

Justo Galeas
EDG500
04/11/23

Participants

The study will be conducted at the local elementary school in central Long Island, Nassau County. The school building comprises two sections, one that houses 1st and 2nd grade and the other which houses 3rd through 5th grade. 79% of the student demographic is composed of 2nd and 3rd-generation Hispanics. The population shows a lack of home support because the parents are 1st generation members and English Language Learners. The school district is an International Baccalaureate school offering education through high-quality programs for students 3-19 years old. The school is committed to a cross-cultural education approach.

The second-grade class studied in this research comprises 26 students, all of whom are bilingual, and 15 are emerging English Language Learners. The class is conducted in both English and Spanish, morning is Spanish instruction, and afternoon English instruction is supplemented with Spanish assistance. 90% of the class is below grade level standards in literacy, and 80% is below grade level in mathematics. Students will be represented by a randomly assigned letter A-Z to protect student anonymity.

Instrumentation

The primary instrument used in this study was a standardized test in Mathematics and Literacy. The Mathematics assessment assessed the students' knowledge in **2.NBT.B.5**

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and the relationship between addition and subtraction. This assessment was graded based on a rubric; the students were graded on a four-point scale. Each point was designated a relationship towards a goal of meeting the standard given; 1 point correlating to far below the standard, 2 points relating to approaching the standard, 3 points connecting to meeting the standard, and 4 points correlating to exceeding the standard. The literacy assessment assessed students' vocabulary knowledge and aimed to develop student vocabulary, which involves reading and writing skills. The study methods used included using the vocabulary in context, the correct spelling of the new vocabulary, and overall literacy skills. These exams were scored by myself and entered into SPSS Statistics for analysis.

Procedures

The students were assessed at three distinct points in the school year; September, January, and April using running records and classroom testing to determine their academic levels in literacy and mathematics. These exams were conducted only in English. A lesson was performed in front of all the students, which followed an "I do, We do, You do" structure. This allowed the students to watch the modeling of the new strategy and practice the strategy as a group before moving on to using the strategy individually. This section was informally overserved, and students were assigned an engagement level based on their performance and body language during the lesson. This engagement level was scaled through a 0-5 rating, with 0 being not present and five being fully engaged, actively listening, participating in all group work, and actively trying to solve the problems themselves. They

were then scored based on their performance and understanding of the content in a formal post-test after the lessons. This post-test was scored via a rubric for the mathematics sections or a criterion-referenced test for the literacy sections. Afterward, the students received back their exam scores with beneficial washback through 1:1 conferencing.

Data Analysis

This study hypothesized that students engaged in learning do better on tests. It has been observed throughout the investigation that students who were more engaged in the classroom lessons and participated in homework, answered call-and-response questions, and actively listened seemed to do better on the exams. Through informal observations and anecdotal running records, the study compared students' engagement levels during the lesson to their post-test scores. The correlation of this bivariate data will be calculated with a linear regression and a correlation coefficient. The two variables, engagement level and test scores, will be graphed on an x-y axis to produce a scatter plot. We can find the correlation coefficient to test the null hypothesis that there is no correlation between student engagement and test scores. The study will then calculate and compare the associated p-value. If the p-value is less than 0.05, the study will reject the null hypothesis and conclude that there is a statistically significant relationship between student engagement and test scores.

