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Executive Summary

Survey Background and Context

Educators are increasingly facing more stringent teaching requirements and performance measurement criteria, especially in the basic education areas of reading, and math. The federal No Child Left Behind Act, passed into law by Congress and signed by President George W. Bush in January 2002, as well as state performance testing requirements are putting greater strain on school systems and teachers.

Programs brought into school systems are also under more scrutiny than ever, with proof of effectiveness and viability being foremost in the minds of administrators and school districts. The TouchMath program is one tool that has been in the classroom successfully helping educators teach basic mathematics since 1975.

What is TouchMath?

TouchMath offers a comprehensive program to teach counting, addition and subtraction, multiplication and division, and general math - such as time, money and fractions. The products, developed for use by teachers, home schoolers, and parents, consist of math kits, workbooks and teaching aids, which serve as supplements to the prescribed curriculum.

TouchMath follows sequential learning strategies advocated by eminent learning theorists such as Jean Piaget and Jerome Bruner. As a math supplement, the program falls into the constructive classroom philosophy because it is hands-on, sequential, and allows students to make sense of their own learning.

TouchMath is a multi-sensory teaching approach that bridges manipulation and memorization. In grade-specific kits consisting of 100 or more activity pages, problems come in the form of high-contrast Blackline Worksheet Masters.

Each digit from 1 through 9 has Touchpoints corresponding to the digit’s quantity. Numerals 1 through 5 use single Touchpoints, or dots. Numerals 6 through 9 use double Touchpoints symbolized by a dot inside a circle.

In TouchMath computations, students touch single Touchpoints once and count aloud once. They touch and count double Touchpoints twice. Students always touch with their pencils in the pattern specified for a particular numeral.

Large, engaging graphics and age-appropriate numbers and problems set this system apart. TouchMath activities include foundation worksheets to provide practice, as well as enrichment exercises, challenge activities and progress tests. Consisting of 56 math kits, workbooks and teaching aids, the integrated curriculum has carefully evolved to help teachers supplement their lessons and increase classroom effectiveness.
National Survey Methodology

Innovative Learning Concepts, Inc., developers of the TouchMath approach and supplemental math teaching program, recently conducted a survey built into the centerfold of its Spring 2004 catalog. The survey was designed to understand how educators use TouchMath materials, how TouchMath helps them teach mathematics in their classrooms, and to gain an understanding of the impact the program has had on students and teachers. TouchMath catalog readers were asked to fill out a survey to identify their usage of the program and to identify the benefits they’ve observed as a result.

Although the developers expected several hundred completed surveys at most, over 3,500 participants responded to questions about their usage practices and the effectiveness of the supplemental mathematics teaching products.

Respondents included classroom teachers representing grades pre-school to college, school principals, special education and special needs teachers. The majority of respondents taught kindergarten through third grade. Approximately 1300 of the respondents were educators with over 10 years of experience, while approximately 600 respondents had over 20 years of experience.

Survey Results Analysis

An overwhelming majority, 99.8%, of all respondents stated that the TouchMath program has been an effective supplement to their math instruction. Several areas of improvement have been attributed to the use of TouchMath tools.

Respondents with over 20 years of experience have noted “better computational skills” and “consistently correct answers” as being the areas of greatest improvement seen in students. The following diagram shows the breakdown of student improvement attributed to TouchMath by survey respondents.

Areas of Student Improvement Attributed to TouchMath

* Percentages add up to greater than 100% due to multiple responses allowed for this question.
One important observation is that respondents with more experience attributed student improvement to the use of the TouchMath program, at higher percentages than the overall respondent base as shown in the graph below.

Teachers have also noted an increase in students overall confidence as a result of using TouchMath tools. The speed of completing calculations and computations has increased while reliance on finger counting has decreased. Also, teachers have observed more focus, greater independence and more strategies being used by students to solve problems.

Other benefits of the TouchMath program responding teachers have observed include more than the increased performance in mathematics. Educators have noticed that student confidence is higher when performing math problems; students are able to work more independently; and, their self-esteem is improved. The following chart displays respondent answers for other observed learning benefits.

Additional information provided by teachers’ observations include a decrease in students using finger counting while students are solving math problems. They’ve also noticed that students in general are enjoying math more; they think math is fun; and students have exhibited lower
frustration levels during “math time.” Students are excited and enthusiastic about math.

Respondents have assessed the progress they reported due to the TouchMath program in a number of ways. The most reported method of assessment was the use of classroom tests, followed by feedback from students and teachers, and observation. Responses listed in the table below indicate the “other” category had a large number of responses. Further detail indicates that ‘observation by parents’ and ‘observation by teachers’ were consistently listed in the write-in boxes on the survey.

**Progress Assessment Methods**

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>73.00%</td>
</tr>
<tr>
<td>Other</td>
<td>62.50%</td>
</tr>
<tr>
<td>TouchMath progress tests</td>
<td>26.30%</td>
</tr>
<tr>
<td>Standardized tests</td>
<td>22.90%</td>
</tr>
<tr>
<td>Feedback from other teachers</td>
<td>14.10%</td>
</tr>
<tr>
<td>Feedback from students</td>
<td>25.90%</td>
</tr>
</tbody>
</table>

The TouchMath program offers teachers’ kits, workbooks, and teaching aids to help educators use the products in the most effective manner. 79.7% of the respondents with over 10 years of experience say they like the multi-sensory approach of the kits. Equally compelling, 77.6% of those respondents indicated they like the ability to apply the Touchpoint method in any math setting. The step-by-step teaching method, age appropriate tools, visual cues and teaching aids were also listed as items that respondents particularly liked.

**Conclusion**

TouchMath programs have been successfully helping educators teach basic math skills for almost 30 years. A national survey was conducted in spring of 2004, with results collected from over 3500 respondents involved in the education field. Over 60% of those educators, representing grades K - 3, have greater than 10 years of experience.

Observed student improvements attributed to the use of TouchMath include better computational skills, consistently correct answers and more confidence in the area of mathematics and problem solving. Educators also noted an increase in students’ self-esteem, ability to work independently, and using strategies when solving problems. Over 99% of the survey respondents stated that the TouchMath has been an effective supplement to their standard mathematics curriculum.