

**THE COMPARISON OF WORKSHEET AND INDEX CARD MATCH AS
A MEDIA ON COLLABORATIVE LEARNING MODEL ON STUDENTS'
LEARNING OUTCOME IN LEARNING OF BUFFER
SOLUTION BASED ON LESSON STUDY**

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ABSTRACT

This research have objective to find a significant difference in students' learning outcomes in learning of buffer solution between student taught by collaborative learning model based on lesson study using worksheet media and index card match media. The population of this research were all student XI grades at even semester in academic years 2015/2016 in SMA Panca Budi Medan. Sample on this research were research class in above school. The research then followed by pretest as the preliminary evaluation before the teaching treatment, and treated by Collaborative learning model based on lesson study with worksheet media in experiment class-1 and index card match media in experiment class-2. After that gave posttest and the data collected in this research as evaluation test. In pretest, average of pretest in experiment class-1 is 41.83 and in experiment class-2 is 35.33. In posttest, in experiment class-1 is 88 and experiment class-2 is 79.67. The gain of students' learning outcome from experiment class-1 and class-2 are 78% and 68 %. The increasing of lesson study's indicator from one meeting to second meeting are 69.93 % up to 88.31% in Experimental class 1 and for Experimental Class 2 are 67.96% up to 88.18%.

Keywords : Collaborative learning model, lesson study, worksheet media, index card match media, buffer solution.