
This study deals with The Effect of Applying Semantic Clustering Technique on Students’ Vocabulary Mastery. This study used the experimental design. The population of the study was the first grade of SMP Swasta Masehi Medan. There were sixty students of first grade junior high school as the sample of the research. This study was conducted with two groups, experimental and control group. The experimental group was taught by applying Semantic Clustering Technique and the control group without applying Semantic Clustering Technique. The data were acquired by administered the pre-test and the post-test. The data were analyzed by using SPSS 17.00. The mean score of the experimental group in pre-test =58.20, control group = 50.87. In the post-test, mean score of the experimental group = 76.23, while the control group = 64.53. The result of this study showed that teaching by applying Semantic Clustering Technique significantly affected the students’ vocabulary mastery.

**Key Words:** Semantic Clustering Technique, Students’ Vocabulary Mastery