

**THE IMPLEMENTATION OF DRILLING METHOD INTEGRATED INTO  
WEB-BASED LEARNING MEDIA TO INCREASE STUDENTS'  
ACHIEVEMENT AND MOTIVATION ON LEARNING  
OF BUFFER SOLUTION**

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**ABSTRACT**

The aims of this study are to get the student's achievement, student's motivation between students follow tutorial and students don't follow tutorial taught with Drilling method integrated in web- based learning media. Beside of that, this research also conducted to know the correlation between student's achievement and student's interest. This study involved 60 students of 11<sup>th</sup> grade in SMAN 2 Medan which taken by purposive random sampling. The research instruments are achievement test and non test in observation sheet and questionnaire motivation form. Test instruments in this research is UAN instruments about buffer solution has been validated. The research use data analyzed by SPSS -17 for windows. The result data shows that (1) The student's achievement of students follow tutorial is higher than student's achievement of students don't follow tutorial. It can be seen from the average of gain and also proved with t-test, the normalized gain of students who are following tutorial is  $(0.46 \pm 0.14)$  and students who are not following tutorial is  $(0.38 \pm 0.13)$  at significant level  $\alpha = 0.05$ ,  $H_{a1}$  is received and  $H_{o1}$  is refused where  $\text{Sig.} < \alpha$  ( $0.0075 < 0.05$ ), (2) The student's motivation of students follow is higher than student's achievement of students don't follow tutorial. It can be seen from the average of motivation and also proved with t-test, the average students follow tutorial is  $83.33 \pm 9.37$  and students don't follow tutorial is  $72.59 \pm 13.09$  at significant level  $\alpha = 0.05$ ,  $H_{a2}$  is received and  $H_{o2}$  is refused where  $\text{Sig.} < \alpha$  ( $0.005 < 0.05$ ), (3) There is correlation between two variables that are student's achievement and student's motivation at significant level  $\alpha = 0.05$ ,  $H_{a3}$  is received and  $H_{o3}$  is refused where  $\text{Sig.} < \alpha$  ( $0.000 < 0.05$ ), with Pearson correlation ( $r$ ) = 0.649, it means categorized in high correlation.

**Keywords:** Drilling Method, web-based learning media, Tutorial, Student's Achievement, Student's Motivation