TOWARDS WIDENING ACCESS TO UNDER-REPRESENTED GROUPS IN THE BIOLOGICAL SCIENCES: A CASE STUDY OF THE UNIVERSITY OF PRETORIA

by

Abbey Mokwape Mathekga

Submitted in partial fulfilment of the degree

PHILOSOPHIAE DOCTOR

in

EDUCATION MANAGEMENT AND POLICY STUDIES

in the

FACULTY OF EDUCATION

at the

UNIVERSITY OF PRETORIA

December 2012

In memory of George Lekwapa Mathekga

1935 - 2011

ACKNOWLEDGEMENTS

This study will not have been a success without the guidance, wisdom, strength, perseverance and resilience that I received from God and my ancestors.

I like to acknowledge and appreciate profoundly and copiously the following people who contributed immensely in various ways towards the accomplishment of this study:

- My wife Laurencia for your unconditional love and unwavering support. We walked this path together and you became a sounding board, a pillar of strength and you shared my frustrations and enchanting moments;
- My son Makopye Samuel for your assistance and taking keen interest in this study, your encouragement has spurred me on when things where tough;
- My daughter Bonolo Seikagedi Phoebe for your understanding, support and assistance with transcriptions;
- My mother Diabeng for always being there for me;
- My paternal grandmother Evelyn Mmakonyana who never had education herself but knew the value thereof and instilled in me at an early age, the significance of education and perseverance in life;
- My sister-in-law Keabetswe Tlhagwane for assisting with transcriptions;
- My supervisor and co-supervisor Dr Chaya Herman and Prof Mokubung Nkomo for your insight and mentorship;
- Prof Chika Sehoole for your support and encouragement;
- Dr Mokgadi Mohlakwana for your encouragement during the difficult last stages of the project;
- Department of Statistics, particularly Ms Jaqui Sommerville for assistance with statistical analysis in a short space of time;
- John Kench for editing this study;
- Dr Jeffrey Mabelebele of HESA for knowing the value of PhD;
- My colleague – Annie Viljoen for your technical support;
- My classmates – Monaheng Sefotho and Phumza Khunou for always being there to lift me up in times of need and when the road ahead seemed murky;
- My friends who are stimulating, interesting and amusing;
- My participants – this study will not have been possible without you.

DECLARATION

I, Abbey Mokwape Mathekga the undersigned, hereby declare that the thesis for the Doctor of Philosophy degree in the study field of Education Management and Policy Studies or any version of it was not previously submitted for assessment to the University of Pretoria or any other university or institution of higher education. I declare that this is my own work and all sources have been properly acknowledged and referenced.

Signature: _____

Date: _____

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INVESTIGATOR(S)	Abbey Mokwape Mathekga
DEPARTMENT	Education Management and Policy Studies
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EDITOR'S CONFIRMATION LETTER

John Kench

Editor, proofreader and overwriter

LETTER OF CONFIRMATION

26 November 2012

To whom it may concern,

This is to confirm that I have edited Abbey Mathekga's doctoral dissertation, `Towards widening access to under-represented groups in the Biological Sciences: A case study of the University of Pretoria'.

John Kench

2 Rose Street,

Mowbray 7700,

Cape Town

Tel/Fax: (021) 6866590

Email: johnkench@xsinet.co.za

ABSTRACT

Since the dawn of democracy in South Africa, significant progress has been made with regards to access to higher education. However, widening participation to under-represented groups in science and technology fields, with special reference to Biological Sciences, still remains a challenge. Despite the growing number of black students in this programme, there is still a substantial gap in terms of the enrolment numbers of student from this racial group in the Biological Sciences.

This research is a case study carried out in the faculty of Natural and Agricultural Sciences at the University of Pretoria, which is a historically white institution with a strong Afrikaans culture. The study used Osborne and Gallacher's (2004) framework of *getting in* and *getting through* to explore access policy at this institution in relation to widening participation in Biological Sciences.

The findings showed that, while there has been progress with regards to physical and epistemological access, *getting in* to Biological Sciences still proves difficult to attain, especially for black male students from under-represented groups, including those from township and rural areas. The challenges related to *getting in* are compounded by various factors. These include inadequate preparation of learners for university studies such as limited preparation for natural science studies, limited exposure to science laboratories, inadequate career guidance resulting in wrong subject mix, late submission of application forms and the 'walk–in' phenomenon.

Funding is crucial for facilitating access to Biological Sciences but it is hard to come by and insufficient for students from low socioeconomic groups. The government initiated funding have potential to help needy students with talent but it is not sufficient to cover both tuition and residence fees. In addition to the financial assistance that the university offers, it also provides a strong academic and psychosocial support to students, particularly in first year in Biological Sciences. Both academic and psychosocial support are factors enabling access and widening participation in Biological Sciences. They also underpin *getting through*. However, students in residences tend to benefit more from these support initiatives.

Key words: Access, Biological Sciences, higher education, under-represented groups, widening participation

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ABBREVIATIONS & ACRONYMS

ANA	–	Annual National Assessments
ASSAf	–	Academy of Science of South Africa
APS	–	Admission Point Score
BS	–	Biological Sciences
BSc	–	Bachelor of Science
CHE	–	Council on Higher Education
CSC	–	Client Service Centre
DBE	–	Department of Basic Education
DfES	–	Department of Education and Skills
DHET	–	Department of Higher Education and Training
DoE	–	Department of Education
FET	–	Further Education and Training
FTE	–	Full Time Equivalent
HAI	–	Historically Advantaged Institution
HDI	–	Historically Disadvantaged Intuition
HE	–	Higher Education
HEI	–	Higher Education Institution
HEMIS	–	Higher Education Management Information System
HESA	–	Higher Education South Africa
IT	–	Information Technology
OBE	–	Outcomes Based Education
MEDUNSA	–	Medical University of Southern Africa
MoE	–	Ministry of Education
NBT	–	National Benchmark Tests
NFF	–	National Funding Framework
NSC	–	National Senior Certificate
NSFAS	–	National Student Financial Aid Scheme
NPHE	–	National Plan for Higher Education
PIRLS	–	Progress in International Reading and Literacy Study
QL	–	Qualitative Literacy
SAT	–	Scholastic Aptitude Test
SET	–	Science, Engineering and Technology

TIMMS	–	Trends in International Mathematics and Science Study
UCT	–	University of Cape Town
UK	–	United Kingdom
UNISA	–	University of South Africa
UoT	–	University of Technology
US	–	United States of America
UP	–	University of Pretoria
UWC	–	University of Western Cape
Wits	–	University of the Witwatersrand
WP	–	Widening participation

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