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ADAPTING HANDS-ON AND MINDS-ON MODEL AS EFFECTIVE TEACHING METHODS OF BIOLOGY AND INTEGRATED SCIENCES

SUTUMA EDESSA

Department of Science and Mathematics Education, College of Education and Behavioural Studies, Addis Ababa University, Ethiopia

ABSTRACT

The purpose of the study was to adapt the hands-on and minds-on model for teaching methods of biology and integrated sciences and measure its effectiveness through the performances of practitioners.

Mixed, descriptive, exploratory and conclusive design methods were employed. Situational sampling techniques were used to determine and select 40 academically low mark achiever research populations with equal gender parity practitioners from Jima and Hawassa Universities and Fitche and Mettu Colleges of Teacher Education. Data collection was through overt observation Likert scale checklists and interviews conducted with practitioners.

As a result, the average performance effectiveness of practitioners of both Universities in teaching biology showed 35.35% whereby performances in teaching integrated sciences of both CTEs scored 32.5% improving effectiveness by 33.93% against using the formal teaching styles. In response to interviews made with practitioners, all participants confirmed average performance effectiveness of 43.97%in the teaching profession.

As final, the overall average teaching effectiveness of using the hands-on and minds-on model was 38.945% showing that much improvement of professional qualifications.

In conclusion, using the Hands-on and Minds-on model for the delivery of biology and integrated sciences was found as the most superlative effective teaching methods to improve conceptual understanding through doing lab works, experiments, tests and field based lessons activities, construction of rich experiences and upgrading the retention capacity of learners.

KEYWORDS*:* Adapt, Effective, Hands-on, Minds-on, Model, Performance and Practitioner