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Spicing Mathematics Teaching through Technology: Case of DeltaMath

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Mathematics with Rigor, Relevance and Responsiveness



INTRODUCTION

- Students generally are challenged in mathematics
- Technology motivates and engages students
- Multiple technologies used including DeltaMath

QUESTION OF STUDY

To what extent does DeltaMath increase student motivation and engagement in mathematics?

METHOD

- Explore general use of technology
- Survey on DeltaMath
 - In-service teacher
 - Pre-service
 - HS students

SPICING MATHEMATICS TEACHING THROUGH TECHNOLOGY: CASE OF DELTAMATH

Unlimited practice

Problems are randomized, allowing students multiple opportunities to get the practice and feedback they need on the road to mastery.

Instant feedback

Go beyond right and wrong. As soon as a student submits an answer, they get a detailed age-appropriate explanation.

Fine-tune controls

DeltaMath allows teachers to mix and match problem-sets, control rigor, vary due dates, and, with PLUS, create tests and problems of their own.

Figure 1: DeltaMath Mission

Sample Problem Student View:

Problem types

Find the ratio of circles to squares in the diagram below.

Unsimplified ratio of circles to squares: : Just count them all

You must answer all questions above in order to submit.

Sample Problem Teacher View:

Find the ratio of circles to squares in the diagram below.

We have split our shapes into **four** groups

How many of the **4** circles are in each of the **four** groups?
 $4 \div 4 = 1$

How many of the **12** squares are in each of the **four** groups?
 $12 \div 4 = 3$

Each group has **1** circle and **3** squares.

For every 1 circle there are 3 squares, therefore the simplified ratio of circles to squares is 1 : 3.

Adaptive Assessment Strategies

Modeling

Decreasing cognitive level

Instructional Video



Founder: Zack Korzyk
2009

FINDINGS

- Customized practice
- Management and monitoring students

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