This study was on the impact of SMASSE project on teaching mathematics in secondary schools in Mwingi West district, Kenya. The strengthening of Mathematics and science in secondary school education (SMASSE) is a teacher in-service training program in mathematics and science in Kenya. The government of Kenya and Japan through Japan International Co-operation Agency (JICA) started the program. The objectives were to enhance methods of teaching mathematics and Sciences in secondary schools, change of attitude and improved performance in the subjects to help Kenya achieve its dream of being a middle level economy by 2030. In Mwingi West, around 50 mathematics teachers have already gone through all the four cycles of SMASSE. However, since the inception of SMASSE no detailed assessment has been done to assess the Activity, Student, Experimentation and Improvisation (ASEI) and “Plan Do See Improve” (PDSI) approach in teaching and learning of mathematics in the District. The purpose of the study was to assess the impact of SMASSE project in teaching and learning of mathematics in public secondary schools in Mwingi West District. The key objective of the study was to establish whether the ASEI and PDSI concept is being employed by teachers in teaching and learning of mathematics, its impacts on attitude change and on capability of teachers to perform well and the challenges the teachers face in the implementation of ASEI/PDSI approach. The literature was reviewed as follows: the general overview of the SMASSE Project in Kenya, SMASSE project in Africa, importance of mathematics and science in the modern world, general importance of In-Service Education and Training (INSET), the concept of training of mathematics and science teachers, science education in Japan, assessment and impact of SMASSE in Kenya, and summary. The research design was a descriptive survey study. The district has 26 public secondary schools. The schools were divided into 3 boys boarding, 3 girls boarding, and 20 mixed day schools were picked through stratified random sampling. The study involved 10 head teachers, 20 mathematics teachers, 2 SMASSE mathematics trainers out of 4 trainers, and 1 QASO. The research instruments used were questionnaires (for 10 head teachers, 20 mathematics teachers, 2 mathematics trainers), one observation schedule for each of the 10 selected schools, and one interview schedule for the QASO. The
The method of percentages and manual counting was used to calculate the coefficient of reliability. Data analysis was done using Statistical Package for Social sciences (SPSS) which involved the use of frequency distribution tables, bar graphs, pie charts and percentages. The study found that SMASSE implementation was faced by many constraints. These constraints included lack of enough teaching and learning facilities in schools and at the INSET centers, understaffing hence teachers didn’t prepare adequately for teaching and lack of support by the administration among others. It can be concluded that most of the mathematics teachers have indeed attended SMASSE training as most feel that it strengthens them in their role as people who impart mathematics knowledge to students in secondary schools. It is recommended that there is need for full implementation of the ASEI/PDSI concept in class by teachers.