

ASSESSMENT OF THE AVAILABILITY AND UTILISATION OF INSTRUCTIONAL MEDIA
IN ENHANCING TEACHING OF MATHEMATICS AND SCIENCES IN SECONDARY
SCHOOLS IN KANDARA DISTRICT

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ABSTRACT

CONTINUOUS UNDER ACHIEVEMENT IN MATHEMATICS AND SCIENCES (BIOLOGY, CHEMISTRY AND PHYSICS) IN KENYAN SECONDARY SCHOOLS HAVE PUT THE METHODS OF TEACHING AND LEARNING IN SHARP FOCUS IN RECENT TIMES. THE GOVERNMENT OF KENYA THROUGH THE MINISTRY OF EDUCATION AND JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STARTED A PROJECT CALLED STRENGTHENING MATHEMATICS AND SCIENCES IN SECONDARY SCHOOLS EDUCATION (SMASSE) IN 1998. THE PROJECT POPULARIZED THE USE OF INSTRUCTIONAL MEDIA BY GIVING COMPUTERS, VIDEO CAMERAS AND LAPTOPS TO SCHOOLS THAT SERVED AS CENTERS. INSTRUCTIONAL MEDIA WHEN EFFECTIVELY USED CAN SUPPORT CONSTRUCTIVE CONCEPT DEVELOPMENT IN A CLASS RESULTING IN FIRM GRASP OF MATHEMATICS AND SCIENCE CONCEPTS. THE THEORETICAL FRAMEWORK OF THE RESEARCH WAS BASED ON SOUND PEDAGOGY NAMELY CONSTRUCTIVIST THEORY. SANFORD (2001) AGREED THAT CONSTRUCTIVISM IS HOW STUDENTS LEARN AND ASSIMILATE NEW KNOWLEDGE. LITERATURE WAS REVIEWED TO BUILD A THEORETICAL AND EMPIRICAL BASE FOR THE STUDY. THE PURPOSE OF THIS STUDY WAS TO FIND OUT WHETHER INSTRUCTIONAL MEDIA MATERIALS ARE AVAILABLE AND UTILIZED TO THE FULL IN SECONDARY SCHOOLS IN KANDARA DISTRICT. THE OBJECTIVES OF THE STUDY WERE TO FIND OUT THE AVAILABILITY OF INSTRUCTIONAL MEDIA TECHNOLOGIES, TO INVESTIGATE THE EXTENT OF ACCESSIBILITY AND UTILIZATION OF INSTRUCTIONAL MEDIA MATERIALS AND TO DETERMINE WHETHER THERE ARE SUPPORT SYSTEMS IN SCHOOL FOR UTILISING INSTRUCTIONAL MEDIA IN TERMS OF TEACHER TRAINING, TIME TABLING AND PROVISION OF NECESSARY SOFT WARES IN SECONDARY SCHOOLS IN KANDARA DISTRICT. DESCRIPTIVE SURVEY DESIGN WAS USED IN THIS STUDY. THE STUDY TARGETED ALL PRINCIPALS, ALL TEACHERS OF MATHEMATICS AND SCIENCES AND THE STUDENTS IN THE DISTRICT. PURPOSIVE SAMPLING WAS DONE SO AS TO GET SCHOOLS THAT HAVE INSTRUCTIONAL MEDIA MATERIALS THAT THEY OBTAINED FROM GOVERNMENT FUNDING IN A PROGRAMME CALLED ECONOMIC STIMULUS PROGRAMME ESP. DATA WAS COLLECTED BY USE OF QUESTIONNAIRES, INTERVIEWS AND OBSERVATION SCHEDULE. PILOTING OF THE RESEARCH INSTRUMENTS WAS DONE AND THEN TESTED FOR VALIDITY AND RELIABILITY. ON ANALYSIS OF DATA FROM THE PILOT STUDY, THE INSTRUMENTS WERE FOUND TO BE RELIABLE. DATA COLLECTED WAS TABULATED AND THEN ANALYSED USING DESCRIPTIVE STATISTICS AND INFERENTIAL STATISTICAL TECHNIQUES, OF FREQUENCY DISTRIBUTIONS AND PERCENTAGES. THE DATA ANALYSED WAS PRESENTED IN TABLES, GRAPHS AND NARRATIVE FORMS. IN LIGHT OF THESE FINDINGS, CHAPTER FIVE RECOMMENDED PROVISION OF SUPPORT AT SCHOOL LEVEL SO THAT TEACHERS WOULD PARTICIPATE IN UTILISING INSTRUCTIONAL MEDIA. THE MAIN FINDINGS OF THE STUDY INDICATED THAT THE ESP SCHOOLS ARE FAIRLY EQUIPPED WITH INSTRUCTIONAL MEDIA MATERIALS. THE MATERIALS ARE NOT USED FULLY. THE STUDY THEREFORE RECOMMENDED THAT THE KICD SHOULD DEVELOP AN EXTENSIVE PROGRAMME FOR SOFTWARE DEVELOPMENT FOR LEARNING.