



AdFocus is the FM's annual survey of the advertising and marketing industry in South Africa

Subscribe now!  
& get the full FM  
early online!

## Sections

Advertising & Marketing  
Arts & Leisure  
Business  
Business in Africa  
Companies  
Cover Story  
Current Affairs  
Economy & Markets  
FM Focus  
Front of the Book  
Opinion  
People  
Personal Wealth Weekly  
Property  
Technology  
Did You Hear?

## Careers

Top Jobs

## Special Reports

- Wiphold
- Project Management
  - DuPont
- Analyst Rankings 2005
  - Innovations

## Annuals

Analyst Rankings 2005  
**AdFocus 2005**  
Budget 2005  
Top Companies 2004  
A Decade of Democracy  
Analysts Ranking 2004

## Social Responsibility

- World Aids Day 2004
- Corporate Aids Awareness
  - Rally to Read
- Corporate Aids Awareness
  - Cida City Campus

## Online courses

Buy To Let  
Corporate Governance  
Responsible Trustees  
Strategic Empowerment  
Tenders  
Virtual Books

## Conferences

AdFocus 2005 winners  
AdFocus website

## Resources

Help  
Search  
Subscribe  
New Web Users  
Log in  
Advertise  
Online Advertising  
Contact Us - email

## In my opinion



17 June 2005

By Invitation

**MATHEMATICALLY SPEAKING**

By Mamokgethi Setati

**Students' home languages should be used as resources in the teaching and learning of maths**

**The minister of education** recently announced a plan to move indigenous languages "from the margins on to the centre stage". The plan includes the long-overdue development of indigenous languages into languages of learning and teaching.

This means that in a few years we may see matric mathematics examination papers in multiple languages. At the moment the papers are set only in English and Afrikaans; and so Afrikaans students who are learning maths in English can always check the Afrikaans version if they are not sure what is meant in English.

A majority of SA students learn maths in English, a language in which they are not fluent. It is not surprising that most of these students do not do well in maths. Language is a factor both in the learning of maths and in the assessment of maths achievement. These students have to cope with the mathematical concepts, how the concepts are applied and the language in which they are embedded.

Their teachers have a dual task of teaching both maths and English at the same time. In some schools, maths students learn very little maths because the teachers are focusing more on developing their fluency in English. As a result, many children enter secondary school without the background knowledge required to succeed in maths.

Maths curricula all over the world emphasise learning to communicate mathematically as a central aspect of what it means to learn school maths. Students are now expected to participate in a variety of maths oral and written practices, such as explaining solution processes, describing conjectures, proving conclusions and presenting arguments.

Research shows that students whose home language is not English must acquire a substantial level of English proficiency to be able to participate effectively in maths classrooms where the language of learning and teaching is English. A majority of SA students start learning maths in English before they even acquire basic conversational fluency in the language. This is one of the reasons we perform poorly in studies such as the Trends in International Mathematics & Science Study.

The linguist Jim Cummings postulates that there is a minimal linguistic competence - a threshold - that a student must attain to function effectively in cognitively demanding academic tasks. This threshold can take between five and seven years to develop in a student's second language. This is probably the reason some SA researchers argue that we have to develop the students' proficiency in English so that they can perform better in maths. There is no doubt that proficiency in English is important, but the maths classroom is not the place to be developing it.

The students' home languages should be used as resources in the teaching and learning of maths. This would ensure that maths teachers focused on developing students' mathematical proficiency, rather than their fluency in the English language. The role of maths teachers is to teach maths and any language can be a tool to make maths accessible to students.

PRINT THIS ARTICLE EMAIL TO A FRIEND

Property Section  
proudly sponsored  
by

**JAWITZ**

PROPERTIES

Contact Us  
Career Junction

**Virtual Books**  
Marketing in SA  
Business Finance  
HR Management  
Simply Successful Selling  
Intro to Company Law  
Cyberlaw  
Management & Treasury  
Operations

An important goal of maths teaching in a multilingual context such as ours should be to support the maths learning of all students, regardless of their proficiency in English. Teachers can move towards this goal by encouraging students to express mathematical ideas in their own language.

Research in SA and elsewhere shows that classroom interactions that include the use of students' home languages support their learning to communicate mathematically. In these classrooms the focus is on the maths; English, like other languages, is one of the resources that can be used in the process of learning.

## Past Issues

The fact that the mathematics register is not well developed in our indigenous languages should not be a barrier. In a multilingual country like ours, it is quite normal for people to mix languages when they speak. The same can be done in a maths class. The critical point is that during maths teaching the focus should be on the maths rather than on English.

Recognising indigenous languages as a resource in the learning and teaching of maths is important not only for developing mathematically competent students, but also for promoting them as languages that can be used for scientific interactions.

South Korea, Taiwan and Japan, which teach subjects like maths and science in their mother tongues, outperform countries that do not. SA can turn its multilingual context into a strategic asset as it seeks sustainable economic growth and development.

*Mamokgethi Setati is associate professor of mathematics education at the University of the Witwatersrand, and president of the Association for Mathematics Education of SA*



*BDFM Publishers (Pty) Ltd disclaims all liability for any loss, damage, injury or expense however caused, arising from the use of, or reliance upon, in any manner, the information provided through this service and does not warrant the truth, accuracy or completeness of the information provided. The publisher's permission is required to reproduce the contents in any form including, capture into a database, website, intranet or extranet.  
© BDFM Publishers 2005*

