

Question

What are the initial perceptions of the Singapore Math approach to small-group math instruction at SHS?

Introduction

Strong foundational skills in mathematics are very important to a child's success (Guilfoyle, 2013). Research has shown that only about one in ten Grade 4 students with substantial challenges in mathematics was able to meet curriculum benchmarks that would build towards readiness for post-secondary education by the time he or she reached Grade 8 (Guilfoyle, 2013). Currently, interventions in reading are common, but extra support in mathematics is generally not part of a struggling child's education (Jordan, 2007).

In response to this research, SHS has brought to the Grade 1 and 2 classes the Singapore Approach to teaching mathematics. The highlights of this approach include:

- Emphasizing conceptual understanding (why particular computations and procedures are used)
- Focusing on depth over breadth
- Consistent and clear teaching strategies and terminology across the grades
- Using the concrete-pictorial-abstract method of introducing new concepts
- Implementing small-group instruction for more differentiation of the content

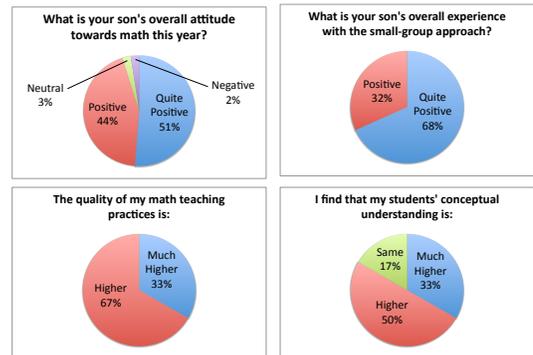
Results

Parent Survey

"For the first time ever, I heard my son say, "Math is fun!""
"We like that the program does not rush through fundamental concepts and that it focuses on... mastery."

Teacher Survey

"I feel as though my hour-long math classes are time well spent – every component has a purpose and it helps me get through a lot more content."
"We are really reaching each boy and making sure the content is being delivered consistently."



Conclusions

Parent Survey

- Overall, parents feel that their sons' attitudes towards math this year (2013-2014) are positive (95%).
- In addition, they feel that their sons' experiences with the content have been favourable (90%).
- They also believe that the small-group approach has been beneficial for students (100%).
- Through feedback from the parent survey, it was clear they would like additional information about the program.

Teacher Survey

- Teachers are finding that the quality of their math teaching practices is higher as compared to previous programs (100%), perhaps due to an increase in their content knowledge of math (100%) and more time spent planning and preparing (100%).
- They feel that their students' conceptual understanding is above that of previous programs (83%).
- Teachers perceive the level of engagement of their students to be higher with Singapore Math (67%).
- One hundred percent of teachers believe that small-group instruction is benefiting their students.
- Many would like more professional development in Singapore Math.

Implications

- SHS will continue to follow the Singapore Math approach with students in Grades 1 and 2.
- Singapore Math will expand to Grade 3 using the small-group instruction model in 2014-2015.
- Small-group instruction will remain as an integral component of the Primary mathematics program.
- The Singapore Math program will expand to Grades 4 and 5 in 2014-2015 with additional math teaching support.
- The co-ordinator has pre-planned an information session for parents, which will appear in next year's school calendar.
- Additional Qualification courses in Teaching Math will be run through York University at SHS in 2014-2015, for teachers from SHS and beyond.

Bibliography

- Guilfoyle, C. (2013). For College and Career Success, Start with Preschool. *ASCD*, 19 (4), pp. 1-7.
Jordan, N. C. (2007). The Need for Number Sense. *Educational Leadership*, 65 (2), pp. 63-66.