

Effectiveness of Traditional and Skills-oriented Teaching to Enhance Generic Skills in Chemistry in Junior Secondary Schools: A Case Study in Central Province, Sri Lanka

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In the teaching-learning process, assessments have become an essential key topic. It is very important to revisit the instructional and assessment systems from the 21st century perspective as it demands real-world learning with skills as learning outcomes. This study examines the effectiveness of traditional teaching and assessment versus skills-oriented instruction and assessment in enhancing generic skills in learning Chemistry in junior secondary schools in the Central Province of Sri Lanka. This is an experimental study employing a mixed methods approach. Two sub-units from the Grade Seven Science curriculum were selected for instruction. Nine schools were selected from the Central Province with a sample size of 636 students by convenience sampling. Two parallel classes of Grade Seven in each school were selected. A Pre-test was administered to both classes to ensure comparability of the groups. One class was considered as a control group and the other class as an experiment group. In the 2nd sub-unit these groups were interchanged. The first lesson was conducted using a traditional method for the control group, while using a skills-oriented instructional and assessment method for the experimental group. The parallel classes were switched over in the second lesson employing the same teachers. After the teaching-learning process, post-tests were administered to both groups for both lessons. While conducting both traditional and skills-oriented learning, generic skills were observed by the researcher with the help of three other teachers with scoring rubrics. The difference between the mean scores of the pre-tests, the post-test, and the generic skill test were compared. According to the results, skills-oriented groups showed significantly higher performance than the traditional group. Furthermore, the observational data analysis demonstrated that the students of the skills-oriented instructional group demonstrated better orientation to real life situations. The findings from focus group discussions with students and teachers revealed that the skills-oriented instructional and assessment cultivate much higher generic skills than traditional instruction and assessment. Thus, it is concluded that the skills-oriented instruction and assessment methods could be successfully applied for conceptualization developing generic skills in Grade Seven Science in the selected schools.

Keywords: Generic skills, Scoring Rubrics, Skills-oriented, Traditional Instruction and Assessment