

Savannah-Chatham District Partnership

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Introduction

In September 2015 Sumdog partnered with Savannah-Chatham School District in Georgia with the help of Mathematics Program Manager, Dr. Marlyn Westbrook.

All Grade 4 teachers in the district were invited to join the partnership which involved using the full version of Sumdog once a week with their class until the end of the school year in May 2016.

34 teachers joined the partnership from 21 schools across Savannah-Chatham. This gave a total of 1045 students. Each week the teachers were sent tips on how to get the most out of Sumdog for their class.

At the end of the partnership all teachers and students involved were asked to

complete an online attitudinal survey to share their experience learning and teaching with Sumdog.

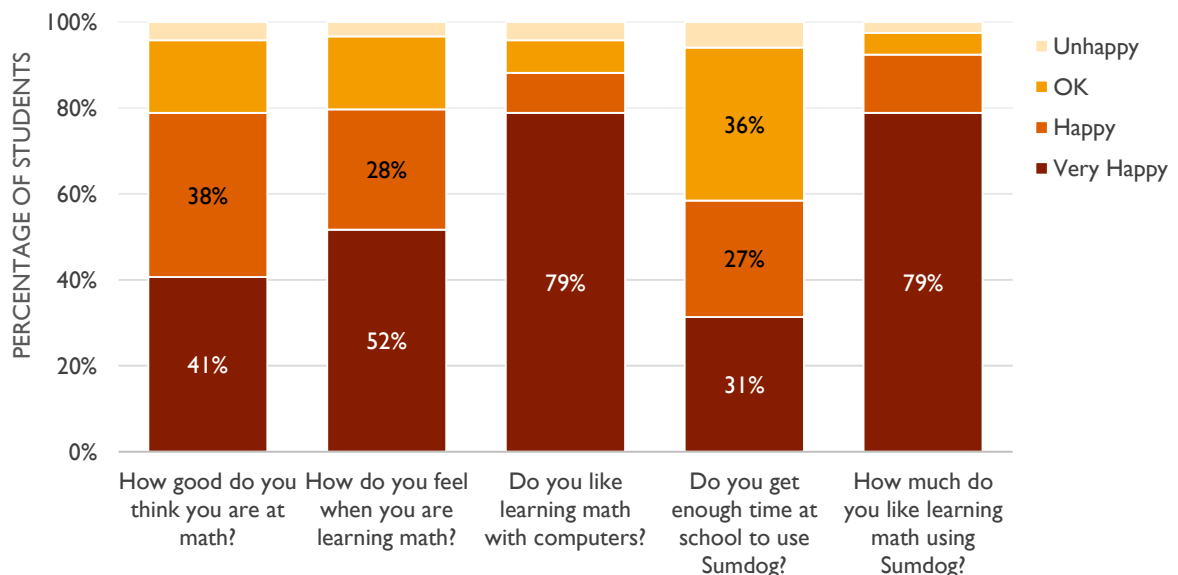
Overall, teachers and students were very positive about using Sumdog to practice math skills both at school and at home.

Student Survey

118 students completed the online survey composed of 8 multiple choice questions. This is 11% of students who participated in the partnership. Some teachers commented that it was difficult for students to complete the survey due to limited computer access.

Figure 1 shows the responses to the first 5 questions in the survey.

Figure 1: Student responses to the first 5 questions of the attitudinal survey



The options were very happy, happy, OK, and unhappy and were shown alongside a corresponding smiley face image.

When asked how good they thought they were at math, 41% of the 118 students selected the very happy image and 38% selected the happy image. 51% of students felt very happy when learning math and 28% felt happy. Only 3% of students selected unhappy.

Students gave a more positive response when asked if they liked learning math with computers. 88% of students selected happy or very happy with only 4% selecting unhappy.

The next two questions related to Sumdog use. When asked if they had enough time to use Sumdog at school, 31% of students selected very happy, 27% selected happy and 36% selected OK.

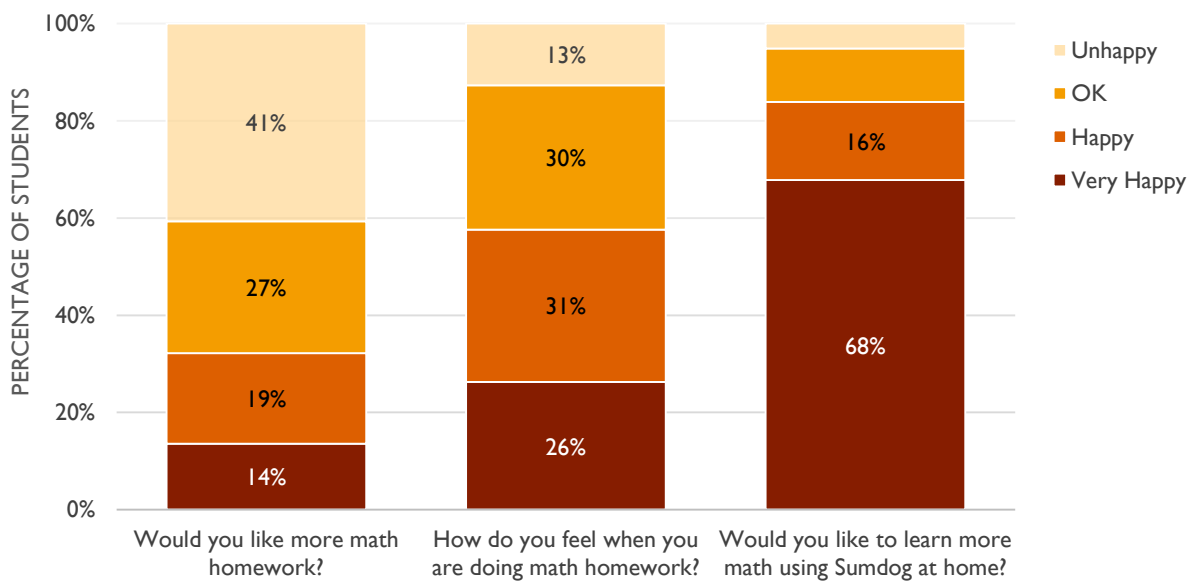
Students gave a very positive response when asked how much they liked learning math using Sumdog. 79% of students selected very happy and a further 14% selected happy.

Figure 2 shows the responses to questions regarding math homework. When asked if they would like more math homework, 41% of students selected unhappy. Only 14% of students selected very happy and 19% selected happy.

Students were then asked how they feel when doing math homework. 26% of the 118 students selected very happy and 31% selected happy.

The response was far more positive when students were asked about Sumdog use at home. When asked if they would like to learn more math using Sumdog at home, the majority of students (68%) selected very happy and a further 16% selected happy. Only 5% selected unhappy.

Figure 2: Student responses to questions regarding math homework



Teacher Attitudinal Survey

Of the 34 teachers participating in the study, 11 teachers (29%) completed the online attitudinal survey. The teacher survey consisted of 9 multiple choice questions followed by 6 longer questions.

Figures 3 and 4 show the responses to the multiple choice section of the survey. Responses to the longer questions are summarized in the next section. Many of the teachers attended a Sumdog training course at the start of the partnership and 61% of teachers who responded to the survey agreed or strongly agreed that this course prepared them for the program. No teachers disagreed with this statement.

Teachers were very positive about using Sumdog as homework. 91% of teachers agreed or strongly agreed that their students had become more positive about math homework through using Sumdog. No teachers disagreed with this statement.

81% of teachers agreed or strongly agreed that they were able to support students when they use Sumdog to complete math questions and 90% of teachers agreed or strongly agreed that their class had a positive attitude towards math.

Most teachers saw an increase in student engagement in math after starting to use Sumdog regularly with their class. 55% of teachers who responded to the survey strongly agreed that their student's engagement in math had increased and a further 27% selected agree.

Figure 4 shows responses to questions regarding computer usage. 82% of teachers disagreed or strongly disagreed that students have more difficulties in their learning of math when they are using computers. 54% of teachers disagreed or strongly disagreed that they had to reorganize their classroom to accommodate using computers.

Teachers were more positive about student IT access at school than at home with 63% of teachers agreeing or strongly agreeing that their students have access to IT in the classroom, but only 27% agreeing or strongly agreeing their students have access to IT at home.

Figure 3: Teacher responses to first 5 questions of the attitudinal survey

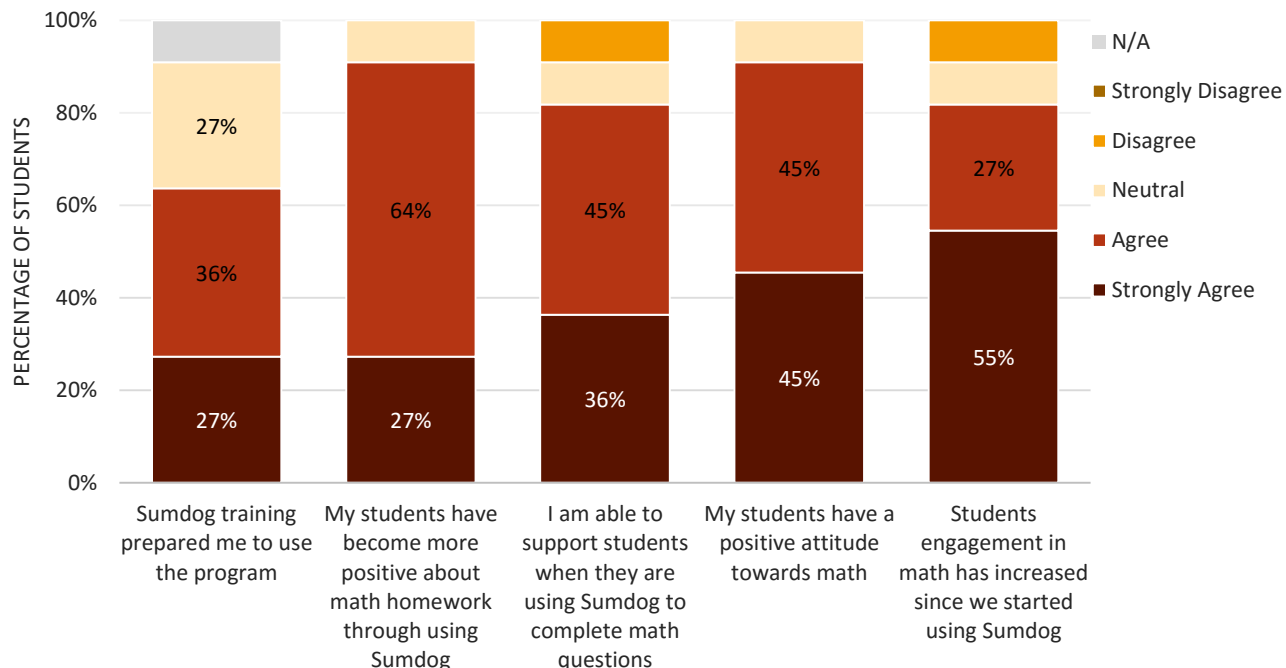
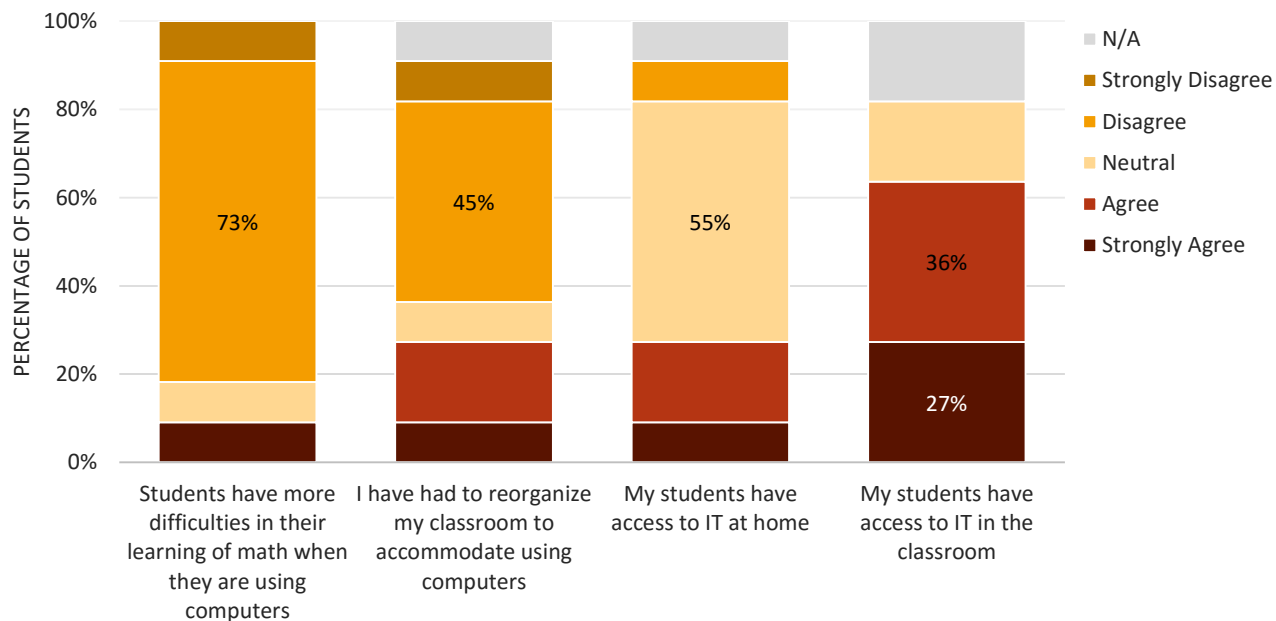


Figure 4: Teacher responses to questions regarding IT use



Overall, do your students enjoy learning with computers?

All 11 teachers agreed that students enjoy learning with computers;

"Yes, I run the computer lab and all students enjoy coming to the math computer lab."

- P. Nelson, White Bluff Elementary

"Usually, there is a 50/50 split in regards to learning with computers. With Sumdog, I have noticed that ALL of my students enjoy using this program. They get so excited!"

- Grade 4 teacher, Windsor Forest Elementary

"Yes, they want to use the computers for all their learning."

- Grade 4 teacher, Heard Elementary

How has your students' attitude towards math changed since they started using Sumdog?

10 of the 11 teachers stated they had seen a positive improvement in their student's attitude towards math since starting to use Sumdog;

"Sumdog has helped my students increase their fluency, which has made them more confident with math."

- Grade 4 teacher, Windsor Forest Elementary

"They are more eager to practice and do not complain about math when using Sumdog."

- L. Worthy, Shuman Elementary

"Their attitudes have improved. Most would at least try to complete problems."

- Grade 4 teacher, Butler Elementary

Only 1 teacher saw no change in student's attitude;

"I don't feel that their attitude towards math has changed, but they get excited when they can work on Sumdog."

- D. Viola, Blair Elementary

How has your enjoyment of or success in teaching math changed as a result of using Sumdog with your students?

10 out of the 11 teachers experienced a positive change in their enjoyment or success in teaching math;

"Sometimes when I am teaching a very difficult concept, it is hard to get the students motivated to learn because they are frustrated. Using Sumdog as a short break from the current concept or as a reward has changed their motivation drastically."

- Grade 4 teacher, Windsor Forest Elementary

"It has helped me teach them that math is not all that bad and that they can do it!"

- D. Fischer, Fresh Start Elementary

“My students’ attitudes towards math have certainly changed. Even my struggling students have discovered that math can be fun! They are more engaged and willing to accept challenges. I have thoroughly enjoyed using Sumdog in my classroom.”

- M. Baker, Marshpoint Elementary

“I’m happy to see my students excited about learning on Sumdog.”

- D. Viola, Blair Elementary

Only 1 teacher saw no change in her enjoyment of teaching math.

How easy is it for your students to access IT while at school? Are there any particular issues that may prevent you from making more use of computers?

6 teachers stated it was easy for their students to access IT at school and 5 teachers commented they were limited by the number of devices in the school;

“There are only enough computers for my class one day a week to access Sumdog.”

- D. Viola, Blair Elementary

“It is fairly easy. I would love to have more devices, but the Sumdog app on the iPads has made the program more accessible.”

- Grade 4 teacher, Windsor Forest Elementary

Compare the type of homework you assigned before using Sumdog to the type of homework you assign now. How have your math homework assignments changed as a result of using Sumdog?

4 teachers stated they now include Sumdog when setting math homework for their class;

“Students used Sumdog as one of their math choices.”

- M. Baker, Marshpoint Elementary

“I saved a lot of paper!”

- Grade 4 teacher, Windsor Forest Elementary

2 teachers stated they were unable to set Sumdog as math homework due to students’ lack of internet access at home;

“I have not been able to assign Sumdog for homework, as all students do not have access to the program at home.”

- L. Worthy, Shuman Elementary

2 teachers have made no change to homework assignments, and 2 teachers did not give homework in their position.

Have you had to undertake changes to classroom organization and management as a result of using Sumdog?

No teachers had to make significant changes to their classroom organization and management as a result of using Sumdog.

“Kids love Sumdog so much more than they like the other programs they have tried - find them boring, but they love the games on Sumdog.”

“My students look at math in a more positive light now. I think they all really benefit from Sumdog - lower ability students are able to practice math facts which they wouldn't be motivated to practice normally.”

- T. Wheeler, May Howard Elementary

“Management didn't change too much. Sumdog was implemented into the group rotation.”

- Grade 4 teacher, Butler Elementary

“I have also used Reflex math which also uses games, but Sumdog goes beyond just basic math facts which is why I prefer it.”

Sumdog is really good at tracking students level so I have been able to just let them play without having to use set skills. I like to see how the kids progress by using reports, they are also really helpful for when I am planning a lesson so I know what skills we need to focus on.

“I can rotate students on the four computers I have in my classroom.”

- D. Viola, Blair Elementary

For lower ability students I have seen a significant improvement in their math facts ability and for high level students who may not be challenged during normal math lessons it provides them with more challenging work while I work with the rest of the class”

Other Comments

“I have also used Front row and Compass math, but they don't have as many games and kids prefer Sumdog.”

- P. Nelson, White Bluff Elementary

- A. Mahany, Marshpoint Elementary