THE DEVELOPMENT OF INQUIRY TRAINING STUDENTS' WORKSHEET BY USING ANDROID ON ELECTROLYTE AND NON ELECTROLYTE SOLUTION TOPIC

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ABSTRACT

The research objectives are to know the properness of android based students' worksheet as practical and economical learning which has been compiled, know the student learning achievement by using android based students'worksheet and know the student learning motivation by using android based students' worksheet. This research was conducted at SMAN 14 Medan in March-April 2019. The population was all students X MIPA SMAN 14 Medan field consisting of 7 classes. Sampling is taken by purposive sampling technique as many as 2 classes, each of 30 students for each control and experiment class. The method of this research is Research and Development (R and D) with the ADDIE development model. The properness of android based student worksheet on electrolyte and nonelectrolyte solution material has a Very Good (VG) quality category in media validation with average total is 3.9 (97%) and 3.87 (96%) in material validation. Data of pretest and posttest were declared distributed normally and homogeneity. The percent increase in learning achievement can be calculated by the formula g factor (gain normalized score) in the experimental class is 0.82 (82%) while in control class is 0.67 (67%). The hypothesis testing is showing the value of $t_{count} > t_{table}$ (8.50 > 2.0021). The result of the hypothesis is showed H_0 is rejected and Ha is accepted, thus mean student learning achievement by using an android based student worksheet is higher than using a student worksheet that already exists in school. Researchers see the learning motivation of student by giving a questionnaire and the results are learning motivation of student in experiment class categorized as very good while in control class categorized as good.

Keywords*: Student Worksheet, Android, Electrolyte and Nonelectrolyte Solution*