

Impact of online learning based on creativity and achievement in design and invention subject

ABSTRACT

This research aimed to study students' understanding and creative thinking in Innovation Subject through online learning. This quasi-experimental quantitative study focused on students' understanding and creative thinking of the subject through online learning brainstorming technique. Samples of 36 students from School Y participated in the treatment (online learning) and every student sat for the pre-test and post-test to measure their understanding and creativity of the subject. Results from paired t-test have shown that the pre-test and post-test for aspects of student achievement in the subject of design is $t = 13.858$ and the level of significance is $p = 0.001$ and student creativity in the Invention Subject is $t = 16.739$ and a significant level is $p = 0.001$. This significance level was lower than 0.05 ($P < 0.05$). Results showed that there are significant differences between students' achievement and creativity after applying the online learning brainstorming technique. This showed that online learning has successfully increased students understanding and creative thinking of the subject, aligned with the government's wish and education blueprint, which is to produce creative products.