

# Implementation of SSI-Based Biology learning to improve scientific literacy of SMA/MA Students in DIY

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## ABSTRACT

This lesson study aims to 1) develop SSI-based biology learning guide in SMA and MA DIY, 2) implement SSI-based biology learning guide, 3) describe SSI-based biology learning, and 4) describe students' scientific literacy through SSI-based biology learning. The implementation of lesson study follows the *plan-do-see* pattern. At the planning stage, the lesson study team, namely biology teachers in SMA and MA DIY, together with the facilitators carried out SSI-based learning planning. The stage carried out the implementation of the SSI-based learning design. The see stage is a reflection of the learning that has been done. The instruments used in this lesson study activity are in the form of lesson study observation sheets to see the implementation of SSI-based learning and sheets to see student learning activities. The results of the lesson study are in the form of SSI-based learning tools using cases in the surrounding environment. Biological material and the cases are: 1) tuber diversity with tuber vs wheat case, 2) blood circulation system with cupping cases, 3) inheritance with dreadlocks cases, and 4) circulation system with scraping cases. The open class was held in 4 different schools, namely: 1) tubers vs wheat at SMA 1 Sanden, 2) cupping at SMA 2 Wates, 3) dreadlocks at SMA 7 Yogyakarta, and 4) scraping at MAN 1 Yogyakarta. During the SSI-based learning process, it appears that students actively participate in learning and are able to give their opinions about the cases presented. It appears that students are active in discussions to support each other's opinions on a given case. There are two groups of students in dealing with a given case, namely a group that agrees with the habits that exist in society and a group that does not agree with the habits that exist in society. It appears that students have used scientific literacy in the given case in conveying ideas and defending their opinions. SSI-based biology learning is also able to improve students' scientific literacy

Kata Kunci: *lesson study, SSI-based learning, scientific literacy*