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Factors that influence the use of practical work in the Grade 10 physical sciences classroom

Singh, Aroon Kumar

2014-07-21
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Candidate's Declaration

I declare that this report is my own work. It is being submitted for the Degree of Master of Science (MSc) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.



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Aroon Kumar Singh

Protocol Number: 2012ECE186

08 May 2014

Abstract

The Curriculum Assessment Policy Statement (CAPS) for all approved subjects is the result of changes brought to the curriculum that was introduced in 1997. The review of the previous curricula has resulted in the National Curriculum Statement for Grade R-12. The changes in the curriculum were inspired by the Constitution of South Africa (Act 108 of 1996) which aims to "heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights" (DBE, 2011a, p. 1). The curriculum aims to ensure that children acquire and apply knowledge and skills in ways that are meaningful to their own lives. The National Curriculum Statement for Physical Sciences aimed to produce learners that are able to "Identify and solve problems and make decisions using critical and creative thinking; collect, analyse, organise and critically evaluate information and use science and technology effectively and critically showing responsibilities towards the environment and the health of others" (DBE, 2011a, p. 8). The aim of this study was to investigate the implementation of CAPS in the Physical Sciences in Grade 10 with particular emphasis on the use of practical work. Two secondary schools, both former Model C schools were used as research sites. Two Physical Sciences teachers and their respective learners participated. The research method used was a case study. The instrument used to collect data was an interview schedule and an observation schedule. Two teachers were interviewed using an interview schedule which consisted of open and closed ended questions. Classroom observation of the practical lessons was conducted with an observation schedule. The data obtained through these instruments was analysed using an interpretive approach. The findings of the research reveal that one school in the sample was not adequately resourced to conduct practical work. The outcome of this study would enable education officials to have an insight of challenges (e.g. lack of resources, larges class sizes, etc.), that are experienced by teachers in respect of the implementation of practical work in schools.

Key words: practical work, laboratory resources, investigations, assessment, experiments, CAPS, Constructivism,

Dedications

To my family, Shubnum, Dillon and Cassandra Singh who had encouraged and supported me throughout my research project.

Acknowledgements

I owe particular thanks to my supervisor, Dr Samuel Ouma Oyoo, who guided me through the research process with patience, understanding, constructive criticism and support.

I thank the Gauteng Department of Education for granting me permission to conduct research in two schools.

I thank the Gauteng Department of Education for the bursary that I was granted to complete the Master of Science Degree.

I thank the Principals of the selected schools for allowing me to conduct research at their school.

I thank the teachers and learners that participated in this research project. Without their cooperation I would not have collected any data.

I thank all my lecturers for their assistance over the two years.

I thank my family for their patience and encouragement.

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List of Acronyms

NCS – National Curriculum Statement

CAPS – Curriculum and Assessment Policy Statements

SCORE – Science Community Representing Education

GDE – Gauteng Department of Education

DoE – Department of Education

DBE – Department of Basic Education