

**THE EFFECT OF MIND MAPS ON THE STUDENT'S LEARNING
ACHIEVEMENT AND RETENTION IN CELLULAR
BIOLOGY TOPIC OF GRADE XI IPA
SMA NEGERI 1 SIDIKALANG
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ABSTRACTS

The objective of this study is to explore the effect of mind maps on learning achievement and retention. This study consists of two stages. First, it aims to use mind map as strategy and then the second stage is implementation. It aims to see the effect of mind map on learning achievement and retention of students. The population is all of students grade XI Science SMA N 1 Sidikalang that consists of 8 classes. The sample consists of 2 classes which is taken purposively, XI Science 1 as control group (note-taking group) and XI Science 2 as experimental group (mind map group). There are 25 students in each class. The instruments used to collect data is multiple choice tests (28 items). The gain score of learning achievement (cognitive) with $t_{\text{calculate}} (5.09) > t_{\text{table}} (1.676)$; with $\alpha = 0.05$ and $df = 48$. The gain score of learning achievement (affective) with the score of mind map group (3.1) is higher than note taking group (2.9). It means H_01 is rejected and H_a1 is accepted. Then, the result of gain score of retention test ($t_{\text{calculate}} 2.75 > t_{\text{table}} 1.676$); with $\alpha = 0.05$ and $df = 48$. It means that H_02 is rejected and H_a2 is accepted. Results indicates mind map has a significant effect on learning achievement and retention. In this research, it is clear that mind map provides learning environment according to their own understanding and needs. It is also clear that mind map creates student's interest in retaining information.

Keywords: *mind map, note-taking, learning achievement, retention, gain score, Cellular Biology*