



PRISM Kawartha Pine Ridge Research Project

Lead School Board – Kawartha Pine Ridge
District School Board

Lead Educator – John Ford john_ford@kprdsb.ca

Participants

- 1 Board - KPRDSB
- 43 Grades 7 and 8 teachers, 16 Special Education teachers, approximately 1200 Grades 7 and 8 students participating in the treatment group
- 44 Grades 7 and 8 teachers, 15 Special Education teachers, approximately 1200 Grades 7 and 8 students participating in the control group

Lead Researcher

Dr. John Ross jross@oise.utoronto.ca

Project Design

Improve opportunities for students deemed at-risk by building teacher capacity for teaching mathematics through the following professional learning opportunities:

- *PRIME Number and Operations Strand* teacher training for all participants - 4 days provided by a Grades 7/8 teacher and special education teacher from the same school and supported by the mathematics consultant
- Differentiating instruction through the use of manipulatives and cooperative learning strategies – 4 half days provided by a Grades 7/8 teacher and special education teacher from the same school and supported by the mathematics consultant

Research Questions

Did participation in PRISM in-service contribute to improvements in student attitudes, higher student achievement, and/or improve student beliefs and practices?

Research Instruments

1. *PRIME* Diagnostic Tools: Numbers and Operations (Test F)
2. Teacher Attitude and Practices to Teaching Mathematics
3. Student Characteristics Survey
4. Teacher Log

Research Findings

1. Students who were identified by their teachers as the weakest in the class performed significantly better on the *PRIME* Numbers Diagnostic than similar students in the control group.
2. There were no significant differences between groups on the teacher measures.
3. Students in the treatment group showed greater improvement in attitudes to mathematics learning than students in the control group.

Successes

- Using *PRIME* diagnostic tests to measure improvements in a students understanding of mathematics concepts
- Using a Student Characteristics Survey to measure improvements in student's attitudes towards learning mathematics

Conditions for Success

Research-based strategies for in-service
Rigorous assessment of program effects
Use of a research-based mathematics continuum

Lessons Learned

- It is possible to change the achievement of Grade 7 and 8 students at risk in mathematics

Suggestions Based on Experience

Well-funded, intensive professional development is required to improve student achievement in mathematics.