Address by the Chief Executive Officer of the HSRC, Prof Crain Soudien, at the Release of South African participation in TIMSS 2015

29 November 2016

The Programme Director, DG Mweli

The Minister of the Department of Basic Education, Honorable Motshekga.

The Executive Director of Education and Skills Development programme and Principal Investigator of TIMSS , Dr Vijay Reddy

Participants from government departments, unions, universities and all delegates to this meeting

It is an honour for the Human Sciences Research Council to present the results from South Africa's participation in the Trends in International Mathematics and Science Study (TIMSS) 2015. Educational achievement studies have become an important part of a national conversation about the state of the country's education. South Africa is not alone. Across the world, decision makers in countries (at different stages of development) want to know what works in the education system and what needs to be improved. Equally important is how the schooling system is changing over time.

South Africa has participated in a number of national, as well as cross-country comparative assessment studies to measure achievement in the key knowledge areas of language, mathematics and sciences. There have been five rounds of the Trends in International Mathematics and Science Study (TIMSS), three rounds of the Progress in International Reading Literacy Study (PIRLS), and three rounds of the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) Survey. South Africa first participated in the TIMSS in 1995 and subsequently in 1999, 2002, 2011 and 2015.

There are advantages to gaining this international perspective on our educational achievement. As reported results are based on data from all learners across participating countries, local policy makers have the opportunity to compare South African learners to their peers elsewhere. Further, South African researchers can both learn from international experts about the best ways of assessing the education system and share our experiences of making the global assessment locally meaningful.

The HSRC had taken a brave step in 1995 to participate in an international achievement study – in fact up to that point, there was no single national score estimating educational performance. Participation in TIMSS 1995 (which had methodological limitations) and TIMSS 1999 provided the first indicative estimate of national mathematics and science achievement. This shocked the country in recognising the educational journey that we needed to take to achieve the desired results.

So why does South Africa participate in the TIMSS?

Mathematical and science skills are globally recognized as key competences for the development of an individual, a society and an economy. Achievement in school mathematics and science is one of the key indicators of the health of our educational system, and we recognize that this continues to be a contributor to social inequalities of access and income. The changes in school mathematics performance provide a measure of whether the historical differences in the system

are shifting in the right direction. Who can forget the apartheid social engineering project which deliberately withheld mathematics as a school subject for the African population.

South Africa is characterised as a country with high levels of poverty, inequality and unemployment. The societal characteristics have an impact on the education quality and become both a determinant and an outcome of the level of development of the country. As expected in unequal societies, there are high levels of variation between schools. While high income countries focus on interventions inside classrooms to improve subject matter knowledge and achievement scores, low income countries have to focus on two challenges. On the one hand we must focus on what happens inside classroom to improve teachers and students mathematical knowledge. And, we need to go beyond the estimates of national mathematics and science achievement scores to identify the effects of the learning and teaching contexts and conditions that influence educational achievement. As a sociologist the analysis of context and its correlation with educational achievement is of deep interest to me.

The South African approach to the analysis of TIMSS data which extends beyond reporting the rank order performance of participating countries to include an analysis of school and home contexts and conditions is gaining global recognition. I am very pleased that the there is an emerging scholarship and knowledge production from the analysis of TIMSS data. The HSRC and other researchers have analysed TIMSS data further to understand key societal issues like gender and school safety and the link with achievement scores. The HSRC team has further extended the TIMSS sample to a five year South African Youth Panel Study (SAYPS) to understand educational progression and pathways of learners post grade 9. The analysis so far has revealed the predictable story of 'advantage begetting advantage'.

Of course, responses to the results from the TIMSS have been mixed, with critics arguing that participation in international assessments is a pointless exercise because of the slow pace of improvement in South African education, and because these assessments are not relevant to the country's social and political history. Supporters have argued that international assessments (especially those with trend measures) can be useful at many levels of policy and planning. As we listen to the presentation we can evaluate whether these international studies have contributed insights on ways to monitor and improve South African education.

As I conclude my presentation I want thank the Department of Basic Education for the collaboration in this study. The earlier rounds of the TIMSS were conducted by the HSRC. The TIMSS 2011 and 2015 studies were supported with by the Department of Basic Education,

without in any way interfering in the independence of the study. We answer to the scientific criteria for knowledge production. The results from the TIMSS have informed the Department of Basic Education's Action Plan to 2019. Minister, I want to also congratulate you on your bravery in staying the course and continuing to measure educational achievement in a global stage, when we all knew that South Africa had a long way to go. It is better to take the hard knocks, face the truth about the state of our educational and plan our improvement from a knowledgeable position.

Thank you