

Learning Modality based E-learning Approach to Enhance the Sri Lankan Education System

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Sri Lankan education system is based on a teacher-centered education approach. Mostly the students do not have an opportunity to learn according to their learning modality. According to the statistical reports released by the Department of Examinations of Sri Lanka, there is a considerable failure rate in the General Certificate of Education Ordinary Level Examination, especially in Mathematics. Through these reports, we can observe that there is a weakness in the current teaching approach. This study addresses the above-mentioned problem by evaluating the effectiveness of learning according to the learning modality-based e-learning approach instead of the teacher-centered education approach. Visual, Auditory, and Kinaesthetic learning modalities are considered in this study. Grade eight English medium students were randomly selected into two samples with twenty in each. Similar portions were selected from the units 'Sets' and 'Volume' from the Grade eight Mathematics syllabus. One sample was selected and their learning modality was identified through the e-learning platform and facilitated to learn through the e-learning platform based on the identified learning modality. The other sample was facilitated to learn the same unit with the teacher-centered education approach. The learning approach applied for the samples was interchanged in the next unit. A paper-based test was given to the two samples at the end of each unit and marks were recorded. Two sample t-test was used to analyse the results. Analyzing the results, calculated p-values for the units 'Sets' and 'Volume' are 0.03530 and 0.03542 respectively with a 95% confidence level. It is concluded that there is an improvement of marks in the learning modality-based e-learning approach than the traditional teaching approach. This modality-based e-learning approach can be applied to increase the effectiveness of the education system by mitigating weaknesses that occurred in the teacher-centered education approach.

Keywords: E-learning, Learning-modality, Visual, Auditory, Kinaesthetic