



PRISM Ottawa Area (PRISM Pre-pilot) Research Project 2004-05

Lead School Board – Ottawa-Carleton Catholic

Lead Educator – Tom Steinke–Thomas_Steinke@occdsb.on.ca

Participants	Lead Researchers
<ul style="list-style-type: none"> Ottawa-Carleton Catholic SB; Ottawa-Carleton DSB; Upper Canada DSB; Toronto DSB Treatment group: 40 teachers, 782 Grades 7 and 8 students Control group: 17 teachers, 703 Grades 7 and 8 students 	<p>Dr. Marilyn Kasian – Marilyn_Kasian@occdsb.on.ca</p> <p>Dr. Carolyn Rees-Potter – Caroline.Rees-Potter@edu.gov.on.ca</p>
Project Design	Research Questions
<ul style="list-style-type: none"> 23 teachers received 3 days of training in developmental continua, either <i>PRIME</i> or <i>First Steps in Mathematics</i>. 4 of these 23 teachers received an additional 3 days training on <i>Knowing Mathematics</i>. 13 teachers received training on <i>Knowing Mathematics</i> only. All 40 of the above teachers received an additional 2 days of release time for work in a professional learning community. The 17 control teachers received no training during the project. 	<p>Quantitative</p> <ul style="list-style-type: none"> 2 questions about intervention and remediation programs 6 questions about teacher professional development 2 questions about student achievement <p>Qualitative questions addressed:</p> <ul style="list-style-type: none"> a Professional Learning Community Model impact on classroom and special education teachers impact on students
Research Instruments	Research Findings
<ol style="list-style-type: none"> <i>Content Knowledge for Teaching Mathematics</i> (CKT-M) Teacher Attitude and Practices to Teaching Mathematics Student Characteristics Survey <i>PRIME</i> Diagnostic Tools: Numbers and Operations 9 theoretical propositions based on best practices incorporated in a Professional Learning Community model: <ul style="list-style-type: none"> shared values goal setting and establishing priorities student focus collaboration communication action research focus on student results teacher capacity building and changes in professional practice sustainability 	<ol style="list-style-type: none"> a) Form A01, designed for elementary teachers, was appropriate for this project. b) Teachers in the <i>PRIME</i> and <i>First Steps</i> groups showed the most growth in knowledge for teaching math. Teachers in the <i>PRIME</i> and control groups showed a slight increase in positive attitudes. 88% of students felt that if you work hard, you can do well in math. a) Only 53% of students initially approached a Phase appropriate to their grade in Numbers, and less than 40% in Operations. b) There was a significant improvement in Number scores for students in the <i>Knowing Mathematics</i> group and in Operations for both the <i>PRIME</i> and <i>Knowing Mathematics</i> groups. c) Female students did consistently better than males on Operations. d) There was no significant interaction between IEP and groups. However, students with IEPs performed significantly lower than students without. What was done and key findings are organized under the propositions in the full report.
Successes	Conditions for Success
<ul style="list-style-type: none"> <i>PRIME</i>, <i>First Steps in Mathematics</i>, and <i>Knowing Mathematics</i> all contributed to improvements. All of the research instruments used yielded important information. 	<ul style="list-style-type: none"> These are research-based materials that help teachers see their role in developing students' understanding. Conditions of the project matched the instrument designs, and the researchers knew how to do the necessary analysis.
Lessons Learned	Suggestions Based on Experience
<ul style="list-style-type: none"> Publishers' workshops alone were insufficient support for implementation in classrooms. 	<ul style="list-style-type: none"> Provide follow-up support for teachers, over time, after initial publisher training.