CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY

Name(s)
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Project Number
J0705

Project Title
Nursery Rhyme Mania 3: Does the Use of a 22° Slant Board & Blocking Methods Improve Reading Fluency in 7-14yro Students?

Abstract

Objectives/Goals
The objective is to determine if the use of a Slant Board and Blocking Methods improve reading fluency in students.

Methods/Materials
Informed consent was obtained from a voluntary sample of 210 students in libraries, 79 girls and 83 boys, aged 7 - 14. We recorded 82 readers using Full Blocking (FB), Partial Blocking (PB), & Eyes Only (EO) on a Slant Board (SB) and 80 readers using FB, PB, & EO on a Flat Table (FT). The rhymes were rotated through the blocking methods. Each reader read one practice & three test rhymes. We timed the rhymes to within one second of each other, recorded the mean, counted the errors agreed on outcome 100%, and then averaged the data to determine if reading angle & method improved fluency. Speed & accuracy was analyzed by age & gender.

Results
The first part of our hypothesis was supported; readers read faster & made fewer errors on a SB than on a FT. The second part of our hypothesis was refuted. Readers using FB read slower, but made fewer errors than EO. Readers using PB read slower & made more errors than EO.
After filling in our tables & graphs, we found an uncontrolled variable (age) in our experiment. We re-separated the data by age, but each age group did not contain all three rhyme sequences. To learn how reliable the results were, we ran a second test using one age & gender. The results from the first & second set of trials were almost identical.

Conclusions/Discussion
Nationally, 4 out of 10 children cannot read at a basic level. A systematic reading program can improve reading. Our SB may have improved fluency because it keeps the text at the same perspective. We think schools should consider replacing worn-out desks with slanted work surfaces. FB may have been refuted because we used a unique font (FB was read 1st & EO 4th) and unique fonts take practice for readers to improve their speed. Or, FB may have been slower because the reader had to refocus with each card movement. FB research should be continued to rule out the weaknesses in our experiment.

Summary Statement
The purpose of our experiments is to determine if the use of a slant board & blocking methods improve reading fluency in students.

Help Received
Mr. Williams sent an important article; Dad downloaded recordings; Mom helped with the internet & Exacto blade (FB card); & 210 students participated.