

## **Effect of student-engagement on acquisition of knowledge from an interactive lecture**

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Active engagement is a critical component in student learning behaviour. This study explores the relationship between students' engagement in a learning activity and its outcome, in the context of medical education.

The study included 135 first year medical students from the Faculty of Medicine, Peradeniya, and 228 pre-entry students qualified for entering a local medical school. First year medical students were divided into two groups; Interactive group (group 1) consisted of 73 students assigned into smaller sub groups with an accompanying facilitator who promoted and evaluated the level of student engagement in preparation for a lecture using an evaluation tool with 31 checklist item. Non-interactive group (group 2) consisted of 62 students who were not exposed to a pre lecture activity. Subsequently a 15-minute lecture was delivered to both groups together. Following the lecture Group 1 was again allowed time for engagements and assessed using the same checklist. Both groups were assessed on the content of the lecture by an MCQ paper. A similar activity was conducted with the 228 pre-entry students. MCQ marks and scores for observed intensity of engagement were recorded.

The interactive group obtained an average score of 31.48/50 for the examination while the non-interactive group obtained 29.95/50. This difference was statistically significant at a significance level of 0.1 in a single tailed t-test. The histogram of the interactive group shows skewing towards right when compared to that of the non-interactive group. Variance for the group was 65.67 in pre entry students, 51.83 in engaged faculty students 34.08 in non-engaged faculty students. The coefficient of correlation (r) calculated for student engagement versus test performance was 0.103.

This study demonstrates a positive impact of active student-engagement on knowledge acquisition with a tendency of more students performing above average. This study emphasized the value of pre, during and post engagement of learners in educational activities. However assessed intensity of engagement did not correlate with the learning outcome measured by the MCQ test results, probably emphasizing the need for refined evaluation of engagement and assessment of outcomes.