Kenya Certificate of Primary Education (KCPE) taken at standard eight of the 8-4-4 system of education will continue to measure success or failure of primary school pupils in Kenya. While teachers, field education officers and other interested parties work hard to ensure satisfactory attainment in mathematics subject which includes geometry content, achievement has persistence to deteriorate. "1 'o determine if this trend will continue to affect the attainment of mathematics in geometry content under the prevailing conditions of learning, evidence of the degree of attainment should be determined through a study such as this one.

The purpose of this study was to investigate attainment of geometric spatial ability, which according to Mitchelmore (1990), Bishop (1978) and Kilpatrick (1971), is an ability prerequisite to understanding geometry and its application in polytechnic subjects. Studies done in this area show that age, school instruction and the pupils' environment are strong determinants of the degree to which geometric spatial ability is attained.

To study the problem, six null hypotheses on topological, projective and Euclidean spatial content were formulated arising from the statement of the problem. Three hypotheses tested significant difference between pupils who received treatment and those who received no treatment. The other three hypotheses tested significant relationship between pupils who received treatment and those who received no treatment.

Five variables were involved in the study. They were: sex, age, standard, social class and class ability. A sample of 360 respondents in two groups was initially selected for the study with Experimental (N_1=180) and Control (N_2=180), using systematic random sampling (SRS) technique. Only 285 respondents participated fully in the study with Experimental Group (N_1=162) and Control Group (N_2=123).

A 'pretest-posttest control group design' was used to study the problem. The groups were given a pretest to establish the initial spatial ability on the selected spatial concepts. A treatment was administered to the Experimental group only while the Control group received no treatment. A posttest was administered to both groups after a period of 12 weeks. Data were collected and analysed for comparison between the groups. The t-test was used to analyse significant difference while the Pearson r was used to analyse significant relationship. Both tests were peaked at $p<.05$ level of significance.

Results were reported on each area of spatial content.

(i) Topological spatial ability recorded significant difference on age (10-13 years), t=2.00, standard five, t=2.78. Significant relationship was recorded on some variables with strong correlations on girls, r=0.406, standard seven, r=0.473 among others. Ho_1 and $H0_4$ were rejected.

(ii) Projective spatial ability recorded significant difference on class ability with medium variable, t=2.40. Other variables failed to record any significant difference. Significance relationship was observed on some variables with strong correlations on age (10-13 years), r=0.408 and standard seven r=0.246. Ho_2 was accepted while 1-105 was rejected.

(iii) Euclidean spatial ability recorded significant difference on age (14-17 years), t=2.32, standard seven, t=2.18, middle social class, t=2.53 and medium class ability, t=2.55. Significant relationship was recorded on
some variables with strong correlations on boys, r=0.368, age (10-13 years), r=0.325, age (14-17 years), r=0.330 respectively. Highest correlation was recorded on age (18-21 years), r=0.907. $H0_3$ and $H0_6$ were rejected. Higher age seemed to be a factor of concern in the sample for correlation on spatial ability.

These results corroborate those reported in similar studies by Mitchelmore (1990), Bishop (1978), Martin (1975), Kilpatrick (1971) Piaget (1971) Beard (1964) and others as discussed in the review of literature. From these discussions and findings, it was realized and recorded that there were gaps in attainment of spatial geometric content in primary school curriculum.

Based on these findings, the study concluded that attainment of geometric spatial ability was quite minimal in the studied sample. It should be realised that the topic of' spatial ability in Kenya's geometry curriculum is a new concept, so little effort is placed on its development. The 8.4.4 (1984) and (1986) geometry syllabuses provide that spatial ability be taught, though evidence from this study showed that this was not done, if done, may be very little. Teachers of geometry need additional training to enable them teach this new concept with confidence for the purpose it deserves in geometry.

From the findings and conclusion, the researcher recommended that further studies in the awareness of geometric spatial ability and its attainment be emphasized in the geometry content starting at the primary school level. The development of this aspect of geometry would be useful in physical geometry and related subjects at senior classes of schooling. Specific attention was focused on basic instruction of spatial concepts, enrichment of learning environment, increased play with spatial activitybased objects and consistent age enrolment in class to enhance the required knowledge and attainment in geometric spatial ability.