

**A COMPARISON BETWEEN COOPERATIVE LEARNING TYPE
GROUP INVESTIGATION WITH E-LEARNING ON STUDENT'S
LEARNING ACHIEVEMENT AND CRITICAL THINKING
IN GRADE ELEVENTH SMAN 2 BALIGE AT
ACADEMIC YEAR 2011/2012**

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ABSTRACT

The objective of this study was to: 1) develop and apply e-learning media on the subject digestive system, 2) know the differences of student's learning achievement and critical thinking skills of students who used e-learning media or cooperative learning model type Group Investigation in digestive system topic in grade eleventh SMAN 2 Balige at A.Y.2011/2012. This study used developmental and queasy experimental design with sample of this study was dorm class namely XI IA 2 and XI IA 3 determined by cluster sampling method. For developmental stage, e-learning media was developed by following Luther model which has assessed during validation process in order to get the feasibility on material and media aspect by using questionnaire. The percentage of media assessment achieved 66% for screen design effectiveness; 80% for media operation; consistency, format, organizing and usage were achieved 80%. The percentage of content assessment achieved was achieved 82.5 % belong to feasible category. Small scale validation involved ten teachers and ten students got the average percentage was 92.13% for media and 95% for content assessment. Large scale validation involved 26 students of SMAN 1 Berastagi showed 93.86% for indicator quality of content and purpose of learning materials and 93.91% for quality of technique in the usage of e-learning media.

Class XI IA 2 used e-learning media and class XI IA 3 used group investigation learning model. Instrument test used consists of cognitive test in the multiple choice with five options (24 questions) and essay test (6 questions), critical thinking test in the essay form (6 questions). Based on data analysis, the average of post test for cognitive test in experimental group was higher than control group (experimental group = 87.41 > control group = 82.84) and based on the calculation of t-test, t_{obs} was higher than t_{table} ($t_{obs} = 4.015 > t_{table} = 1.67$) with $p=0.05$ and $df=56$. The average of post test for critical thinking test in experimental group was higher than control group (experimental group = 86.06 > control group = 82.06) with t_{obs} was higher than t_{table} ($t_{obs} = 2.173 > t_{table} = 1.67$), with $p=0.05$ and $df=56$. It means H_a is accepted so there was significant difference of students' learning achievement and critical thinking skill that taught by using e-learning media. There was relationship between critical thinking and cognitive test with $R=0.38$ for experimental and $R=0.083$ for control.

Keyword: E-learning Media, Cooperative Learning,
Learning Achievement, Critical Thinking.