

EFFECTIVENESS OF IN-SERVICE TEACHER TRAINING ON DEVELOPMENT OF SECONDARY SCHOOL LEVEL PHYSICS EDUCATION

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In-service teacher training is an essential part of the professional development of science teachers. The main objective of this study was to analyze the science teachers' performance after attending in-service teacher training program on physics education effectively in order to get maximum benefit for teaching physics. The study is focused on three important concerns for teacher effectiveness: (i). Upgrading secondary science teachers' subject knowledge, teaching abilities and skills; (ii). Facilitating an active learning environment for students introducing three different strategies of teaching opposed to the traditional teaching –problem based Learning, cooperative learning and concept mapping and (iii). Sharing experiences of science teachers' in science teaching with other teachers of neighboring schools. The study was implemented with a group of science teachers who teach science at secondary school level with a view to developing a vision on physics education. The researcher employed questionnaires and Likert's scale to analyze the obstacles and limitations the teachers face in employing active teaching methods in the classroom and to assess the teacher attitudes in physics education. Experimental and control groups of science teachers were used for the comparative analysis. Benefits of in-service teacher training in development of physics education at secondary education were discussed. The experimental group received training and the control group wasn't given any training. Teachers' performances on teaching were analyzed through learning outcomes of the students which were examined using pre and posttests. According to the experimental results, achievement of the students of treated group was significantly higher than that of the untreated group. Outcome of the study confirmed that, effective in-service teacher training helps to improve students' achievement in physics education. Impacts of the in-service teacher training depends on, the dedication, attitudes and readiness of teachers. In order to improve the quality of teaching and learning process, the use of integration model of problem based learning; collaborative learning and concept mapping were suggested.