# THE NATURE OF FACTORS AFFECTING PUPILS' INTEREST AND ATTITUDES TOWARDS LEARNING MATHEMATICS: THE CASE OF SELECTED SECONDARY SCHOOLS IN EASTERN PROVINCE.

By

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### TITLE

The nature of factors affecting pupils' interest and attitudes towards learning Mathematics: A case of selected secondary schools in Eastern Province of Zambia.

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I, Daniel Stailud Mtonga, do declare that this dissertation is my own work and has not been submitted for a degree award at this or any other university.

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#### **CERTIFICATE OF APPROVAL**

This dissertation by Daniel Stailud Mtonga is approved as a fulfillment of the requirements for the award of the degree in Master of Education in Mathematics Education by the University of Zambia.

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#### ABSTRACT

This study sought to assess the nature of factors affecting interest and attitudes of pupils toward learning Mathematics in selected Secondary Schools in Eastern Province. The objective of the study was to determine the nature of factors that contribute to pupils developing interest or lacking interest and developing positive or negative attitudes toward learning Mathematics. The aim of the study was to answer the following questions; what is the nature of factors contributing to pupils' interest or lack of interest or having negative or positive attitudes toward learning Mathematics in selected Secondary Schools in Eastern Province? ; What nature of interest or attitudes do pupils have toward learning Mathematics in selected Secondary Schools in Eastern province? The research used a survey design with a combination of quantitative and qualitative methods, when collecting data from pupils and teachers teaching Mathematics. A questionnaire for Grade 10, 11 and 12 pupils on interest and attitudes was administered. The other questionnaire was administered to teachers. Focus group discussions and interviews were also conducted for teachers and pupils to consolidate the collected data. Data collected from the pupils' questionnaire and the teachers' questionnaire were analysed quantitatively using Likert scale with five options choices to be selected. The last parts of the questionnaire contained open ended questions for pupils and teachers to comment or explain. The focus group discussions and interview findings were analyzed qualitatively by categorizing, describing and explaining, while descriptive statistical methods like mean, bar charts, standard deviation, percentages and frequency distribution were used to illustrate and analyze the data obtained from the Likerts scale.

According to the research findings the nature of interest and attitudes of Secondary School pupils show that pupils had little interest or had negative attitudes toward learning Mathematics. The research revealed that rural Secondary Schools had more pupils who lacked interest and had negative attitudes toward learning Mathematics compared to the pupils from urban schools in selected Secondary Schools in Eastern Province. The research also showed that pupils lost interest and developed negative attitudes toward learning Mathematics, mainly because of the Mathematics teachers and other factors such as poor pupils' grade 9 mathematics results; lack of text books (teaching and learning materials); location of the school (rural or urban); Parents, and peers, advice or comments. However, the type of school and sex of the teacher were identified to have no direct influence on the interest and attitudes of the pupils toward learning mathematics. The mathematics teachers were labelled as the major contributors to why pupils lose interest and develop negative attitude in the way they conducted their lessons and interacted with pupils.

The study recommends that the Teacher Training Institution should encourage the use of pupil centered methods; Curriculum Development Centre (CDC) might help to arouse interest and positive attitudes by developing text books which incorporate practical applications. The Ministry should also consider changing the policy at Grade 9 by considering mathematics a must-pass subject for one to proceed to Grade 10.The Ministry should improve staffing of qualified staff at Grade 9 level in Mathematics to curb the pupils' poor background at Grade 10.

#### DEDICATION

This study is dedicated to my late father Stailud Mulima Mtonga and mother Marylyn Mkandawire Mtonga, for the inspiration and encouragement they gave me to continue persuing further studies even after they had passed on.

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#### ACRONYMS

- CDC- Curriculum Development Centre
- DEBS- District Education Board Secretary
- HOD- Head of Department
- MOE- Ministry of Education
- PEO- Provincial Education Officer
- PTA- Parents Teachers Association
- ZAME- Zambia Association For Mathematics Education
- ZAMSTEP- Zambia Mathematics and Science Teachers Education Project.