

**THE DIFFERENCES OF STUDENTS' LEARNING OUTCOMES AND
STUDENTS' CHARACTERS THROUGH IMPLEMENTATION
OF COOPERATIVE LEARNING MODEL TYPES
IN SOLUBILITY AND SOLUBILITY
PRODUCT TOPIC**

DESCEY NATALIA SIMBOLON (4123131011)

ABSTRACT

These objectives of the research are: (1) To know difference of learning outcomes from students on learning solubility and solubility product among the Cooperative Types STAD, TGT, and Jigsaw classes. (2) To know the characters of students who taught by STAD, TGT and Jigsaw classes. (3) To know the increasing of students' learning outcomes who taught by STAD, TGT, and Jigsaw. Populations of this research were all class in grade XI Science on 2nd semester from SMAN 1 Tebing Tinggi, SMAN 1 Sidikalang, and SMAN 1 Berastagi. Samples were chosen by purposive random sampling and taken 3 classes per schools, so that they are 9 classes. The initial characters of students were assumed in the same condition. The result of research of students' learning outcomes and treatments (STAD, TGT and Jigsaw model) are (1) There are significant differences between learning outcomes between three of learning models with Pretest value in SMAN 1 T.Tinggi for experiment I is 35.50 ± 8.07 , for experiment II is 35.38 ± 8.80 , and experiment III is 37.38 ± 6.89 . In SMAN 1 Sidikalang experiment I is 38.28 ± 8.12 , for experiment II is 40.47 ± 6.64 , and experiment III is 39.84 ± 6.45 . In SMAN 1 Berastagi for experiment I is 35.94 ± 6.89 , for experiment II is 37.50 ± 6.96 , and experiment III is 39.53 ± 6.52 . For Posttest value in SMAN 1 T.Tinggi for experiment I is 83.75 ± 4.63 , for experiment II is 81.50 ± 5.21 , and experiment III is 78.00 ± 5.64 . In SMAN 1 Sidikalang experiment I is 80.78 ± 7.16 , for experiment II is 78.75 ± 5.82 , and experiment III is 79.22 ± 6.51 . In SMAN 1 Berastagi for experiment I is 82.50 ± 6.35 , for experiment II is 82.19 ± 5.67 , and experiment III is 83.28 ± 4.85 . The hypothesis can be seen from $F_{count} > F_{table}$. In SMAN 1 Tebing Tinggi is $12.524 > 3.25$. In SMAN 1 Sidikalang is $5.851 > 3.33$. In SMAN 1 Berastagi is $3.433 > 3.33$. It means H_0 is rejected and H_a is accepted (2) There are significant differences of students' characters in SMAN 1 T.Tinggi for experiment class I is 72.23, class II is 68.28, class III is 67.50. In SMAN 1 Sidikalang for experiment class I is 74.74, class II is 72.01, and class III is 66.60. And in SMAN 1 Berastagi for experiment class I is 74.74, class II is 72.01, class III is 66.06 (3) There are significant differences increasing students' learning outcomes that taught by Cooperative Learning Model Types STAD, TGT, and Jigsaw in SMAN 1 Tebing Tinggi is 70%, in SMAN 1 Sidikalang is 66%, and in SMAN 1 Berastagi is 72%.

Key Words: Learning Outcomes, Students' Characters, Cooperative Learning Model Types, Solubility and Solubility Product