

**APPLICATION OF AUTHENTIC ASSESSMENT IN JUNIOR
SECONDARY SCHOOL CHEMISTRY IN SRI LANKA:
AN ILLUSTRATIVE STUDY OF GRADE 9 CHEMISTRY-UNIT 4
INQUIRES ON THE PROPERTIES, USES AND INTERACTIONS OF
MATTER**

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Authenticity has gained a lot of attention in the past few decades worldwide as alternative method to evaluate students' performance in real life orientation. The main objective of this research was to compile relevant, specific features of the authentic assessment and investigate student performance level in grade 9 science unit -4 criteria on the standards and quality in selecting suitable consumer goods. Further, the research was designed to examine the effect of using authentic instruction and assessment method opposed to conventional method of teaching and assessment in learner achievement of the expected learning outcomes, the higher order learning outcomes and to check whether there is loss of learning content. The design was a mixed method approach, qualitative and quantitative comprising two groups: An experimental group and a control group. Familiarizing with the authentic assessments was done through in-depth-analysis of literature review and a surface analysis of existing curricula on chemistry education and the teaching methods.

One coeducation school in the Kurunegala educational zone was selected with a sample size of 68. Then the pre-test was performed to check whether there is a significant difference with these two groups. After teaching group student using conventional methods the teacher was instructed to carry out the authentic teaching for the same content to the experimental group. Data were collected by observing the two processes to interpret the situation for qualitative data analysis. Finally, post-test and higher order thinking (HOT) test were done with both groups. The presentation of results includes quantitative and qualitative data analysis and interpretation of results. The difference between the two assessments methods (authentic and conventional) were analyzed by the t-test.

The result of the pre-test showed that the comparability of selected groups. Post-test and the HOT ability test showed that the authentic instructional group performance is significantly better than the conventional group. Further more it reveals that there is no loss of learning content due to using authentic instruction and assessment methods and the teachers' fear of content loss due to innovative instructional method is a false claim. Finally it was concluded that for the holistic evaluation of students' performance the authentic assessment method is significantly more effective than conventional paper pencil assessments.