

**THE PROVISION OF TEACHING AND LEARNING  
MATERIALS IN SCIENCE SUBJECTS IN THE HIGH  
SCHOOLS OF NORTHERN PROVINCE**

BY

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## **AUTHOR'S DECLARATION**

I, Able Siwale, do hereby declare that this dissertation represents my own work and that it has not previously been submitted for a degree at the University of Zambia or any other university.

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## CERTIFICATE OF APPROVAL

This dissertation of Able Siwale is approved as partial fulfilment of the requirements for the award of the Master of Education in Education Administration by the University of Zambia.

### Examiners' Signatures

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## ABSTRACT

This study investigated the provision of science teaching and learning materials in the high schools of Northern Province. The specific objectives of the study were to identify the current practices in the provision of teaching and learning materials in high schools; to assess the adequacy and state of the existing science physical infrastructure in high schools; to establish the adequacy of teaching and learning materials in science subjects through such indicators as pupil-book ratio; pupil-laboratory space ratio; and pupil-equipment ratio and to find out the challenges which schools face in the provision of teaching and learning materials in science subjects.

The study employed a survey and descriptive study research designs were used. Twenty five schools, 25 heads of science departments and 15 deputy head teachers were randomly sampled to form the study sample. Data was collected using questionnaires and observation schedules. The statistical package for social sciences (SPSS) was used for quantitative analysis of data whereas the views of participants were analysed qualitatively by grouping them into categories according to emerging themes.

The findings were that some key science teaching and learning materials were not available in school. Even those which were available were not adequate. For instance, the pupil-apparatus ratio for the most abundant apparatus was 14:1. Similarly, the pupil-book ratios for the most abundant text books were 7.2:1, 14:1 and 23: for biology, chemistry and physics respectively. Most schools did not have science laboratories. Furthermore, most schools did not have a science policy. Apart from that teachers were facing a lot of challenges in the teaching of science such as over-enrolment of pupils amidst lack of teaching and learning materials. It was also revealed that the local book publishing industry and the National Science Centre were doing very little to increase the availability of teaching and learning materials in science in schools.

The study recommends increased government funding towards the purchasing of science materials by increasing per pupil capita; government investment in laboratory and classroom construction and support for the book publishing industry.

## **DEDICATION**

To my mother, Alice Chibuye Nkasabanya for all she has done in my life.

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## LIST OF ABBREVIATIONS

<b>BAZA</b>	Book sellers Association of Zambia
<b>BGCSE</b>	Botswana General Certificate of Secondary Education
<b>BPAZ</b>	Book Publishers Association of Zambia
<b>CDC</b>	Curriculum Development Centre
<b>CPS</b>	Centralised Procurement System
<b>DPS</b>	Decentralised Procurement System
<b>EBs</b>	Education Boards
<b>EFA</b>	Education for All
<b>EMs</b>	Education Materials
<b>GDP</b>	Gross Domestic Product
<b>GRZ</b>	Government of the Republic of Zambia
<b>HoD</b>	Head of Department
<b>INSET</b>	In-service training
<b>LCA</b>	Learner Centred Approach
<b>MoE</b>	Ministry of Education
<b>NSC</b>	National Science Centre
<b>PPP</b>	Public Private Partnership
<b>PSRP</b>	Public Service Reform Policy
<b>PTA</b>	Parents and Teachers Association
<b>SDIF</b>	Service Delivery Improvement Fund
<b>SPSS</b>	Statistical Package for Social Sciences

<b>STME</b>	Science, Technology and Mathematics Education
<b>TESS</b>	Teacher Education and Specialised Services
<b>UNESCO</b>	United Nations Educational, Scientific, and Cultural Organisation
<b>UNICEF</b>	United Nations Children Emergency Fund
<b>UNZA</b>	University of Zambia
<b>ZEPH</b>	Zambia Education Publishing House