachers involving their learners in teaching, learning and assessment processes, such as discussing with them the learning intentions or lesson objectives and assessment criteria to be used to collect assessment information (or evidence of the learning process).

Second, teachers considered continuous assessment (CASS) to be suitable for both formal and informal assessments. They linked CASS to the frequent assessments that occur in their classes and which predominantly serve the purpose of recording marks.

Third, teachers expressed the need for parents to actively participate in matters of assessment of their children. This belief related more to teachers providing assessment reports of learners to their parents than actually involving them in the general assessment processes linked to daily educational tasks. It is a struggle for teachers in some schools to get parents involved in the education of their children.

What can be deduced from the teachers' beliefs is that their classroom assessment understanding seems to be burdened by a

> **To work without a policy is very difficult. If there was no policy... I was going to do whatever I feel suits me.**

compliance routine of producing assessment information for recorded and reporting purposes. The result is teachers have insufficient time and opportunity to carry out learning enabling assessments.

TEACHERS' BELIEFS ABOUT THE ASSESSMENT POLICY

Teachers displayed varying understanding of the assessment policy, ranging from seeing it as a useful guide in their work to it being a hindrance and a source of the assessment-related problems or challenges they were experiencing. For instance, one teacher commented on the value of the assessment policy in directing what teachers were doing in class in the following manner:
'It is good that they [Department of Education] give us a policy to look at and guide us. To work without a policy is very difficult. So if I have a formality that tells me that I have to do 1, 2, 3 … for me it is easier and I can follow that, but if there was no policy that binds me I was going to do whatever I feel suits me.'

Other teachers understood the assessment policy to be a source of their frustrations in conducting classroom assessments. A case in point is the issue of administration workload that teachers were experiencing. Time that teachers could be using for teaching was used doing much assessment-related administration work. One teacher had this to say:
'It could be valuable that when assessing all learners, the teachers would rather concentrate on the things that will help them with the skills to write and to read. The policy doesn't allow that, there is not enough time for reading because [a teacher] has to do all the

things that are not important. That is why the children cannot read these days.'

Teachers' varied understanding and interpretation of the assessment policy could be a source of lack of uniformity in their implementation of the policy in the classroom.

TEACHERS' CLASSROOM ASSESSMENT PRACTICES

CASS is the dominant form of assessment that teachers used in their classrooms. Teachers understood CASS to refer to the general frequency of conducting various types of assessments with their learners, such as classwork, homework, projects, assignments, and oral tests. To them CASS embodied formal assessments that they are required by policy to record, as well as the unrecorded informal assessments.

The tendency has been that teachers treated formal and informal assessments unevenly. They prioritised formal over informal assessments – due to the feeling that recorded (formal) evidence of learners' progress is more important than unrecorded (informal).

Assessment Task Quality: While most teachers developed their own classroom-based assessment tasks (e.g. tests, exercises), evidence from observed lessons and reviewed learner documents points to the fact that these tasks comprised cognitively unchallenging questions (e.g. questions requiring knowledge or recall type answers). Nevertheless, teachers

> There is not enough time for reading because [a teacher] has to do all the things that are not important. That is why the children cannot read these days

used such questions in their assessments for grading (marking) to indicate the achievement levels of their learners.

FEEDBACK

While teachers overwhelmingly indicated that they provided feedback to their learners, especially during written assessments, this consisted mainly of ticks, crosses, marks, symbols and motivational comments. This practice was found to be common across the different types of schools studied. This type of feedback is not geared towards enhancing learning in the classroom.

Teacher Support: Teacher support was stronger inside schools opposed to external support. Inside-school support was provided by the phase or subject Heads of Department (HOD) through class visits and (phase) meetings, and dealt with classroom teaching, learning and assessment matters. Support from outside the schools (especially from the districts) was reported to be fragmented, irregular and compliance inclined.

Regardless of the cognitively low-quality assessment tasks teachers used with their learners most of the time, teachers' classroom assessment practices were focused on recording and reporting learners' marks – a summative function of assessment.

Suggestions for using classroom assessment to improve teaching and learning:

The current curriculum and assessment policies advocate a practice of integrating assessment with teaching and learning. However, the kind of teaching and learning that takes place in classrooms may be influenced by the assessment practices that teachers implement. One way of improving the learning outcomes in the South African schooling context could involve orienting classroom assessments to service teaching and learning. This could be done in the following manner: ensuring that teachers' beliefs about classroom assessment and their assessment practices move beyond the current grading uses and begin to reflect a truly formative (learning) focus on assessment. This would require a shift in the current compliance culture of classroom assessment that fosters summative uses of assessment to one that encourages an assessment-process-focus linked to learning development.

The formative (or learning enabling) value of assessment of service teaching and learning hinges on the types of feedback strategies that teachers use in the classroom. Teachers in our study predominantly utilised the strategy of awarding marks and giving motivational comments to learners.

Such strategies are limited as they only indicate what is wrong but fall short of directing learners on how to 'fix the wrong'. To move learners forward would require the use of comment feedback that clearly explains their learning shortfalls and give direction on how to remedy the situation.

Appropriate resources to support teachers should be readily available at classroom level. For instance, making available to teachers a curriculum-based assessment database comprising a range of cognitively challenging assessment items would go some way to alleviating the deficiency of rich classroom questions that teachers in our study displayed. Such a database, when applied in the context of classroom assessment, would help teachers to: (i) obtain information on learner strengths and weaknesses; (ii) identify relevant strategies for addressing learner needs; and (iii) record learner scores so as to monitor their performance over time.

Implementing ongoing professional development for teachers, aimed at promoting their understanding of assessment policy and enhancing their assessment and instructional practices is required. This can be made possible with improved, regular and sustained inside- and outside-school support. ◄◄

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Testing, testing...

First national assessment of Grade 9 pupils shows much work lies ahead

The first systematic assessment and evaluation of the senior phase of the education system (Grade 9 learners) suggests that simply ensuring that schools have access to teaching and learning resources as proposed in the Department of Basic Education's Action Plan to 2014 will not be enough, according to **GEORGE FRAMPONG** and **CHARLOTTE MOTHA**.

The 1996 National Education Policy Act 27 imposes a Constitutional obligation on the Department of Education to conduct regular evaluation and assessment of the quality of educational provision in South Africa. Further, the Assessment Policy of 1998 provides for the conducting of systemic evaluation at the end of each schooling phase, namely grades 3, 6 and 9, which are the key stages of schooling.

Over the past decade, the department has carried out systemic assessment and evaluation for grades 3 and 6 (Grade 3 in 2001 and Grade 6 in 2005) but not Grade 9, largely because of the administration of the Common Task Assessment (CTA) that allows schools to assess their Grade 9 learners annually.

The National Assessment of Learner Achievement (NALA), carried out by the HSRC in 2009, was the first systemic survey of the senior phase of the education system.

Following the grades 3 and 6 systemic surveys in 2001 and 2005 respectively, NALA is expected to identify the major strengths and weakness in the South African education system at senior phase level.

The focus is on monitoring learner achievement in three subject areas: language, mathematics, and natural sciences, as well as the context of teaching and learning.

Unlike the traditional large-scale assessment exercises that wield a hammer and see the world of education as full of nails, NALA is based on the assumption that assessment, broadly conceived, can play a prominent role in identifying strategies to shape discussions in the provision of quality education for all.

RESEARCH QUESTIONS

Our analysis attempts to address the following research questions:

What is the achievement level of Grade 9 learners? To what extent do Grade 9 learners' background characteristics and their access to quality schools play a role in their success or failure to achieve the expected standard?

Does access to high-quality schools ensure success of learners from disadvantaged homes? What would it take to achieve the 2014 target?

FINDINGS

Our analysis indicates that the achievement levels of a large number of Grade 9 learners across the nine provinces are quite poor. In Language, the mean score was 34% (at 'elementary' performance level) and 25% (at 'not achieved' performance level) in mathematics and science. About 46% of learners performed at the 'not achieved' level in Language, while over 70% of learners did not achieve the minimum expected standard ('elementary' performance level of 30%) in mathematics and science, as shown in Table 1.

Learners attending schools in the Western Cape, Gauteng and Northern Cape were more successful than learners from other provinces. In Language, the average learner from these three provinces performed at the 'moderate' level (about 40%) compared to 'not achieved' performance for learners from Lim-

popo and the 'elementary' performance level for learners from Eastern Cape, Free State, KwaZulu-Natal, Mpumalanga, and North West. In mathematics, the average learner in all the provinces performed at 'not achieved' level and over 60% of learners in all the provinces did not meet the minimum performance standard. About 80% of learners from the Eastern Cape, North West and KwaZulu-Natal failed to meet the minimum performance standard. The results for science are quite similar to those of mathematics.

Open-ended questions where learners were often expected to provide short or extended responses were particularly difficult for most learners.

In Language, most learners found writing more difficult than the other learning outcomes. In mathematics and science, the performance of an average learner was at the 'not achieved' level in all the learning outcomes.

Gender did not seem to make a difference in learner achievement levels as both male and female learners performed at elementary level in Language and 'not achieved' level in mathematics and science.

Poverty plays a significant role in learners' success in learning. In general, learners who attend the least poor schools (quintile 5 schools), decided by the quintile system which determines the amount of funding for individual schools, are more successful in learning than those who attend the poorest schools (quintile 1 schools). Learners from the poorest homes are also less successful in learning than those from the least poor homes.

Only a small proportion of learners from the poorest homes attend the least poor schools. The few learners from disadvantaged homes who are privileged to have access to the best

> The South African education system is not working very well for the poor and vulnerable, most of whom attend the poorest schools.
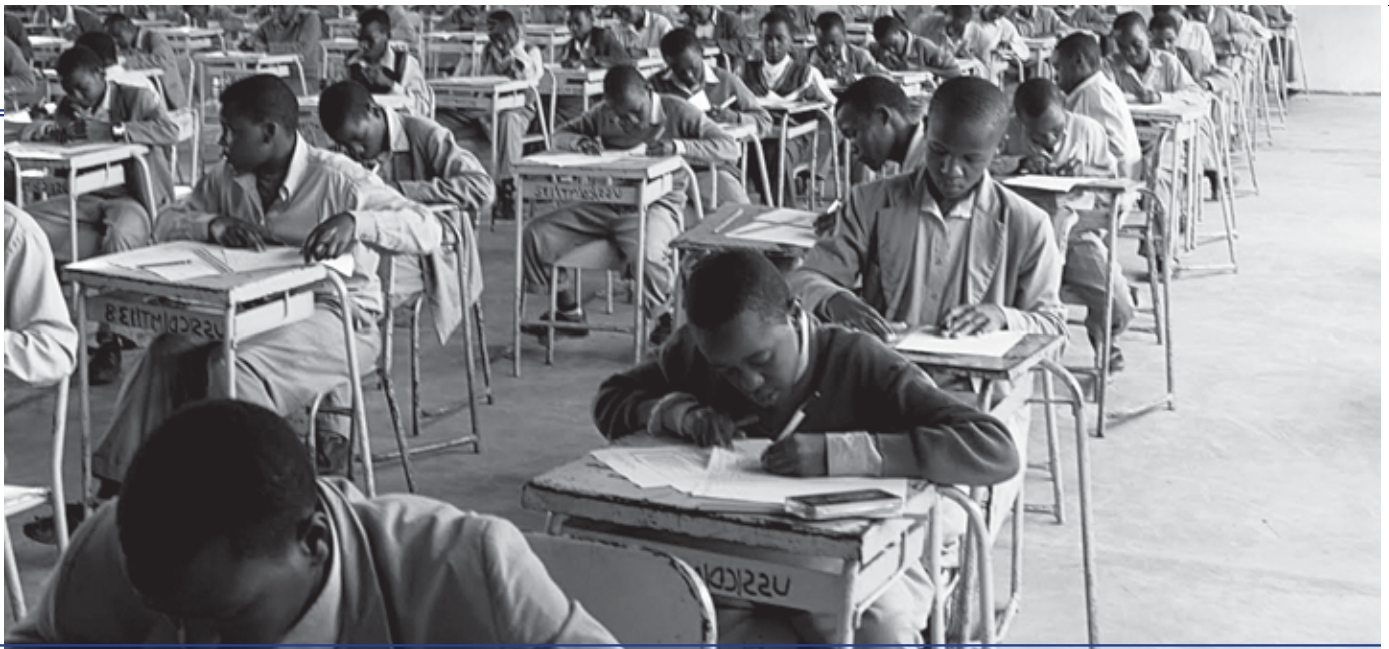
schools are often not very successful. However, there are a few learners from poor homes who attend poor schools who are successful, a trend we need to study to develop an understanding of how these learners succeed in learning under these conditions.

CHALLENGES

These findings suggest the need to revisit the South African 'social transformation' agenda, which has always been about redress of the past educational imbalances and the provision of equal educational opportunities for all sections of the population.

The Department of Basic Education's Action Plan to 2014 supports the argument that an education system is most effective when all learners – including the poor and vulnerable – can attribute their success in learning to the system.

Our analysis clearly demonstrates that the South African education system is not working very well for the poor and vulnerable, most of whom attend the poorest schools, and the few who attend the best schools are often not successful.

These findings highlight the magnitude of the challenge ahead of the Action Plan to 2014 to provide quality education for all children. Simply ensuring that schools have access to teaching and learning resources as proposed in the Action Plan will not be enough; it would require the mobilisation of all education stakeholders, probably to the scale of the preparations for the 2010 World Cup. We need to galvanise support for our learners, both at home and at school, in order for them to work very hard and develop a hunger for success.

We hope that such an approach would help South Africa realise its vision of a schooling system where all students, irrespective of their background, have the opportunity to succeed.

To achieve this vision, the South African education system would need to function in such a way that students' successes do not depend on their background. That is, the school processes and policies in South Africa need to be inclusive, supporting the learning of all students, so that learner achievement levels do not depend on the province in which schools are located or on the children's backgrounds. And, most importantly, in such a scenario, we should expect our best schools to compensate for socioeconomic disadvantages to minimise the achievement gap associated with poverty. This is one of the scenarios that would guarantee that continuous improvement in access to the quality of educational provision leads to successful learning outcomes for all learners.

As previously noted, the phenomenon of the few poor learners in poor schools who are more successful than their counterparts in better schools calls for more research to better understand the schooling conditions that provide opportunities for these learners to succeed. ◄◄

AUTHORS: George Frempong and Charlotte Motha, Education and Skills Development, HSRC.

Performance level/ rating code	Description of rating	Marks in %	Percentage of learner population		
			Language	Mathematics	Science
7	Outstanding performance	80-100	1,2	0,4	0,1
6	Meritorious performance	70-79	2,9	1,1	0,4
5	Substantial performance	60-60	5,8	1,4	1,2
4	Adequate performance	50-59	10,9	2,4	2,6
3	Moderate performance	40-49	14,3	5,1	6,8
2	Elementary performance	30-39	18,7	14,7	16,5
1	Not achieved	0-29	46,2	75	72,5

TABLE 1: Percentage of learners at the different performance levels in the three learning areas

Basic conditions of schooling

This research is specifically directed at the examination and analysis of the conditions affecting all public schools in South Africa's education system. These schools are overwhelmingly situated in the communities of the rural and urban poor, and are populated by the children of communities that are the most socially disadvantaged. The assumption of the project is that unless the educational challenges facing these schools are resolved, educational opportunities for the majority of the population will remain unchanged. It is therefore imperative that policy and practice concentrate on these schools and communities that constitute the actual norm in our society. The two articles based on this study report, namely: What education, development and support is available for teachers who have to teach more than one grade in the same classroom (multigrade teaching); and The importance of community participation in school affairs, are presented on pages 26 to 29.

Education, development and support for multigrade teachers

Multigrade teaching – the teaching of more than one grade of pupils in one class by one teacher – is a feature of education systems the world over. It dates back to the origins of formal education, and it was not up until the late 1800s that the teaching of one grade in a classroom (monograde) at a time became prominent. Despite this development, multigrade teaching remains a reality and, for some learners, especially in developing countries, is the only way they can access education, write **TSAKANI CHAKA** and **EVERARD WEBER.**

In South Africa about a quarter of our schools are multigrade or have multigrade classes, according to an analysis of Education Management Information Systems (EMIS) data for 2005-2007, and later 2011 data.

This article discusses the situation in relation to multigrade teacher education, development and support, linking to the key competencies of multigrade teaching. It draws on six school case studies conducted in the North-West Province, including interviews with departmental officials and elected higher education institutions.

It also makes recommendations on how the issue of multigrade teacher education, development and support should be addressed in South Africa.

MULTIGRADE TEACHER EDUCATION, DEVELOPMENT AND SUPPORT

While the multigrade teachers at the participating schools met the requirements of qualified teachers in line with the South African National Framework for Teacher Education and Training, none of them were trained in multigrade teaching. Current teacher training focuses on training teachers to teach in phases.

District support for multigrade teachers is also not multigrade specific because district officials themselves have not had any training in multigrade education. Principals, who are supposed to be teaching as well, also do not have the academic wherewithal for supporting multigrade teachers. Even teacher development workshops are geared towards monograde schools and do not take into account the existence and special circumstances of multigrade schools. Further, multigrade teachers tend to be isolated as their schools are in remote rural areas.

A look at current teacher training practices revealed that there are certain institutions that are beginning to act in terms of preparing multigrade teachers. One such effort was found at the Centre for Multigrade Education (CMGE) at the Cape Peninsula University of Technology, sponsored by the Royal Netherlands Embassy.

The centre offers programmes on multigrade teaching, starting from Advanced Certificate in Education (ACE), going up to doctoral levels, and draws students from the Southern African region. Another example is the University of Venda, which incorporates certain multigrade aspects into the teacher training programmes.

These efforts are encouraging. What is of concern, however, is that, with the exception of the CMGE, these efforts are not institutionalised, thereby dependent on the passion and interest of current trainers. Further, the reach of these efforts is restricted.

Lack of specific training and support to multigrade teachers has a bearing on their teaching practices, and the discussion on the key competencies points to this fact.

KEY COMPETENCIES

The literature suggests that key competencies multigrade teachers require in order to be effective include: curriculum adaptation and planning, learner organisational and teaching strategies, and assessment. Data was gathered in the six schools in relation to these competencies.

CURRICULUM ADAPTATION AND PLANNING

Curriculum adaptation allows for the national curriculum to be adapted to local multigrade settings. It could be done in several ways. The first is through multi-year curriculum spans that cover two to three grades. In this case, learners work through common topics and activities.

The second is a differentiated curriculum, which allows all learners to deal with general topics or themes, but differentiates learning tasks in terms of level of learning of learners.

The third is quasi-monograded, which essentially mimics what happens in a monograde school with the multigrade teacher teaching each grade separately. Subjects for the different grades do not necessarily need to be the same. Further, time may be allocated equally or unequally across the grades depending on the teacher's judgment.

The last is learner- and materials-centred strategies in which the curriculum is translated into self-study graded learning guides, and learners work through these at their own pace with support from the teacher, followed by structured assessment. None of the teachers in the participating schools reported adapting the existing monograde curriculum to the circumstances pertaining to multigrade settings. Without training and encouragement, multigrade teachers are not able to take the opportunity provided within the curriculum for adaptation. Lesson planning also followed a monograde-orientation in accordance with departmental requirements. There were certain cases where there were no lesson plans, negatively impacting teaching quality in one of the cases.

LEARNER ORGANISATIONAL AND TEACHING STRATEGIES

While there are some teachers who are in-novative in teaching strategies and employed learner grouping methods and some level of whole-class teaching combined with differentiation of activities based on the grade, others followed the quasi-monograde strategy.

Teachers did not employ peer tutoring – a strategy that could allow teachers to draw on learners in higher grades as resources for teaching those in lower grades.

Only in one instance was peer tutoring observed during the study. This was an initiative on the part of learners who were attempting to understand the teacher's instructions. Peer tutoring is beneficial not only to those being tutored, but also to those who are tutoring, in that as they explain to others they reinforce their own understandings. Peer tutoring also encourages learners to collaborate with one another.

ASSESSMENT

Multigrade teachers think of the purpose of

> **District support for multigrade teachers is also not multigrade specific because district officials themselves have not had any training in multigrade education.**

assessment as determining learners' understanding of the content taught and determining academic progress at the beginning and during the year. Assessment practices point to a shift towards continuous or formative assessment. Continuous assessment is more consistent with multigrade teaching in that it is assessment aimed at better learning, as opposed to assessment used to determine promotion from one grade to another.

We found that teachers applied various assessment forms, including tests, assignments, class work, homework, orals, research and demonstrations. Some teachers tended to give irregular assessment and fewer tasks than planned. Various reasons were given for this, such as the burdensome nature of recording grades.

We also came across incidences of learners' work that was unmarked. A principal at one of the schools, who was also a teacher, said that giving homework to the learners in her class and then assessing their work was almost impossible due to the countless meetings she had to attend.

A teacher pointed out that not all learners completed their homework. The reason was parental negligence and unwillingness to assist with homework and research activities.

Although learner assessment was reported at two of the schools, assessment at the participating schools tended to be teacher-dominated. We did not observe any learner self-assessment. ►►

◄◄ One teacher was not enthusiastic about involving learners in assessing their own work because she said some of them could not be relied on as they would mark themselves correct even when wrong.

Requirements relating to the amount of assessment and recording need to be revisited. Teacher in-service training should seek to reinforce assessment practices, as well as encourage adoption of assessment practices that are compatible with multigrade teaching. There is also a need for the Department of Basic Education to provide administrative assistance and also to provide guidelines for a basic minimum number of teachers for each multigrade school.

RECOMMENDATIONS

The challenges faced by multigrade teachers could be avoided with provision of specific multigrade training and support. An immediate step to be taken should be to provide in-service training to teachers on various aspects of multigrade teaching competencies, including curriculum adaptation, classroom organisation, teaching strategies, and learner assessment. District officials should also be trained, especially in regard to the support they can provide teachers. Accompanying this training should be the distribution of multigrade teachers' handbooks to which multigrade teachers could refer whenever necessary.

The Department of Higher Education and Training needs to ensure that multigrade teaching competencies are incorporated into pre-service programmes, and that the subject is examinable. Dealing with the issue at pre-service level is more cost-effective than doing so at in-service level. Prospective teachers could be required to do their teaching practice in at least one multigrade school as part of their pre-service training to ensure exposure to such contexts. On a broader level, pre-service teacher training should seek to orientate prospective teachers on the different types of schools, that is, monograde/multigrade, rural/urban, and so forth, as well as the educational implications of working in different contexts. Efforts already undertaken by teacher training institutions need to be acknowledged, embraced and harnessed as part of the way forward in relation to the training and support of multigrade teachers. ◄◄

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Mobilising communities

Can community participation improve education in poorer and rural contexts in South Africa? Is it important that a community participates in school affairs? And if so, what needs to be done to get greater community participation in education? **MADUMETJA KGOBE** reports on the Community Literacy and Numeracy Group (CLING) study, which probed the belief in community mobilisation and participation, especially in rural and urban impoverished communities.

The idea that community participation is important in improving the quality of education is well entrenched in South Africa and internationally. In South Africa, calls for greater community participation in education emerged in the form of major campaigns led by, for example, the National Education Coordinating Committee in the 1980s and 1990s. These ideas of greater community participation as key to improving education have found expression in major policy statements and debates on education transformation in the post-1994 era.

If community participation is important to improving education, how then do we go about harnessing greater community participation in the context of South Africa, especially in poorer communities? Does such participation lead to improvements as claimed in the broader literature on the subject?

THE CLING STUDY

The aim of the study was to investigate whether community participation in education can improve numeracy and literacy in poor communities in South Africa, and if so, how? The study was undertaken in five sites: two in Limpopo (predominantly rural), two in Gauteng (township/informal settlement) and one in the Eastern Cape (rural). Each site had at least one primary and one secondary school (and in some instances more than one) that participated in the project.

At each site, the model for implementing the project included the establishment of a CLING structure as a primary driver for mobilisation for participation education in communities. These structures drew membership from a wide variety of stakeholders within each community and were envisaged to be as broad-based as possible.

KEY INSIGHTS

Research methods: The research employed a number of research techniques, including community mapping, and household and school surveys. These techniques were extremely important in assisting with the profiling of the communities and schools. The information gleaned through these techniques was also used to develop programmes of actions for the CLINGs.

In order to understand deeper issues of mobilisation, the research team the study drew on other participatory research approaches, including giving voice to participants, observing meetings of the CLINGs, running workshops, entering into conversation with teachers and learners in schools, engaging with various community structures, and giving the researchers a glimpse into the issues of mobilisation and participation.

A key lesson from the study was that while traditional techniques such as surveys can be powerful tools in profiling some key characteristics in communities, they need to be used alongside other research methods to capture the complexity and dynamics in communities in which research is undertaken.

Defining a community: Community is often defined as a monolithic structure with certain key characteristics, such as sharing geographic area, culture and language, but the study showed that the concept is complex and cannot be understood simply by reference to language and area. One needs to explore the complex interactions between the internal and external dynamics, politics, economics, ideologies, power dynamics and local priorities of communities in order to understand them.

Community mobilisation: The research suggested that this is a long, complex and difficult process and requires commitment in terms of time and resources. Whereas the project has been operating for almost five years in each of the five communities, greater time and effort is required to ensure ongoing and sustainable organisation and participation in educational matters. Ensuring that various structures within the community participate, both to broaden participation and ensure a legitimate forum for engagement, together with negotiating interests, tensions and other dynamics within communities, makes mobilisation even

more challenging. Specific skills and ongoing engagement are also required to initiate and sustain mobilisation and participation.

> **Community mobilisation is a long, complex and difficult process and requires commitment in terms of time and resources.**

BENEFITS TO EDUCATION

Towards the end of the project, wider participation of community members in educational activities and discussions was evident across the five sites, where the following key activities are taking place:

Reading clubs have been established that support mainly primary school learners. These are run by volunteers and in some instances include parents;

There are campaigns for reading materials across the sites. CLING volunteers and community members are sourcing reading materials from within the communities and elsewhere to make them accessible to learners;

There are campaigns for libraries, and

at one of the sites a shack library has been established and is accessible to learners and members of the community;

The CLINGs, in collaboration with municipalities in some sites (in particular the two sites in Limpopo), are providing centres where learners can get assistance with homework.;

There are campaigns to collect school uniforms (Limpopo sites) and to provide support to poorer learners;

There are working relationships among the schools, local education officials and the communities through CLINGS.

CONCLUSION

The role of community participation in education remains of utmost importance and should be recognised as a fundamental part of democracy. Policies need to value community participation in education, and resources must be invested in mobilising greater participation. ◄◄

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Improving the effectiveness of our schools

3 ①②③ three

Designing research on a national level

National policy lessons arising from any research study are most powerful if they can be shown to apply to the whole school population. To address this consideration, a nationally representative sample of 268 schools was drawn for the study. All provinces were included in the sample except Gauteng, which was excluded when it was discovered that provincial tests were being written at the same time as the first round of data collection.

The study assessed learner performance by means of literacy and mathematics tests, which were administered to the learners at the end of each year. It is common in large-scale studies to collect data on educational activities by means of survey questionnaires. Such methods do not always provide the most valid kind of data, given the well-known tendency for principals and teachers to place their practices in a favourable light. Thus, the school and classroom data was collected by means of interviews and direct observations, using structured instruments and fieldworkers experienced in the work of schools.

Due to budget limitations, we did not undertake classroom observations. This is a limitation of the study, given the importance of teaching quality to learner performance. However, we did assess teacher practices through an analysis of planning and assessment records, and undertook a detailed analysis of pupil writing in both maths and literacy by looking at all the exercise books of the best student in each class. We also administered a very short test in their respective subjects to maths and language teachers.

We used an asset-based method for assessing both school and learner socioeconomic status, and learners completed a questionnaire to describe the educational practices they experience at home: reading, homework, and exposure to the language of instruction of the school.

Aside from personal attributes, learning outcomes for any particular child depend primarily on home characteristics, and secondarily on the influence of all the teachers through whose hands the child passes. For this reason the National School Effectiveness Study aimed to identify lessons for policy and practice for government, principals, teachers and parents. The study was designed to enable the gain scores of a learner over any one-year period to be related to the practices followed by the teacher for the same year. The study followed a group of children for three years, starting with Grade 3 in 2007 and ending in Grade 5 in 2009. Around 16 000 children participated in each year of data gathering, during which a cohort of 8 383 was tracked over all three years. **NICK TAYLOR** reports. The articles under this theme, on pages 30 to 33, explore the process of research on a national scale, and its findings.

Analysis of the National School Effectiveness Study

Multivariate modelling techniques (involving several statistical variables) provided the first level of analysis of the study data. This exercise investigated the strength of relationships between proxies for educational activities in homes, schools and classrooms on one hand, and test scores on the other.

Regarding home factors, a consistent pattern that emerged was that greater exposure to English through speaking and hearing English on the television was associated with higher achievement when controlling for home language and poverty. Children who read frequently at home on their own also performed better.

SOCIOECONOMIC STATUS

Regarding the influence of socioeconomic status (SES) and school type, the model indicates that African-language students in historically white schools enjoy a considerable performance advantage over those in historically black schools. This difference is statistically significant and large, especially so in the case of numeracy.

It is clear from this analysis that, although

achievement is strongly connected to socioeconomic status at home, much of this connection has to do with the effectiveness of schools in which students are located.

SCHOOL RESOURCES

Weak evidence was found that school resources such as pupil to teacher ratios and school facilities are associated with student achievement. As other studies have argued, more important than the mere presence of resources is how well they are managed. No resource is more poorly used in South African schools than time, and a positive effect was obtained in our regression models for schools in which the principal and all teachers were present on the day of the survey. Another school management factor positively associated with better literacy scores is whether the school has an inventory for textbooks and readers that is up-to-date.

QUALITY OF TEACHERS

At the teacher level, a positive effect on both literacy and maths was obtained for schools in which a curriculum plan for the

whole year could be produced. Schools where more than two English marks were seen in teacher assessment records scored better on the literacy test. Similarly, where the quality of assessment records was very poor, scores on the maths test were worse than where records were present and up-to-date. Teacher scores on the literacy test were not strongly associated with learner performance in literacy, but there was a significant effect of teacher knowledge on the model for numeracy, although this was only apparent for learners whose teacher scored 100% on the maths test.

CURRICULUM AND PERFORMANCE

There was also a reasonably large, positive and significant effect on maths associated with having covered more than 25 curriculum topics, as identified in student workbooks.

A large and statistically significant negative impact on literacy scores occurred when no paragraph-length writing had been undertaken over the year, while a positive effect was found for schools in which more than 27 writing exercises of all types were counted in students' English workbooks.

The indicators of good management identified in this research should not be interpreted as more than exactly that: indicators that point to the characteristics typically exhibited by good managers, rather than levers to be manipulated by policy to achieve improved student outcomes. The correlations revealed by our modelling exercise in many instances provide only very blunt responses to questions like, 'Is the presence of an annual curriculum plan associated with better learner test scores?' The answer to this question was affirmative, but that tells us little about what is entailed in these planning practices.

It seems likely that curriculum planning is one element in a constellation of activities undertaken by effective school leaders and teachers in order to optimise learning. And the really useful knowledge that principals and policy makers need to understand is what that constellation of activities consists of and how it ranges across schools which produce stronger and weaker test performances.

We undertook a set of case studies to investigate this and a number of related questions concerning school leadership practices. Similarly, we drew on a variety of data sets, in combination with the data from this study to better profile teacher subject knowledge, to probe the role of writing in language learning, and to describe the actual mathematics curriculum to which learners have access in class.

SCHOOL LEADERSHIP AND MANAGEMENT

Our case studies reinforced the findings from other research in the area of school leadership and management. What the principal and staff do together in a well-functioning school is to build systems which drive the work of teaching and learning.

Parents are incorporated into an extended pedagogical team. A structured division of labour distributes functions and integrates curriculum delivery across the classroom, the school and the home. School-level systems regulating the flow of work are time management, curriculum planning, assessment, book procurement and retrieval, and teacher professional development.

While there certainly are standard features to these systems, in general innovative solutions need to be found to local manifestations of the problems endemic to poor communities: learner hunger, tardiness, shortages of books and classrooms, and home conditions not conducive to parental engagement. The case studies provide vivid examples of how enterprising principals deal with these issues.

The case studies also looked at the issue of professional behaviour at the levels of both individual teachers and the school. We investigated three elements of teacher professionalism: ethical comportment, understanding the importance of subject knowledge as the foundation for teaching, and a sense of intrinsic motivation. The last element, and to a large extent the second one too, appear to be missing among most teachers and principals interviewed. In the large majority of the eight case studies, supported by a survey of 65 schools, principals underestimated the subject knowledge needs of their teachers.

Furthermore, those few teachers who do realise their own shortcomings in this area have little sense of agency with regard to their own knowledge, falling back on a passive dependence on the district to provide training.

Writing in Language classes

T he power of writing comes from its ability to leave a permanent trace. This unique characteristic allows the writer to reflect upon what has been written, generating and refining ideas in the process. Moreover, it allows ideas and information to be detached from space and time, giving them a capacity to reach a wide audience across continents and generations. Even more important for the development of individual children, the academic literature has firmly established the centrality of writing in shaping the way we think, reason, and learn. As Langer and Applebee (1987) put it, "To improve the teaching of writing ... is also to improve the quality of thinking required of school children".

While writing helps us remember and better understand ideas, information and experiences, not all types of writing tasks have the same effect on learning. Some tasks, like writing summaries or analytical essays, require a deeper level of processing than answering fill-in-the blanks or short-answer questions.

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Number of exercises and frequency of writing in Grade 5

- Average number of school days to write one exercise
- Average number of exercises per class

Eastern Cape: 5,8 / 31,2
Free State: 5,1 / 40,9
KwaZulu-Natal: 3,6 / 47,1
Limpopo: 4 / 38,1
Mpumalanga: 3,9 / 39,3
North-West: 4,9 / 39,6
Northern Cape: 4 / 44,2
Western Cape: 2,6 / 63,8
National: 4,3 / 42,1

Average frequency of writing paragraphs: number of exercises over the year

- TOTAL
- More than half a page
- Half a page or less

Eastern Cape: 2,3 / 0,6 / 1,7
Free State: 5,5 / 1,7 / 3,8
KwaZulu-Natal: 2,7 / 1 / 1,7
Limpopo: 2,4 / 0,3 / 2,1
Mpumalanga: 4,1 / 1,4 / 2,7
North-West: 2,3 / 0,5 / 1,8
Northern Cape: 3,6 / 0,7 / 2,9
Western Cape: 7,6 / 1,8 / 5,8
National: 3,6 / 1 / 2,6

►►

Studies have found that the degree to which information is reformulated or manipulated through writing has an impact on how well the information is integrated, learned, and retained. This finding would seem to favour analytical essays as the writing task of choice, since they tend to demand careful structuring of an extended argument, and evaluation and reformulation of the material. The NSES study reveals that such writing is very seldom undertaken in South African classes, and this must rank as one of the biggest shortcomings of the school system, particularly for children from poor homes. On average South African children perform writing of any kind in language classes once in about four days.

Number of exercises and frequency of writing in Grade 5:

The most common form of writing seen in children's workbooks consists of single words, with an average of 22 exercises of this type written over the course of the year. The next most frequently observed exercises consist of isolated sentences, which reflect an average of 12 exercises over the year. Writing of paragraph length or longer is very infrequent in South African schools, occurring on average only once a quarter (3.6 times a year).

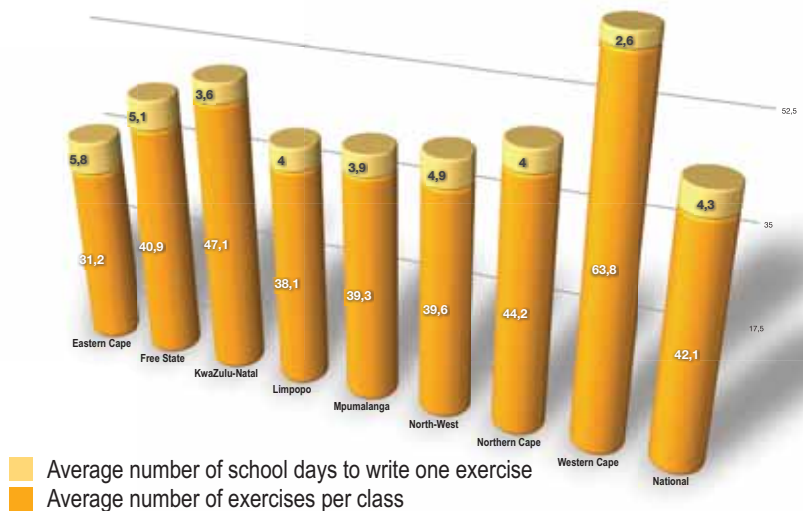Average frequency of writing paragraphs – number of exercises over the year:

Most disturbing is the number of books in which no paragraph writing at all was done over the year, a phenomenon seen in 44% of Grade 4 and 32% of Grade 5 classes.
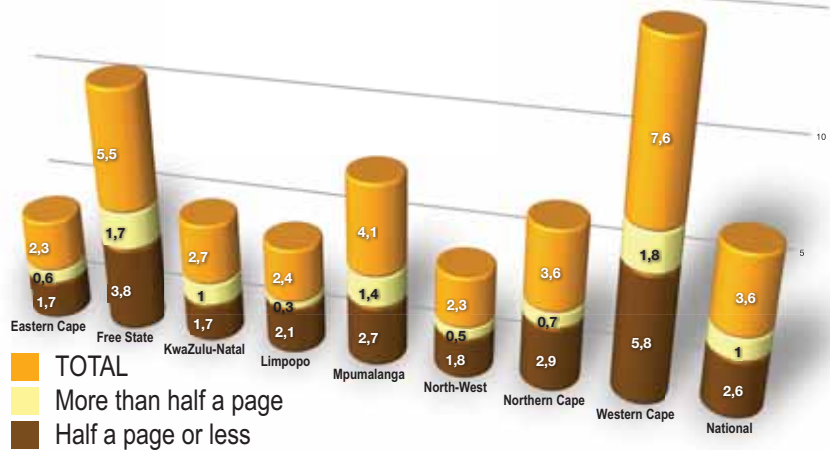
OPPORTUNITY TO LEARN MATHEMATICS

As in the language classes, all the writing books of the best learner in each maths class in grades 4 (in 2008) and 5 (2009) were examined. Using a list of all the topics specified in the curriculum, fieldworkers noted each topic on which one or more written exercises had been completed.

For each topic, we then computed the mean percentage of classes that had completed at least one written exercise.

The results are aggregated by the learning outcome in the table on the following page.

Coverage of each of the five learning outcomes in grades 4 and 5:

On average, only 24% of topics are covered in both grades 4 and 5. Overall, 88% of teachers had covered no more than 35 of the 89 (40%) topics specified in the Grade 5 maths curriculum, and 58% had covered no more than 20 topics, which make up only 22% of the curriculum.

There were very few topics where at least half the sample had completed one exercise or more. These included only the simplest of topics: counting, writing numbers, the operations of addition, subtraction and multiplication, and rounding off numbers. More advanced topics, including those which constitute the building blocks for a deeper, conceptual understanding of the subject, are covered by very few teachers.

It is clear that the overwhelming majority of South African mathematics schoolteachers avoid topics that are in any way challenging. These are also the topics that build conceptual understanding. Only the simplest of topics are taught to learners, and then largely in a mechanical, procedural fashion.

CONCLUSION

Attendance and punctuality by principals and teachers, thorough planning, frequency of assessment, teacher knowledge and curriculum coverage vary substantially across South African schools and are strongly linked to educational achievement.

For example, our modelling exercise estimated that the national average for maths could be expected to improve from 34,2% to 42,3% in response to raising teacher knowledge and curriculum coverage across the system.

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50% OR MORE	BETWEEN 5% AND 20%	5% OR LESS
Counting	Ratio and rate	Patterns: completing, describing and formulating numerical patterns
Writing numbers	Relationship between multiplication and division	
Operations: addition, subtraction, multiplication	Checking solutions	
Rounding off numbers	Additive and multiplicative inverses	
	Communicative, associative and distributive properties	All topics on data management
	Shapes, especially 3-dimensional models	
	Converting units of measurement	

COVERAGE OF EACH OF THE 5 LEARNING OUTCOMES IN GRADES 4 AND 5	Grade 4		Grade 5	
LEARNING OUTCOME	Number of topics	Mean% covered	Number of topics	Mean% covered
Numbers, operations and relationships (LO1)	32	35	34	38
Patterns, functions and algebra (LO2)	12	13	12	12
Space and shape (geometry) (LO3)	15	23	14	18
Measurement (LO4)	14	17	17	15
Data handling (LO5)	11	12	12	19
Total	84	24	89	24

Teachers' mathematical knowledge

Maths teachers in the sample were given five simple mathematical tasks to do, drawn from the Grade 6 curriculum. The results show that more than half of the students in the NSES sample were taught by teachers who could answer only two of the five questions correctly. Two-thirds of the teachers could answer only three questions, and just 12% of teachers could answer all five. For teachers who scored anything less than five, the mean achievement of students was very similar. However, those students taught by teachers who could answer all the questions correctly performed noticeably better, scoring an average of 47% on the learner test, compared with an overall average of 34%.

The recent SACMEQ III results, which involved a longer teacher test of items compara-ble to those on the Grade 6 learner test, show a low correlation between teacher knowledge and learner scores.

This is a common finding even in developed countries, where teacher knowledge, as measured by relatively simple tests, correlates only weakly, at best, with the performance of their learners. However, scores on more complex teacher tests devised by Heather Hill and her colleagues in the USA, which assess deeper levels of mathematical understanding, emerged as a significant predictor of student gain scores in maths.

The authors conclude that efforts to improve teachers' maths knowledge through content-focused professional development and pre-service programmes will improve student achievement. This work suggests that in order to be effective a teacher needs to have a thorough conceptual understanding of the principles of the subject, and that different degrees of a relatively shallow understanding have no marked effect on learner performance. The NSES data gives some support to this hypothesis.

An interesting interaction between the time spent on teaching and teacher knowledge was noted in our modelling exercise.

Students taught by teachers who scored less than 100% in the mathematics test, and who reportedly taught for less than 18 hours per week, had lower numeracy achievement in Grade 4 on average than students with any other combination of these two teacher characteristics.

Students taught by teachers with either better knowledge or more time spent teaching, but not both, performed somewhat better than the poorest performing group.

However, students whose teachers scored 100% and reportedly spent more than 18 hours a week teaching performed substantially better on average (mean of 54% on the maths test) than the other students (mean of 35%). These pupils also exhibited higher gain scores in Grade 5. Unfortunately, only 7% of students were in this fortunate position. ◄◄

4
1 2 3 4
four

Learning and language
Home, school and community

Under this theme, the research covered the 'golden triangle' of learning, namely home, school and community. Each component is complementary to the others. Working in all of these domains allows for the development of holistic understanding of and approaches to children's learning needs. Deficits in any one of them should be compensated by one or both of the others for as long the system remains dysfunctional. **CAROLE BLOCH, CHRISTOPHER DIWU, XOLISA GUZULA, NADEEMA JOGEE, NTOMBIZANELE MAHOBE, ZOLA WABABA** and study leader, **NEVILLE ALEXANDER**, report on what they found and what can be done to improve early language learning. The articles based on this study are reflected on pages 34 to 41.

An educational system that seeks to deliver meaningful access to effective learning must be based on the learners' mother tongue(s).

It will take at least one generation for the education system to shift towards a mother tongue-based education rather than based on English, which for many, if not most, children is a second, third or even a foreign language. Long-term thinking and realistic planning are essential if we wish accomplish this.

It will require, among other things, teacher retraining in line with a mother tongue-based system, language development with respect to terminology standardisation, lexical expansion, and production of learning and teaching support materials, as well as adaptation of management approaches.

The focus of our research is to build a model on which to base dual-medium classroom practices and biliteracy learning as aspects of a mother tongue bilingual education system. Biliteracy development, whether simultaneous or consecutive, refers to the use of two languages for reading and writing. It is a way of advancing bilingualism in that children not only speak two languages fluently, but use the two languages systematically for learning literacy.

The concept implies a wide range of practices, especially single-medium teaching accompanied by the learning of additional languages by means of excellent second language teaching approaches.

ACTION RESEARCH

The model on which our interventions are built is of a qualitative nature and is based on action research. For this purpose we carefully selected typical community and language profiles of four schools in poor communities in the

Western Cape. This model ought to be replicable in similar contexts elsewhere in South Africa, subject to the appropriate adaptations.

Tactically, our dual-medium focus opens the way to persuading sceptical parents that mother tongue teaching is a valid approach to the education of their children. It helps them to understand that the mother tongue is an effective base from which to learn an additional language that can, and should, be used as a complementary medium once the child has acquired second language instructional competence.

Mother tongue education is not a silver bullet. Without the essential improvement in teaching methods and the availability of appropriate learning and teaching support materials, learners will continue to do badly even if they perform better than in a system that is based on a second language.

INTEGRATING BILINGUALISM WITH LANGUAGE AT SCHOOL

The integration of the bilingualism approach to language learning and to the language used in school (language of learning and teaching, (LOLT)) with the language approach to early literacy and biliteracy learning is based on the premise that children learn best if they are

> **Action research, or participatory action research, is a reflective process of progressive problem-solving led by individuals working with others in teams or as part of a team – Wikipedia**

taught through the medium of the language(s) they know best.

CREATING LITERATE SCHOOL COMMUNITIES

The approach to early literacy learning is based on the sociocultural and holistic understandings of how the ability to read and write competently takes place. Thus, we believe it is possible to create conditions that allow children to learn to read and write meaningfully as they come to use literacy as part of their daily lives.

Fundamentally, we take it that children learn to read and write in similar ways to how they learn to speak – implying that mechanical skills are learned within the context of authentic experiences with written language. Scaffolding to learn these skills provided by parents, teachers, siblings, friends and others, is an essential element in these processes. This approach, which is informed by a significant body of research, involves in essence:

►The understanding that there is an urgent systemic need to promote reading for enjoyment as part of learning to read and write. Despite the fact that this aspect of learning to read is widely known and acknowledged as valuable, it is often ignored in formal education. For example, it has been shown to have a positive impact on language skills such as vocabulary development, spelling, knowledge of grammar and additional language learning.

►Interactive writing is one of the strategies that inspire children to write. It changes perceptions about writing, so that learning to write becomes an exercise in communicating for real reasons rather than about perfecting handwriting, spelling and punctuation only.

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At home

It is widely accepted that school is the place where children are taught to read and write and, in most South African schools, the focus is on teaching children these skills separately – the expected precursors to connecting to meaningful reading and writing.

But many children fail to make the connection. This has led to a cycle of ever-falling expectations of African language-speaking young South African children, and to curriculum adjustments to try to make things even simpler. It has also led to beliefs that literacy learning in African languages is difficult and that it can only be taught by means of 'direct instruction'.

Yet many children learn to read and write through informal interactions with print before they begin school. Several studies show how young children's literacy emerges as they play and are included in regular and purposeful activities that include the print medium. Certain conditions of learning are necessary for this to happen, as they are for learning to talk. No baby would ever learn oral language if s/he didn't interact in particular ways with a community of speakers.

The Project for the study of alternative education in South Africa's (PRAESA) researchers documented some of their own children's informal language and literacy learning at home to find out how those conditions supported early reading and writing. Researcher-moms spent six months in 2007 documenting events and practices around reading and writing initiated by and with their own young children.

Literacy development takes place wherever literacy practices are occurring. Through interactions with others, in particular social and cultural settings, learners develop understandings of language systems, both oral and written.

IN PRACTICE

Tumi, aged six, lives in a home where isiXhosa, English and isiZulu are in regular use, and where the language of school is English. Her mom, Xoli,

makes conscious decisions about language use at home, because she wants her children to know both their mother tongue and English. At school, there is no recognition of their mother tongue, but classrooms are relatively well resourced and teachers are relatively well trained.

Xoli has clear strategies for supporting and valuing isiXhosa. These include getting appropriate reading materials in both languages, deciding which language to use when, how, and for what. She reads and writes isiXhosa around Tumi and she speaks to Tumi about their language use. Tumi knows, and over time comes to value, the fact that she is growing up bilingually.

The examples below provide merely a glimpse of how young bilingual children are able to use what they know about sounds and spelling to write in two languages, and how literacy skills transfer across languages. Tumi, has received no formal isiXhosa phonics tuition, yet she begins to write for herself because she wants to.

> Tumi's shopping list
>   sugar
>   ubisi (milk)
>   brad (bread)
>   amasi (sour milk)
>   sweets

> **'**
> **Several studies show how young children's literacy emerges as they play and are included in regular and purposeful activities that include the print medium.**

Tumi's planning on paper

She writes 'lala' (sleep) and 'wayke ape' (wake up).

Her mother then provides her with the correct spelling for 'wake up'

At school, Tumi had been learning words with double vowels, e.g. good. She showed her mom how to indicate the (Xhosa') sound 'u' by making two circles with her fingers and thumbs of both hands. She thus tries out what she knows for English on isiXhosa:

NDIYAKUTHANDA KAKHULU
'Ku' as 'koo' and 'lu' as loo

All children are perfectly capable of becoming confidently biliterate. Mastering the sounds and spelling of the two languages takes place as the child writes to communicate what is significant to him or her.

The education system is systematically unaware of this capacity of bilingual students. Our work contributes to the growing body of research on emergent biliteracy, which suggests that young biliterate children living in 'simultaneous worlds' are enormously competent.

CONDITIONS OF LEARNING

All homes and communities can create and offer certain conditions for learning such as:
• Immersion
•Demonstration
These two are necessary but not sufficient conditions for learning to occur.
Also needed are:
• Engagement (with interactive role models)
• Expectations (of significant others – subtle and powerful coercers of behaviour)
• Approximation
• Response
• Use

►►

Children who are allowed and challenged to write every day complain if a day goes by without writing, and they write better when they are challenged. This is especially true of interactive journal writing by children. Unlike traditional writing that is prescribed and dictated by the teacher, interactive writing offers children an opportunity to write what they know and care about.

Because interactive writing is a social activity, children engage in real writing for a real audience. They are encouraged and allowed the freedom to write without fear of being wrong or making mistakes.

What is demonstrated in this strategy is faith in children and in their attempts. Interactive journal writing is shared writing between two individuals – often a teacher and a child, or two children writing to each other. It characterises an exchange of personal information which is of benefit while children practise the skills of authorship and experience rich, varied and meaningful reading and writing experiences.

Changing perceptions of teaching writing means allowing children to take responsibility for what they write and, instead of marking children's journals, the teacher demonstrates language use and acts as a role model. This means responding to *what* is said, not *how* it is said.

Writing back shows children that you are interested in what they have communicated. In time, they find ways of improving their own spelling, punctuation, grammar and organisation of their own work. Increases in written fluency make them confident and want to write more. Supporting children's writing development this way takes away the pressure that comes with assessment, which often voids writing of meaning. The journal can be a learning, teaching and assessment tool.

We have learnt:
• the value of writing back to the children. They understood journal writing to be an interactive process and often expressed disappointment when we did not write back;

• that if you are genuinely interested in them, an open and honest relationship develops. The children want to share their stories and be listened to. They do not all need to be given a topic to write about;

• that working with both isiXhosa and English and encouraging writing in both languages developed their ability to read, speak and write in both languages. The journal was also a means of reshaping attitudes about different languages and built self-confidence in most of the children.

SUGGESTIONS

Respond to all the children and not only to those who write well. For those who still need extra support, the teacher acts as a scribe while the learners dictate what they want to say. Sometimes children share very personal information. What is written in the journals is not discussed outside the journal, unless it is agreed between the two people writing the journal. The journal is for both reading and writing. Encourage children to read your responses.
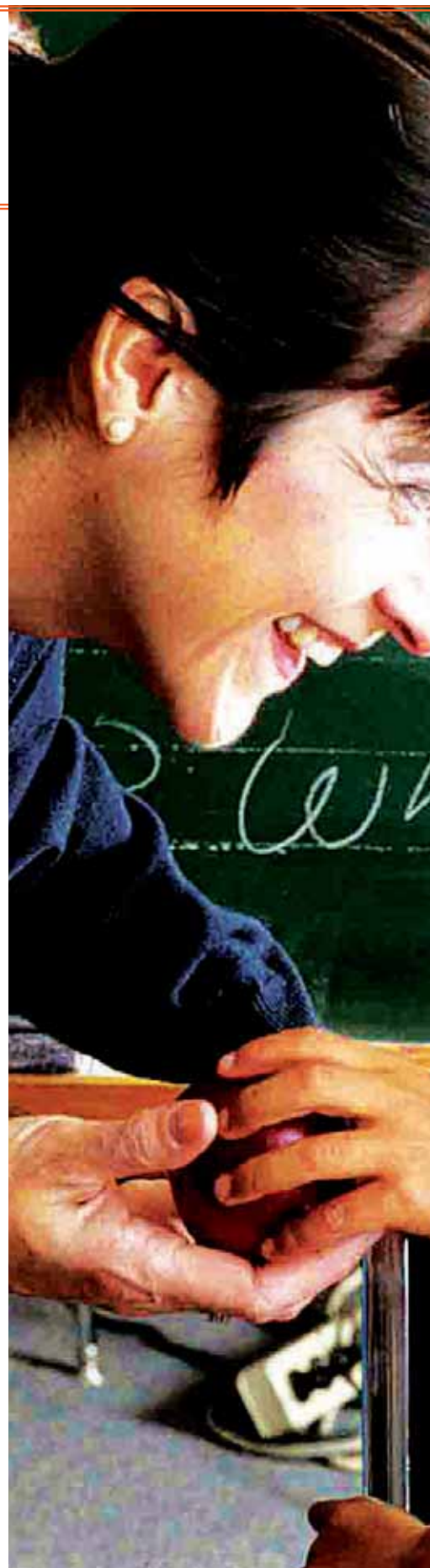
The quantity and quality of the teacher's response is important. It is easy to look forward to certain journals as some children write particularly interesting things, but they all deserve extended responses that are better than just 'nice', even when they only write one line. They need to know that they are accepted. They need to be invited to write more and take more risks with their writing.

Journals can also be used for reporting on other learning areas, like social sciences.

Interactive journal writing should have an allocated time. The established routine gives children something that is about themselves and personally meaningful to look forward to.

MENTORSHIP FOR CLASSROOM CHANGE: ACTION AND REFLECTION

The study for Creating Literate School Communities also explored mentoring as an

> It is easy to look forward to certain journals as some children write particularly interesting things, but they all deserve extended responses that are better than just 'nice' even when they only write one line.

alternative model for teacher training. Mentoring is a nurturing process in which a more skilled or more experienced person serves as a role model, teaches, encourages, advises and befriends a less skilled or less experienced person for the purpose of promoting the latter's professional or personal development. Mentoring functions are carried out within the context of an ongoing, caring relationship between the mentor and the child being mentored.

Our work in schools was intended to create conditions which inspire, promote and support teaching and learning. These conditions included nurturing teachers to use holistic approaches for teaching literacy (emergent, whole language, and balanced approaches); supporting mother tongue and additional language learning; getting children and teachers to read for enjoyment, and establishing school libraries.

Mentoring involved visiting schools at least twice a week from October 2007 until the end of 2010; creating and sustaining relationships and cultivating an atmosphere of collegial collaboration and problem-solving with their teachers; an individualised form of training tailored to their needs; and providing job-embedded, context-specific, ongoing support to teachers and students.

The mentoring process was not based on one specific model but on a collection of strategies used flexibly and sensitively in response to changing needs. The strategies included modelling/demonstration lessons; workshops; interactive reflective journal writing; reflective meetings; co-planning sessions and exposing teachers to professional development conferences, inspirational talks and professional books on literacy.

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Interactive journals

Journal writing as a mentoring and reflective tool, which is supported by literature on teacher professional development, played a major role in the mentoring process explored by the study. It was found to be very beneficial in classrooms where teachers and students write to each other for meaningful reasons. The journal-writing process involved:

Giving explicit explanation of what journal writing and reflection mean and of the principles involved:

- ☛ Modelling journal writing
- ☛ Writing in one's mother tongue
- ☛ Setting time aside for writing
- ☛ Achievements

Mentorship increased teachers' confidence and trust in the children's ability as well as their own practice. Once they started seeing the results for themselves, they became more secure and self-confident. When our approaches were linked with curriculum documents, teachers' attitudes changed, which helped with the uptake and understanding of the curriculum. Teachers became mentors to each other.

All expected curriculum outcomes were reached (and at times exceeded) using Whole Language approaches in a coherent and systematic manner.

LESSONS LEARNED

Take-up of reflective practice and literacy approaches is a complex developmental – rather than linear – process or a once-off event and depends a lot on the presence of mentors to provide ongoing demonstrations, team teaching, discussions, meetings, training, reading of professional books, and reflections with teachers on their attitudes and patience.

Mentoring teachers requires mentors to have patience, value teachers' current practices, praise their attempts, and accept resistance. Professional development should not focus on one person but on a number of teachers, thus building capacity.

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Supporting children's literacy development is at times a luxury and at times a burden or a low priority in the face of the real material hardships that have to be dealt with on a daily basis.

In some cases we allowed teachers to depend on us or use us as substitutes when they left classrooms for whatever reason. Training should be tailored to teachers' individual needs.

CHALLENGES

Implementation of approaches and strate-

IN THE COMMUNITY

Vulindlela Reading Clubs as an example

In different communities around the Western Cape and in other parts of South Africa, children and adults are starting reading clubs. Many of these reading clubs follow a basic programme of songs and games, storytelling, reading and writing, and drama and poetry in the mother tongue and English. This loose network of community literacy initiatives grew out of the need for the Langa community in Cape Town to respond to the low levels of literacy among their children. PRAESA was asked to partner with a community organisation to set up a reading club and pass on skills and literacy knowledge to interested community volunteers.

The theoretical understandings and practical, technical and pedagogical know-how of how the development of reading and writing habits in children can be nurtured within these reading clubs is a culmination and continuation of PRAESA's Early Literacy Unit's experience and knowledge.

The theories that underpin the work and training within the Vulindlela reading clubs include:
• Reading for enjoyment as the missing link in literacy learning;
• In the multilingual settings of Africa, and given the history of the continent, mother tongue-based bilingual education allows children the best opportunities for learning: not either mother tongue or the ex-colonial language, but in both;
• Literacy is part of people's regular social and cultural practices;
• Oral language and written language are learned in similar ways for use in personally meaningful ways in social contexts;
• Emotions are at the very heart of language development, so the environment needs to be a nurturing one;
• The way to a child's heart and mind is through a story;

• Children learn the cultural ways of their communities through guided participation with interactive role models.

The reading clubs were started to create conditions in community settings which inspire, promote and support reading for enjoyment and the development of reading habits in the mother tongue and additional languages among children and adults. Our aim was to create environments that motivate children to read and write, and that affirm their identities and give them a sense of belonging.

Hand in hand with this is the sharing of knowledge with community volunteers about appropriate ways of encouraging and developing children's literacies. In this way, communities can develop educational strategies that equip them with the means to navigate a system that fails in many ways in order to redress past inequalities.

Central to the success of the reading club model is the participation of and role modelling by adults. In communities that are economically, educationally, linguistically, structurally and psychologically marginalised, supporting children's literacy development is at times a luxury, and at times a burden or a low priority in the face of the real material hardships that have to be dealt with on a daily basis.

The training, encouragement and belief in communities to reclaim some responsibility for the education of their children are just as important as the transfer of reading and writing skills.

By using stories, songs, poetry, drama and games as bridges to written language, reading clubs have the potential to not only include entire communities in the educational development of their children, but to create alternative spaces within which poor and marginalised communities can compensate for some of the disempowering factors that prevent effective literacy learning and the establishment of a culture of reading and writing.

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gies requires the presence of the mentor, and depends on good management. There are many things competing for teachers' time, including high administrative workload and too many workshops.

Teachers' critical reflection still needs to be developed with the help of a reflective mentor. Staff mobility within and outside the school affected continuity and implementation.

Teaching maths and science in isiXhosa

Learners' home language plays a major role in primary schooling, particularly in the foundation and intermediate phases. Most learners come to school with their home language the only instrument in which they can express themselves. The learners' sociocultural background incorporating indigenous knowledge (IK), or local knowledge, is also tied to their home language.

As a result of the latter, the use of the learners' home language can also shorten the amount of time which learners need in order to cognitively move from what they currently know and what they need or are ready to know. This cognitive distance is what Lev Vygotsky calls the Zone of Proximal Development (ZPD) of the child (Vygotsky, 1978).

Many recent studies have shown that most learners who speak African languages start failing mathematics when they reach the upper grades. There is much speculation about the causes of this failure. The upper levels of education tend to point a finger at the early years of schooling and vice versa. Afrikaans schools were top performers, it has been said, because pupils were taught in their mother tongue from Grade R to Matric.

Our research sought to understand how numeracy and science is taught in the intermediate phase, and to show how the learners' home language, isiXhosa, can be used alongside English to enhance conceptual understanding in science and mathematics. We wanted to investigate how dual-medium education models could be established using the concept of mother tongue-based bilingual education (MTBBE).

In South Africa, learners, particularly those who speak African languages, struggle to deal with word problems and with fractions and sums in which geometry has to be used to calculate area. In general, learners experience substantial problems in communicating their answers in the language of the test (usually English). A 2004 study revealed that the vast majority of Grade 6 learners in the Western Cape have not even mastered the literacy and numeracy levels expected of Grade 4 learners.

Most textbooks and other teaching resources, particularly in mathematics and science, are still written mainly in English and most teachers are expected to teach in English. However, most teachers in Xhosa-dominant schools in the Western Cape use isiXhosa to teach or engage in code-mixing and code-switching in order to be understood by their learners. Speakers practise code-mixing when they are fluent in both languages.

The Western Cape Department of Education's (WCED) Literacy and Numeracy Strategy (LitNum, 2006), and the Language Transformation Plan (LTP, 2007) sought to address these challenges by promoting the use of learners' mother tongue in the classroom, wherever practicable, at least until Grade 6.

After identifying the basic linguistic and conceptual challenges in teaching mathematics and science, we developed interventions in line with the LitNum strategy and the LTP to enhance learner performance. Because

> **Code-mixing: the mixing of two or more languages or language varieties in speech.**

$$f(x) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

of space constraints, we confine ourselves to the description of some materials development interventions we made.

Materials development process

Our observations showed us there is a great need for developing and adapting teaching and learning resource materials. We decided to extract all key terminology from the lesson plans, including glossaries from textbooks, in order to form resource packs. In this way, teachers were able to access material that together we developed for use in their lessons.

As the dual-medium team, we introduced a range of materials that disadvantaged schools do not currently have access to. We translated these materials into isiXhosa in order to form bilingual teaching materials.

Mathematics posed a tremendous challenge during this process. Learners find it very difficult to read English textbooks. The content and themes of mathematics and science text-

> The content and themes of mathematics and science textbooks are for the most part unfamiliar to them, the vocabulary strange, and new words are introduced at a very rapid pace.

books are for the most part unfamiliar to them, the vocabulary strange, and new words are introduced at a very rapid pace.

We did not start from scratch in materials development. We translated learning area work schedules and key scientific and technical terms for wall posters. In workshops, we showed the teachers how to plan a bi- or unilingual lesson and develop appropriate materials. We taught teachers methods of choosing textbooks that have, among other things, a good balance of content and teaching methodology. In this process, we had to take into account the mindset of teachers and bolster their self-confidence, so that they would be able to develop teaching and learning support materials in our absence.

FINDINGS

In summary, the main findings in this area were as follows:

While there were some bilingual teaching resources emanating from publishers and the WCED, very few covered the subject content adequately,.Most were direct,, translations, which are not meaningful, and in many cases they were translated out of context.

Generally, these textbooks were translated by linguists who were not mathematics or science subject specialists. The writers of most of the published textbooks are not speakers of an African language. It is essential that textbooks be originated in the mother tongue.

Publishers should have dedicated subject specialists in their translation units working with experienced linguists.

Further reading on these topics is available on www.praesa.org.za

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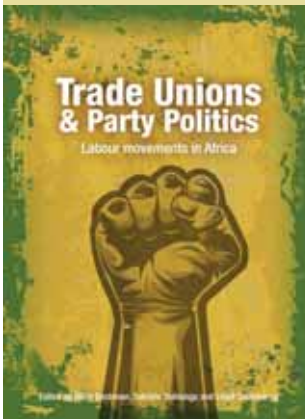
TRADE UNIONS & PARTY POLITICS: LABOUR MOVEMENTS IN AFRICA

Björn Beckman, Sakhela Buhlungu & Lloyd Sachikonye (eds)

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David Cooper

Soft cover, 400pp, ISBN 978-0-7969-2347-9, peer-reviewed book, September 2011, R450.

*t*rade Unions & Party Politics Movements in Africa was awarded the Book of the Year Award 2010 by The International Labour History Association (ILHA). The ILHA had not issued any book awards in 2007, 2008 and 2009, which makes this book a highly recognised scholarly work amongst labour scholars.

This volume looks at the way in which trade unions engage with political parties, either by being part of them, taking the lead in their formation, or refusing to join party politics altogether.

Against a backdrop in which it is difficult to separate workplace matters and wider national development, often the aim is to extend the interests of workers into a rights-based agenda that makes civil and political liberties more broadly accessible.

But how are African trade unions engaging with the political parties that can facilitate such change – and are they doing it successfully? By examining the experiences of trade unions in seven African countries, this volume seeks to explore these questions, and open up space for further research.

a seminal study, *The University in Development* explores how the university is indeed 'in development': pursuing a new 'third' mission of external societal development (alongside its two existing missions of teaching and research), and experiencing a major internal revolution as this impacts on its structural organisation.

Already prevalent in many institutions internationally, this third academic mission has begun to pose troubling challenges to existing academic research cultures and systems in South Africa

The book is structured in three parts. While the first considers case studies of this academic transformation globally, the second part homes in on new research centres at Western Cape universities to examine the combination of creativity and disruption arising as this third academic mission evolves in South Africa.

Part three argues that new visions, concepts and policies of research are needed if our universities are to unlock their 'knowledges' for societal development, with greater social justice not only for industry but also for civil society.

The University in Development will be of interest to scholars in the fields of higher education, innovation studies and the sociology of knowledge, and is of critical relevance to policy-makers.

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