

The Effectiveness of Quantum Teaching Model with Multimedia to Increase Student's Achievement on Topic Hydrocarbon in Bilingual School (RSBI)

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This research aims to know the effectiveness of quantum teaching model with multimedia to increase student's achievement on topic hydrocarbon in bilingual school (RSBI).

The type of this research include as quasi experiments. Population in this research is all students class X, semester II SMA N1 Lubukpakam, that consist of 9 class, with 243 students. Sampling was done by simple random sampling by taking two classes from 9 randomized, that is class X-1 as the experimental class and class X-6 as the control class, total number of sample is 42 from two classes. The instrument that used to know student's achievement is multiple choice question with 18 item test that have been tested the eligibility before used as instrument test. Based on reability test is obtained that $r_{\text{count}} > r_{\text{table}}$, with value r_{count} is 0.843 and r_{table} is 0.361

Result of research give the average value of pre-test from experiment class is 28.83 ± 7.57 and average value from control class is 80.14 ± 6.46 . From normality test of all samples, known χ^2_{count} is 10.86 and χ^2_{table} is 11.07, so is obtained that $\chi^2_{\text{count}} < \chi^2_{\text{table}}$, that means the data from samples is normally distributed. From homogeneity test known F_{count} is 1.14 and F_{table} is 2.12 or $F_{\text{count}} < F_{\text{table}}$, that means the samples comes from a homogeneous population. Then, each sample is given a different treatment, experiment class is taught by quantum teaching model with multimedia and control class is taught by expository method. After treatment, post-test are distributed to all class, and the average value of post-test from experiment class is 80.14 ± 6.46 , and control class is 72.50 ± 7.94 . The average value of normalized gain, for experiment class is 0.72 and control class is 0.60. The normality test and homogeneity test is prerequisite of hypothesis testing and obtained for normality test $\chi^2_{\text{count}} (4.05) < \chi^2_{\text{table}} (11.07)$, for homogeneity test $\chi^2_{\text{count}} (2) < \chi^2_{\text{table}} (2.12)$, it means that data of normalized gain is normally distributed and homogen. From hypothesis test using t-test right side, with using data from normalized gain it give result t_{count} is 3.1749 and t_{table} is 1.684, so obtained that $t_{\text{count}} > t_{\text{table}}$, it means that H_a is received and H_o is rejected, it can be concluded that the student's achievement that taught by quantum teaching model with using multimedia is significant higher than expository method in topic Hydrocarbon. The percent effectiveness of teaching using quantum teaching model with multimedia is 16%. The cognitive aspect that improved in experiment class is obtained that Knowledge aspect (C1) is the aspect that most improved with normalized gain of each domain is knowledge (C1) is 0.93, comprehension (C2) is 0.81, application (C3) is 0.69 and analysis (C4) is 0.66.