

Public Abstract

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Graduation Term:WS 2007

Department:Agricultural Education

Degree:PhD

Title:Effect of Problem-Based Learning on Knowledge Acquisition, Knowledge Retention, and Critical Thinking Ability of Agriculture Students in Urban Schools

Over recent years, there has been a decline in the academic motivation and achievement of students in urban public schools. Scholars have suggested that this is because students do not view their current academic situation as related to their future. A possible solution to this problem in urban schools is increasing school engagement and self-accountability through leadership development.

The purpose of this study was to determine the effectiveness of problem-based learning (PBL) on improving knowledge acquisition and retention, and critical thinking ability of urban agriculture students. Furthermore, this study examined the motivational profile of students who enroll in urban agricultural programs in order to describe the factors that predict school engagement.

A sample of 110 students from an agricultural magnet school was randomly assigned to learn leadership theories for two weeks using PBL or traditional instruction. The sample's motivational profile indicated that students who had an influence in the decision to enroll were more likely satisfied with the decision and reported exerting more effort during the study.

Furthermore, it was determined that students who had traditional instruction performed better on the knowledge test but retained less of the information they had learned. Additionally, no differences existed between the groups in critical thinking ability after treatment when measured using the WGCTA®. However, teacher and student reflection statements indicated an increase in the use of higher-order thinking skills and overall engagement by the students taught using the PBL instructional strategy.