AN ANALYSIS OF PRACTICAL APPROACH OF TEACHING GEOMETRY IN PUBLIC PRIMARY SCHOOLS IN THOGOTO ZONE, KIAMBU COUNTY, KENYA

BY

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E55/ CE/ 25872/ 2011

A proposal submitted for award of the degree of master of education of Kenyatta University

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DECLARATION

This proposal is my original work and has not been presented for a degree in any other university

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We confirm that the work presented in this thesis was carried out by the candidate under our supervision.

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<tr>
<td>CEMASTEA</td>
<td>Centre for mathematics, science and technology education in Africa</td>
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<tr>
<td>GOK</td>
<td>Government of Kenya</td>
</tr>
<tr>
<td>INSET</td>
<td>In service education and training</td>
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<td>IRBs</td>
<td>International research ethics</td>
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<tr>
<td>KCPE</td>
<td>Kenya certificate of primary education</td>
</tr>
<tr>
<td>KCSE</td>
<td>Kenya certificate of secondary education</td>
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<tr>
<td>KIE/ KICD</td>
<td>Kenya institute of education / Kenya institute of curriculum development</td>
</tr>
<tr>
<td>MoE</td>
<td>Ministry of education</td>
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<tr>
<td>MoE, TPC</td>
<td>Ministry of education, teacher’s proficiency course manual</td>
</tr>
<tr>
<td>MS</td>
<td>Mathematics and science teacher</td>
</tr>
<tr>
<td>NCTI</td>
<td>National center for technology innovation</td>
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<td>NTCM</td>
<td>National council of teachers of mathematics</td>
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<td>PPTs</td>
<td>Prospective primary teachers</td>
</tr>
<tr>
<td>PTE</td>
<td>Primary teacher’s exam</td>
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<td>RME</td>
<td>Realistic mathematics education</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>SMASE</td>
<td>Strengthening mathematics and science in education</td>
</tr>
<tr>
<td>SMASSE</td>
<td>Strengthening mathematics and science in secondary education</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical package for social sciences</td>
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<tr>
<td>STD</td>
<td>Standard, primary school level of the learners</td>
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<tr>
<td>TP</td>
<td>Teaching practice</td>
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<td>TPS</td>
<td>Teaching practice schools</td>
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<tr>
<td>TSC</td>
<td>Teachers service commission</td>
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<tr>
<td>TTC</td>
<td>Teacher training college</td>
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<td>UNESCO</td>
<td>United Nations Educational Scientific and Cultural Organization</td>
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ABSTRACT

Over the years poor performance by KCPE candidates has consistently been observed in geometry items. Geometry has an important place in primary school mathematics curricula. This study will aim at analyzing the effects of practical approach to teaching geometry in public primary schools in Thogoto zone, Kiambu County. The main objectives of the study will be to determine the extent to which primary mathematics teachers use the practical method in teaching geometry, establish effects of practical teaching in performance in geometry questions in primary schools and establish pupils’ most common spatial reasoning errors made in primary schools in Thogoto Zone. This study will be carried out in public primary schools in Thogoto educational zone in Kiambu County. Target population will be 1035 standard seven pupils in 12 public primary schools and 24 mathematics teachers. The categories of schools will be public day and boarding. In standard seven 343 pupils will be randomly sampled representing 33.14 %. This will be made of 180 boys and 163 girls. The sample will be from four purposively sampled schools for the main research and one school for the pilot study. Eight mathematics teachers will be randomly sampled from the four purposively sampled schools. Experimental survey design and causal comparative design will be used. Questionnaire on geometry and geometry standard tests will be used to obtain data. Geometry achievement test will be administered to all standard seven pupils in two phases. Data on teaching /learning materials used will be gathered using classroom practices and teachers and pupils questionnaires. Quantitative data analysis will consist of measuring numerical values from each description such as mean and standard deviation. Frequency tables, graphs and pie charts will be used to represent data. Data will be analyzed using statistical and descriptive survey method together with statistical package for social sciences (SPSS).