

**THE EFFECT OF CROSSWORD PUZZLE ON STUDENTS' LEARNING
OUTCOME AND ACADEMIC ENGLISH MASTERY FOR HUMAN
REPRODUCTIVE SYSTEM, GRADE ELEVEN SCIENCE PROGRAM
SMA NEGERI 1 MEDAN ACADEMIC YEAR 2011/2012**

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ABSTRACT

The objectives of this study are to find out whether or not: (1) Crossword puzzles significantly affect students' learning outcome. (2) Crossword puzzles significantly affect students' ability in answering Bloom's taxonomy of cognitive domain based question (C1, C2, C3, C4, C4 and C6). (3) Crossword puzzles significantly affect students' writing abilities. (4) Crossword puzzles significantly affect students' vocabulary use. (5) Crossword puzzles significantly affect students' spelling ability. (6) Crossword puzzles significantly affect students' reasoning abilities. A quasi experimental research with non-equivalent control group design was used in this study. The population of this study was all students from grade eleven science program at SMA Negeri 1 Medan academic Year 2011/2012. There were two parallel classes chosen as the sample by applying cluster random sampling techniques. Experimental group consists of 24 students and control group consists of 21 students. The instruments used for the data collection were multiple choice and essay test. The data were analyzed by applying Independent T-test and Mann-Whitney U test with the level of significance $\alpha = 0,05$. The result of hypothesis test showed that: (1) Crossword puzzles significantly affect students' learning outcomes ($t = 3,430$; $P = 0,001$). (2) Crossword puzzles significantly affect students' ability in answering C4, C5, C6 of Bloom's taxonomy of cognitive domain based question, C4 ($U = 449$; $P = 0,000$), C5 ($U = 374$; $P = 0,002$), C6 ($U = 315$; $P = 0,039$). (3) Crossword puzzle significantly affects students' writing abilities ($t = 3,0966$; $P = 0,003$). (4) Crossword puzzles significantly affect students' vocabulary use ($t = 2,119$; $P = 0,040$). (5) Crossword puzzles significantly affect students' spelling abilities ($t = 2,096$; $P = 0,043$). (6) Crossword puzzles significantly affect students' reasoning abilities ($t = 2,327$; $P = 0,025$).