



Mimi Mini, Deputy Director of Teaching and Learning Resource Development at the National Department of Basic Education, chats to pupils playing an innovative coding game called "Tanks", at a STEAM (science, technology, engineering, art and maths) workshop run by Nelson Mandela University's Govan Mbeki Mathematics Development Centre (GMMDC). The DBE recently proposed Coding as a new South African school subject.

Pupils from disadvantaged schools across the Eastern Cape are taking their first steps towards IT careers, by getting a feel for coding theory.

Nelson Mandela University's Govan Mbeki Mathematics Development Centre (GMMDC) has included coding theory in its interactive STEAM (science, technology, engineering, art and maths) experiential-learning workshops, run in classrooms from East London to King William's Town, Queenstown, Bedford and Somerset East. The STEAM workshops are run in partnership with Capitec, Old Mutual, Cookhouse Windfarm Trust and BK Admin Services.

Maths, science is now on the phone

Free Android app offers offline curriculum help

By GUGU PHANOLE

SECONDARY school pupils unable to perform at their top level due to under-resourced schools will now have a chance to put their best academic foot forward with a ground-breaking maths and science mobile application.

The Nelson Mandela University's Govan Mbeki mathematics development centre (GMMDC) has been using cutting-edge technology to boost teaching and learning in maths and science to schools in need.

The app, TouchTutor Quiz, is available for free on Google Play Store, offering teachers and pupils mobile access to maths and science academic content.

The app's curricula follow those of grades 8 to 12 on maths, and grades 10 to 12 for physical sciences.

There are high hopes that the app will boost the pass rate in these two key subjects.

"This app can be used by pupils, teachers and schools anywhere in South Africa," enthused GMMDC director Professor Werner Olivier.

"It builds on our existing programmes, which have already led to improved understanding and real results in the classroom."

"The new app will allow us to bring even more innovation into the classroom and help even more pupils, which we are really excited about."

TouchTutor Quiz can be downloaded on Android phones and tablets, which can be linked to data projectors for teachers to use in class.

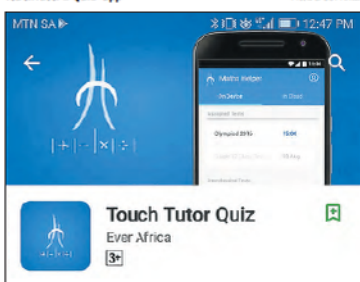
It is a spin-off of GMMDC's first app – the ground-breaking 'TouchTutor' package – which is an offline teaching and learning resource that covers the complete school curriculum.

This app, first introduced in 2012 and expanded each year until its 2017 completion, brings maths and physical science concepts to life for pupils through offline video lessons, PowerPoint presentations and innovative software called GeoGebra.

It also boosts understanding, memory and self-confidence through past papers, interactive



INVESTING IN THE FUTURE: Professor Werner Olivier, director of Nelson Mandela University's Govan Mbeki Mathematics Development Centre (GMMDC), is the driving force behind the new TouchTutor@Quiz app



self-tests and language support in several of South Africa's official languages.

In another project, GMMDC has developed an incubator school programme that offers hundreds of pupils across the province adequate maths and science learning material.

The cities involved include East London, Komani, Port Elizabeth and King William's Town.

East London project leader David Ntawana says helping pupils reach their full potential is really inspiring. "We host classes at the Gomo Library every Saturday. Here, 100 Grade 11 and 12 pupils are taken through rigorous maths and science lessons using GM-

MDC's teaching programmes.

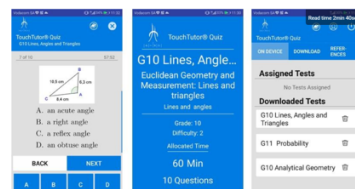
"These children are so receptive to information. They are willing to learn and make a change in their lives and that is truly inspiring," said Ntawana.

GMMDC has provided the selected 100 pupils with tablets that they can take home so that they can study using the app.

The schools involved with GMMDC's East London incubator programme include Alphenale Secondary School, Sinovuyo High School, Ebenezer Majomhosi High School, Greenpoint High School, Khushle Comprehensive School, Mzokhanyo High School, Qaqamba High School and Lumko High School. — gugu@dispatch.co.za

TouchTutor Quiz gets a makeover

By KAITHAR GOOL
Johannesburg, 04 May 2018



The updated TouchTutor Quiz app can be downloaded onto any mobile device.

The Govan Mbeki Mathematics Development Centre (GMMDC) will today launch an updated version of its learning app, TouchTutor Quiz, a spinoff from the original TouchTutor app introduced in 2012. The updated app contains new features, including a range of reference material in maths and science, as well as online competitions and assessments. It also uses minimal data.

This is according to Phil Collett, mathematics project manager of the GMMDC at Nelson Mandela University (NMU).

"TouchTutor Quiz was developed by the GMMDC at NMU in collaboration with IT company AvoChoc, and was created with the desire to make learning material, language support, assessment and practise for maths and science freely available to all learners on their own mobile devices."

"It is primarily aimed at high school learners and teachers, but can cater for any subject at any level. Loading primary school content can be done, but may require partnership with interested teachers or schools."

The app was previously only available on tablets and desktops for pupils in GMMDC project schools, with a laptop-based teaching resource for educators to make use of, notes GMMDC director Werner Olivier.

"The updated app can be used by pupils, teachers and schools anywhere in SA and builds on our existing programmes, which have led to improved understanding and real results in the classroom."

The user downloads the app and then registers on the platform, explains Collett. "The app then has options for practise tests, assigned tests which are scheduled for specific times and accessing reference material and language dictionaries in eight South African languages. The user's record of test performance and their profile are always visible."

"Users must be online to register and download tests, but may use downloaded material offline. Results are uploaded when the user is online again. All material is accessed by simply touching the options available. Question types include multiple choice, matching, sequencing, true or false, numerical and text answers."

Collett notes the app is primarily aimed at high school learners, but college and university students will find it useful as revision. The app can potentially be used by anyone who wants to implement assessment and access content for reference purposes.

In future, GMMDC plans to expand participation in its annual online maths and science competitions, says Collett. "We intend to add game elements to the app and host regular challenges. We will continually expand the range of questions and tests available. We also intend to offer a commercial service for customised assessment."

The updated TouchTutor Quiz can be downloaded from the Google Play store on any mobile device.

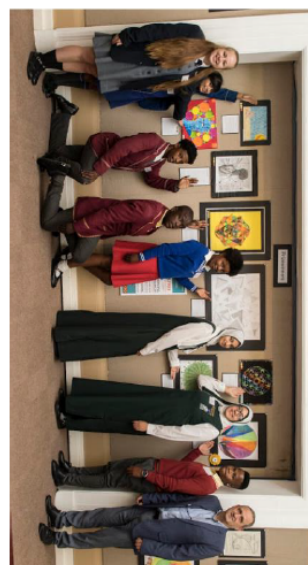
A similar initiative aiming to remove barriers to learning is video education firm Paper Video, which gives learners access to teaching offline using their mobile devices without needing any Internet connection or data.



Left to right: Mr Dal Matta, Old Mutual; Mr Asemahle Cezar, for TAPS participant; Prof Werner Olivier, Director GMMDC; Dr Phil Collett, Project Leader GMMDC; Mr Dik Grief, DBE

Bay conference celebrates Math-Art winners

Competition prize-giving highlight of GeoGebra event
BY HERALD REPORTER - 28 May 2018



Showing Nelson Mandela University's Prof Werner Olivier, right, their innovative artworks, are the Eastern Cape winners of the first Math-Art competition, from left, Gans Hight's Mla Bettele, Beconhurst High's Shanyu Archery (both from East London), Urban Academy's Mandlakhe Khona, KwaZulu-Natal High's Muzila Ntshali, Gel Ahned College's Zukhanyo Hlatshini (from Komani), Nasrudin Islamic High's Fatima Zahra Hoosain and Zairah Kenderany, as well as KwaZulu-Natal High's Masibane Mangwana

Image: Michael Sheehan

It was a clean sweep for KwaZulu-Natal High School at the weekend with two of its pupils taking the top spots in the Eastern Cape's first Math-Art competition where entrants had to create art pieces inspired by maths. The prize-giving for the Math-Art competition – which was run by Nelson Mandela University's Govan Mbeki Mathematics Development Centre (GMMDC) – was one of the highlights of the centre's fifth annual GeoGebra Conference for teachers and TYET College lecturers. This year's theme was "GeoGebra for STEAM Education: Linking Maths and Arts for Beauty in Design".

GMMDC hosts one of 187 global institutes for GeoGebra, which is free, open-source maths software used in maths and science classrooms across the globe, while STEAM – the acronym for Science, Technology, Engineering, Art and Mathematics – follows an international education trend where science, technology and the arts are promoted through maths.

The weekend conference included several talks, along with practical sessions, where teachers learnt how to include GeoGebra in their classrooms. The link between maths and the arts – found in nature, fashion, architecture, Islamic and African art – was also the driving force behind GMMDC's Math-Art competition, which drew 113 entries from 36 schools. These are on display at the Nelson Mandela Metropolitan Art Museum until June 8.



www.myppe.co.za

Mobile maths competition draws 'screen generation' pupils
6 DECEMBER 2018 BY ALAN STRATON

The app draws in two mobile-based math competitions – both run through the innovative TouchTutor Quiz app, developed by Nelson Mandela University's Govan Mbeki Mathematics Development Centre (GMMDC) – which is an offline teaching and learning resource that covers the complete school curriculum. This app, first introduced in 2012 and expanded each year until its 2017 completion, brings maths and physical science concepts to life for pupils through offline video lessons, PowerPoint presentations and innovative software called GeoGebra.

It also boosts understanding, memory and self-confidence through past papers, interactive