Sciencedaily.com Analysis Project

9-27-13

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Researchers

The researchers of this experiment were James Tarr and Doug Grouws, professors from the University of Missouri. This research has been taken place at MU (University of Missouri) for three years now, and they published their work in the Journal for Research in Mathematics Education.

Testable Question

The question that Tarr and Grouws were trying to answer is: How does non-traditional mathematics curriculum affect standardized test scores?

Variables

Independent Variable- Mathematical curriculums

Dependent Variable- Standardized test scores

Controlled Variables- The students in the experiment should all be in high school.

Hypothesis

The hypothesis that I think Tarr and Grouws chose for this experiment is: “*If non-traditional mathematics curriculum is related to standardized test scores, then the more integrated mathematics studied, will result in higher scores on standardized test.”*

Method

1) Gather the three thousand high school students

2) Split them in half; teach one half more integrated curriculum, and the other half more traditional curriculum.

 3) Collect the data from both groups. (Data as in their standardized test scores)

Materials

1) 3000 high school students

 2) Teachers willing to teach the curriculum

 3) The standardized test scores of the 3000 students

Results

The results that Tarr and Grouws received from this research is that students with higher prior achievement scores benefited more from the integrated mathematics, than students who studied more traditional curriculum.

Data Table

ACT Test Scores Based on Mathematical Curriculum

|  |  |
| --- | --- |
|  | ACT Scores |
| Non-Traditional Mathematics | 28 |
| Traditional Mathematics | 22 |

Conclusions

From this experiment, some conclusions that could be made are that, more integrated mathematics curriculum serves a person better on standardized tests, and that integrated mathematics can help improve this country’s mathematics education, proving that the hypothesis was correct.

Connection

 This experiment helps us better understand biology and the nature of life by giving us an idea of how biology affects our lives, and how we could even benefit from such research. This research that James Tarr and Doug Grouws conducted will help many people when it is their time to prepare for standardized tests such as the ACT’s and the SAT’s.

Data

