

EFFECT OF PROBLEM-BASED LEARNING ON CRITICAL THINKING  
ABILITY AND CONTENT KNOWLEDGE OF SECONDARY AGRICULTURE STUDENTS

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ABSTRACT

The purpose of this study was to determine the effect of problem-based learning (PBL) on critical thinking ability and content knowledge. Furthermore, this study sought to examine the relationship between critical thinking ability and content knowledge among selected secondary agriculture students in Missouri.

The target population for this study was identified as secondary agriculture students in Missouri. Twelve Missouri secondary agriculture teachers were selected based on criteria established by the researcher. The resulting sample ( $n = 140$ ) consisted of 77 students in the PBL treatment group and 63 students in the supervised study treatment group.

The study employed a quasi-experimental, non-equivalent comparison group design. The treatment consisted of two instructional strategies: problem-based learning or supervised study. Analysis of covariance indicated a treatment effect on critical thinking ability and content knowledge.

Students in the supervised study treatment group produced higher scores on critical thinking ability. While this difference was statistically different, there was no practical difference between the two groups.

The supervised study treatment group outperformed the PBL group on content knowledge. The difference was both statistically and practically significant. From the findings related to content knowledge, it can be concluded that students in supervised study classes tended to score higher on content knowledge assessments than students in PBL classes.