Media Release
Actuarial Society of South Africa
4 December 2019

Actuarial Society calls on learners not to give up on pure Maths

A high demand for actuarial skills in South Africa means that the country's 1 586 fully qualified actuaries enjoy a 0% unemployment rate. The demand for actuaries is not unique to South Africa – the United States Bureau of Labor Statistics* recently predicted a 20% growth rate in the employment of actuaries from 2018 to 2028, which far exceeds the growth expectations for all other professions.

Mike McDougall, CEO of the Actuarial Society of South Africa, acknowledges that the actuarial qualification is one of the toughest to obtain, which explains why there are so few fully qualified actuaries in South Africa and globally. However, given the country's youth unemployment rate of 55.2%**, McDougall says actuarial science is a profession worth considering for learners with an immense amount of self-discipline and who are prepared to commit to pure Maths as a subject.

He explains that actuaries use highly developed analytical, statistical and numerical skills to quantify and manage risk as well as make strategic provision for the financial implications of loss. McDougall adds that a career in actuarial science focuses on the future to ensure that organisations are in a financial position to respond appropriately to challenges that may emerge.

"The path to becoming an actuary is not a cakewalk, but if you are ambitious and talented when it comes to numbers it can be one of the most rewarding and dynamic professions in the world," says McDougall. He points out that fully qualified actuaries tend to be well-paid with excellent job security and advancement prospects.

The case for Maths

McDougall believes that no learner should be allowed to switch from pure Maths to Maths Literacy without fully comprehending the implications of not matriculating with pure Maths as a subject.

"While there are legitimate cases where a switch to Maths Literacy makes sense, the most common motivator is often to lighten the learner's workload. When a learner is struggling with Maths, parents and teachers should focus on providing learners with academic support instead of encouraging them to give up on the subject."

According to the 2019 Bankrate.com ranking*** of college majors in the US, STEM (science, technology, engineering and Maths) degrees are the most valuable. Graduates in STEM professions typically earn more and are less likely to be unemployed.

Unfortunately for many learners a pass rate, never mind an A, in pure Maths is a bridge too far. McDougall says this is especially true for South African learners from low income households who attend schools that lack even the most basic resources. For this reason, the Actuarial Society supports several initiatives around the country aimed at

helping learners not only achieve a pass rate, but also to obtain the A that they need to qualify for an actuarial or other STEM programme at university.

Helping learners succeed

According to McDougall, the initiative with the biggest impact continues to be the partnership established in 2015 between the Educational Trust of the Actuarial Society and Paper Video. Created by Maths teacher Paul Maree and concept architect Christopher Mills, Paper Video creates books of past exam papers and worksheets that contain embedded video lessons. These resources provide learners with access to some 13 000 lessons by experienced teachers via their mobile phone or computer without needing an internet connection or data.

Over the past four years, this partnership has provided more than 17 000 learners from 106 schools around the country with technology enabled tutoring in Maths, the Sciences and Accounting at no cost to learners, the schools or the Government.

“As a result, we have seen learners with average Maths grades from the country’s poorest schools matriculate with distinctions,” says McDougall. “Many of these learners receive bursaries and go on to study either actuarial science or other professional degree programmes.”

With the help of Paper Video resources, for example, the matric class of 2018 at the Lefa-Ifa Secondary School in Gauteng achieved two Maths distinctions for the first time ever. One of these learners was accepted into the actuarial science programme at the University of the Witwatersrand.

McDougall says another innovative programme that has delivered incredible results, although on a much smaller scale, is the Bona Lesedi Mathematics Initiative, which is a joint venture by the Actuarial Society, the Catholic Women's League and Pretoria Boys' High School.

Sponsored by the Actuarial Society since 2011 and administered by the Catholic Women's League, matric learners at Pretoria Boys' High School provide maths tutoring to Grade 11 and 12 learners from Bona Lesedi Secondary School in Mamelodi. Bona Lesedi teachers have reported a significant increase in the marks of the participating learners. Last year 23 learners participated (17 in Grade 11 and 6 in Grade 12) and all of them achieved a pass rate. Of the six matric learners, four achieved between 60% and 79%, while one learner passed with distinction.

Transformation through learning

McDougall points out that it takes between seven to 10 years to become a fully qualified actuary. Students who come from disadvantaged backgrounds and who did not grow up with English as their first language often face the biggest struggle and take longer to achieve the full qualification.

With the aim of helping struggling student members achieve their qualifications, the Actuarial Society Academy was established in 2016. The Academy provides working

student members with educational support as well as soft skills training such as communicating in a corporate environment, balancing work and studying, and coping with the demands of the workplace.

McDougall says this is making a significant difference in speeding up transformation of the profession. Of the 1 586 fully qualified actuaries in South Africa, 1 228 are white. The actuarial student numbers, however, paint a very different picture. The Society currently has 2 767 student members of which less than half are white (1 130).

Actuarial Society of South Africa Membership Figures – Fellows

Year	White	African	Indian	Coloured	Asian, Oriental, Undefined	Total	Male	Female
2006	628	28	6	17		679	588	91
2016	1149	82	136	21		1417	1095	322
2019	1228	113	185	26	34	1586	1198	388

Actuarial Society of South Africa Membership Figures – Student

Year	White	African	Indian	Coloured	Asian, Oriental, Undefined	Total	Male	Female
2013	1054	463	322	49		1888	1308	580
2016	1090	971	412	72		2629	1802	827
2019	1130	1075	426	97	66	2767	1840	927

Learners interested in actuarial science as a career are encouraged to visit the Actuarial Society's website for more information.

Ends

*** Source:** United States Bureau of Labor Statistics
https://www.bls.gov/ooh/math/actuaries.htm

**** Source:** Statistics South Africa
http://www.statssa.gov.za/?p=12121

*** **Source:** Bankrate.com
https://www.bankrate.com/career/most-valuable-college-majors/

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The Actuarial Society of South Africa is the professional organisation for actuaries and actuarial students in South Africa. The vision of the Actuarial Society is an actuarial profession of substance and stature, serving, and valued by, our communities as a primary source of authoritative advice and thought leadership in the understanding, modelling and management of financial and other measurable risks.