

ENHANCEMENT OF STUDENT ACHIEVEMENT IN SCIENCE OF A 1AB SCHOOL IN DEHIOWITA EDUCATION ZONE: AN ACTION RESEARCH

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Intrinsic motivation is a fundamental element of student learning, and teachers could assist in increasing and developing intrinsic motivation for optimal achievement in the classroom. As there were students with deficient levels of achievement in science, this action research was conducted to enhance their achievement in science in Grades 7, 8 and 9 through interventions. A purposive sampling technique was used. Participants comprised 16 students in each Grade, totalling 48 students. A multidimensional questionnaire was used to measure intrinsic motivation, along with pre-test papers, post-test papers, and continuous assessment test papers to measure achievement before and after the intervention. Students were identified with low achievement in science as the first phase of the intervention. Positive reinforcement, positive feedback, verbal rewards and other strategies were used to enhance intrinsic motivation in the second phase. Furthermore, activity-based learning methods were applied in the third phase. Focus group interviews were conducted for qualitative data. Post-test papers and other measurement tools were used to measure their progress in the fourth phase of the intervention. The mean statistics of the pre-test and intrinsic motivation of students were 26.63 and 1.33 prior to the intervention, respectively. The mean statistics of the post-test and intrinsic motivation were 35.73 and 4.26 after the intervention, respectively. Results showed a significant difference in intrinsic motivation and achievement of students prior to the intervention and after the intervention ($p=25.67$ (47), $t=.000$ and $p=8.93$ (47), $t=.000$). Three themes were derived from the thematic analysis, including enhancement of intrinsic motivation through attractive teaching-learning methods; teacher's verbal rewards for intrinsic motivation; and enhancement of students' achievement through a student-centred approach. Thus, the intervention process improved the intrinsic motivation and achievement of the students who demonstrated low achievement in science in Grades 7, 8, and 9. Thus, Student-centered teaching-learning methods and teaching strategies to enhance students' intrinsic motivation are highly effective in teaching science to meet 21st-century educational goals.

Keywords: Achievement, Action research, Intrinsic motivation, Student-centered teaching-learning methods.