

The study sought answers to the following general problem questions; [1] How do the performance of pre-service and in-service teachers trained in inquiry and non-inquiry science teaching methods compare on the test of [a] science attitudes [b] science teaching attitudes, [c] inquiry and non-inquiry science teaching attitudes and [d] classroom application of inquiry and non-inquiry methods? [2] Is there any relationship between the varying attitudes of teachers towards science, science teaching inquiry and non-inquiry strategies among the preservice and inservice teachers? [3] Is there any relationship in the classroom application of inquiry and non-inquiry teaching methods between preservice and inservice teachers when their scores are categories by: age, sex, subject taught, class size, streaming, type of school, school status and teaching experience?

The research involved 166 Kenya science teachers' college and 164 Kenyatta University preservice and inservice teachers.

Data were collected through: [1] The Modified Science Support Scale [MSSS] developed by Schwirian [1967] and revised by this study's investigators to measure attitudes towards science; [2] the Science Teacher Attitude Questionnaire [STAQ] developed by Taiwo [1980] and revised by the investigator of this study to measure attitudes towards science teaching, [3] the Modified Inquiry Science Teaching Strategies Instrument [MISTSI], developed by Lazarowitz [1973] and revised by the investigator of this study to measure attitudes towards inquiry science teaching strategies, the Modified Instrument to Measure Inquiry Teaching in the Science Classrooms [MIMITSC] developed by Larson and associates [1974] and revised in the present study for the assessment of inquiry teaching method application in science classrooms.

The t-tests for independent samples were used to determine if there were significant differences in attitudes and classroom application of inquiry and non-inquiry methods between preservice and inservice teachers at .05 level of confidence. The Pearson product moment correlation coefficients were used to determine if relationships existed in attitudes and classroom application of inquiry and non-inquiry methods between preservice and inservice teachers at 05 level of confidence.

Results of the study revealed non-significance differences in [1] attitudes towards science but teachers trained in non-inquiry methods obtained higher scores on the MSSS. As categorized by the variables: age, sex subject taught, streaming, and type of school, non-significant differences were observed between teachers trained in inquiry and non-inquiry methods are measured by the MSSS.

There were significant differences between teachers trained in inquiry and non-inquiry methods in: science teaching, inquiry science teaching strategies attitude, and in use of the inquiry teaching method. Inquiry trained teachers held more favourable science teaching attitudes and employed the inquiry teaching more while non-inquiry trained teachers had more favourable attitudes towards inquiry strategies. Significant differences were also observed between the teachers' scores on [a] the MISTSI as categorized by all of the study's variables, [b] the STAQ as categorized by sex and subject taught and [c] the MIMITSC as categorized by all variables except sex. Generally teachers trained in inquiry methods; aged 25 years and above, males, biology teachers, in classes of under 42 pupils, streamed, in boys schools, maintained or aided

schools and with at least 3 years experience tended to score higher on the STAQ and MIMITSC measures while similar categories of teachers trained in non-inquiry methods scored higher in the MSSS and MISTSI.

Significant positive correlations were observed between scores on the attitude measures for these teacher groups:[1] preservice teachers trained in inquiry and non-inquiry methods and [2] inservice teachers trained in non-inquiry methods. For all teacher groups non-significant and sometimes significant but negative correlation between scores on the attitudes scales and those on the inquiry teaching method scale were observed. Significance relationships between science, science teaching and inquiry strategies attitudes were indicated for each group of teachers in the following categories:[1] preservice teachers trained in inquiry and non-inquiry methods and inservice teachers trained in methods who were aged 25 years old, both male and female teachers of biology and chemistry, in class size below 42 pupils, streamed, in government-maintained and aided boys and girls schools and with at least 3 years teaching experience.[2] the inservice teachers trained in inquiry methods science and inquiry strategies attitudes were significantly correlated for all categories but the teachers' science and science teaching attitude scores were non-significantly related. Both inquiry and non-inquiry teachers' scores on the attitude scales and those on the inquiry teaching method were negatively and significantly related.

Evidence from the study's results suggested that [1] significant differences existed between teachers trained in inquiry non-inquiry methods in terms of the attitudes and their application of the teaching method, [2] little or non-significant relationships exist between teachers' attitude scores and scores on the inquiry teaching method scale and [3] certain teacher and school situation variables are associated with favourable or non-favourable attitudes and application of the inquiry teaching method.

It is recommended that further studies in this area should consider other variables that may be related to formation of favourable attitudes. These may include comparisons of these teachers in terms of their personality traits, and their achievements in science, their pupil's attitude. Further research should compare the inquiry teaching method and the prevalent lecture method to see which one may be suitable to Kenya's science teaching situation especially in relation to unavailability of facilities in the science classrooms. Further replications of this study could include a study of science teachers at the primary school level in order to obtain a clearer picture of how science is taught in Kenya's schools. Studies could also assess pupil attitudes and achievement in relation to their teachers.