

Extent of Use of Asei-Pdsi Approach in Teaching of Science in Primary Schools in Emuhaya Sub-County, Vihiga County, Kenya

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Abstract

Activity, Student, Experiment, Improvisation (ASEI) and Plan, Do, See, Improve (PDSI) is a pedagogical strategy advocated by Strengthening of Mathematics and Science Education (SMASE) program since 2010 to refocus the pedagogical practice of mathematics and science teachers and enhance learner achievement. During the life of SMASE, Sabatia, Vihiga, Kisumu West and Gem Sub-Counties neighbouring Emuhaya consistently improved in science (ranging between 55-60%), unlike Emuhaya where performance did not differ from the mean score of 50% registered before the initiation of SMASE. This dismal performance has been blamed on laxity in the implementation of ASEI-PDSI by science teachers in Emuhaya Sub-County. This study investigated the extent of use of ASEI-PDSI approach in teaching of science in primary schools in Emuhaya sub-county, Vihiga County, Kenya. The study was anchored on Vygotsky's postulates of the zone of proximal development. A descriptive survey design was employed. The target population comprised 100 head teachers, 100 science panel heads, 300 classes 6, 7 and 8 science teachers, 1 QASO and 4,959 class 8 learners. Stratified and simple random sampling were used to obtain a sample of 33 head teachers, 100 science teachers, 33 science panel heads and 496 class eight learners. Saturated sampling was used to obtain 1 QASO. Data was collected using questionnaires, interview schedules and document analysis guide. Reliability of the instruments was determined through a pilot study involving 10% of the population using the test-retest method and the instruments appropriately revised to achieve a reliability of .85 for Questionnaire for Science Teachers', .81 for Questionnaire for Head Teachers and .79 for Questionnaire for class 8 learners. Validity of the instruments was ascertained by experts from the Department of Educational Communication, Technology and Curriculum Studies, Maseno University. Qualitative data were summarized in themes and categories based on objectives while quantitative data were analyzed and presented in terms of frequencies, means and percentages. The study revealed that science teachers sometimes used ASEI-PDSI approach in teaching science. The dismal performance of learners in the subject was therefore as a result of ASEI-PDSI not always being applied in science lessons by teachers during their classroom practice. It is hoped that the findings of this study will shed light on the implementation of ASEI-PDSI in science to SMASE, the school administration and the Ministry of Education and provide insight into appropriate improvement of this approach. It is recommended that science teachers should always prepare ASEI lesson plans for their lessons and use them to ensure that all the aspects of ASEI-PDSI are implemented effectively.

Keywords: ASEI-PDSI, Extent of use of ASEI-PDSI approach

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