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PROBLEM-BASED LEARNING TO POTENTIATE THE LEARNING ACHIEVEMENTS AND MOTIVATION OF THE HIGHER EDUCATION STUDENTS

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Educators are using new pedagogical methodologies to engage students in the learning process, and numerous studies have shown evidence of increased interest to learn when real-life problems are incorporated into the learning environment. This paper presents research on the impact on academic achievement and motivation of learning through the application of Problem-Based Learning (PBL) methodology in higher education. Specifically, the study was designed to analyse the benefits in terms of learning outcomes using methodologies that are showed to be more effective approaches to student learning processes than traditional classrooms.

The main research questions are: Rq1: What are the impacts of PBL in the academic achievement of the students?

Rq2: What are the impacts of PBL in the student's motivation for the learning process?

The methodological approach is an experimental design that specifies an experimental group and a control group. The independent variable was administered to the experimental group and not to the control group, and both groups were measured on the same dependent variable.

The sample composed of 62 undergraduate students from management courses. Of the participants 31 students in the control group and 31 in the experimental group.

The materials were multiple-choice digital assessments applied to the experimental groups and the same multiple-choice assessments in paper form for the control group.

The motivation measure was a 5-point Likert Scale questionnaire used as a pre and post-assessment. This questionnaire assessed students' motivation and attitudes before any intervention and again after the intervention. Specifically, the survey measured students' motivation to learn using PBL. The constructs designed for the motivation survey are perceptions of student learning, interest in PBL, and academic motivation. The questionnaire contained twenty items with five choices: strongly agree, agree, neutral, disagree, and strongly disagree and included also positively and negatively worded items to ensure reliability.

The control group answered the same multiple-choice questions as the experimental group, but

without using PBL methodology. The experimental group used the online learning platform and answered the same multiple-choice questions by selecting the answer that was correct.

The statistical analyses were based on ANCOVA to measure students' achievement and motivation for learning using PBL methodology. For the analysis, the dependent variable was either the post-survey or post-achievement measure, and the covariate was either the pre-survey or pre-achievement measure, and the condition was the group status.

The findings reveal that the students who used the PBL methodology showed a significant increase in their learning outcomes. This finding suggests that the students of the experimental group felt a positive change in their learning processes. Regarding academic achievement, experimental groups did not have significant growth as compared to the control groups, but their perception of learning was much higher. Finally, students in the experimental groups felt like they had increased academic motivation in learning when using PBL methodologies.

Based on the results it is possible to state that are benefits for the learning process and classroom lessons will improve the academic outcomes if delivered more frequently using PBL methodologies.

keywords: pbl, higher education, students, academic achievement, students motivation, learning outcomes.