This research addresses an innovative instructional method in science and how this can bring about more conceptualization of laws, theories, principles and concepts in science classrooms. It was aimed at investigating the influence of instructional methods on efficiency in delivery of content to the learner and eventually performance in science. Quasi-experimental design was used, based on the performance in science when the conventional instructional techniques (CIT) are used and when a combination of computer assisted instructions (CAI) and conventional instructional methods are used. Science teachers (teachers teaching biology, chemistry and physics) and Form Two students from six provincial secondary schools situated in the greater Embu district were used for the research. The secondary schools for the study were selected using purposive sampling to focus on schools that offer computer studies course only. The Form Two classes in three of the six provincial secondary schools were randomly assigned the experimental group while the Form Two classes in the remaining three schools were assigned the control group on the bases of academic performance and learning facilities.

Data were collected using three instruments namely: a) Standard students assessment tests (SSAT), b) Teachers interview schedule (TIS), c) Classroom observation schedule (COS). Standard students assessment tests were used to find out the performance of the students before and after the treatment (pre-test and post-test). Teachers' interviews were then used to find out the challenges that teachers encounter when using computer for instruction as well as the mechanisms that should be put in place to motivate science teachers' to use computers for instruction. Classroom observations schedules were used to determine the behavior and characteristics of the learners and the role of the teacher in both computer assisted instruction and conventional instruction method lessons.

The data obtained were analyzed using both descriptive and inferential statistics. The study found out that learners taught through CAI performed significantly better than learners taught through CIT in science. It was also realized that use of CAI in teaching science subjects promotes a more active role of the learner such as interacting with learning resources and consulting one another leading to more interest and attention of the learners. The study also identified various challenges that teachers encounter in their bid to use computers for science instruction and some mechanisms that should be put in place to motivate science teachers to use CAI. Lack of computer skills and science instructional programs were the main challenges noted while taking science teachers to in-service CAI courses as well as incorporating CAI in teacher training are the main mechanisms that need to be put in place.

Various recommendations based on this study were therefore made including ensuring that CAI is implemented in all secondary schools, providing all secondary schools with enough computers and CAI programs for science instruction, organizing CAI in service courses, seminars and workshops for all the currently serving science teachers as well as incorporating CAI in Teachers Training Colleges and university curriculum.