The Effect of the Implementation of Learning Model Based On Scientific Approach using Real Object and ICT to Students' Biological Literacy

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ABSTRACT

The study aims to understand the effect of learning model based on scientific approach using real object, ICT, and blended media (real object and ICT) to students' biological literacy. The previous study shows that real object has positive impact to motivate students.

This study is quasi experiment using pre-test and post – test comparison group design. It aims to test the difference effect of the implementation of learning model based on scientific approach using real object media, ICT, and blended media to high school students' biological literacy in vertebrate for 10th grade, coordination system for 11st grade, and urinary system for 11th grade. The study was conducted in two high schools in Bantul, Yogyakarta using 6 classes which were divided into three classes, 2 classes used real object, 2 classes used ICT, and 2 other classes used blended media (real object and ICT). The difference between three classes was on the media used in the learning process. Observation data were described and analyzed using scoring technique, while test score data were analyzed using descriptive statistics, normality test using Saphiro Wilk, homogeneity test using Levene's statistics, hypothesis test using Kruskal Wallis, and gain score test.

The result shows that there was difference between the implementation of learning model based scientific approach using real object, ICT and blended media to senior high students' biological literacy in vertebrate for $10t^{h}$ grade, coordination system for 11st grade, and urinary system for 11st grade. It can be concluded that Bantul senior high school students' biological literacy increased through the implementation of learning model based on scientific approach using real object, ICT and blended media in low-to-moderate level.

Kata Kunci: *scientific approach, real object, ICT, literacy, biology*