

## INFLUENCE OF SCIBINGO ON SEPARATION OF MIXTURES ON GRADE 6 LEARNERS IN PUNTURIN ELEMENTARY SCHOOL

### ABSTRACT

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The Philippine Institute for Development Studies (PIDS) emphasized that the lack of teaching materials poses a significant barrier to effective learning, as students are deprived of access to essential information needed to fully grasp classroom lessons. In this study, the concept of separating mixtures is applied through SCIBINGO, an interactive and gamified learning tool designed to engage students in a more enjoyable and stimulating way. By incorporating SCIBINGO into science instruction, the study aims to activate various cognitive processes, encourage sustained focus, and ultimately enhance student performance through evidence-based strategies and theoretical foundations. This study employed a mixed-methods design involving 47 Grade 6 learners from Punturin Elementary School, all of whom provided consent to participate. The study utilized a quasi-experimental approach, which involved administering a pre-test and post-test to the same group of students to assess the effectiveness of SCIBINGO. This design allowed the researchers to measure changes in students' knowledge and performance before and after the intervention. The analysis aimed to determine whether any significant improvements could be attributed to the use of SCIBINGO in teaching the lesson on separating mixtures. Additionally, the study was guided by Tippet's theory, which highlights the importance of strategy, familiarity, awareness of outcomes, and consistent practice—all of which align with the cognitive benefits offered by SCIBINGO's interactive format. The findings of this study confirm that the educational intervention had a significant impact on student performance. In the pre-test, students recorded a mean score of 11.064 with a standard deviation of 3.6200. Following the intervention, the post-test results showed a higher mean score of 14.723 and a reduced standard deviation of 2.4821, indicating not only improved performance but also more consistent outcomes. The z-value of -5.7160 reflects a statistically significant difference between the two sets of scores. With a p-value less than .00001, well below the accepted significance level of 0.05, the study rejects the null hypothesis, affirming that the intervention led to measurable improvement in student learning. The analysis confirms that SCIBINGO positively impacted student learning and performance, particularly in understanding the concept of Separation of Mixtures. The intervention effectively enhanced student engagement and academic outcomes, demonstrating its value as a supportive educational tool for improving science comprehension and overall achievement.

#### RECOMMENDED CITATION

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