

Research Brief

Boys & Girls Clubs of Greater Milwaukee
MarVan Scholars After-School Program
WISCONSIN



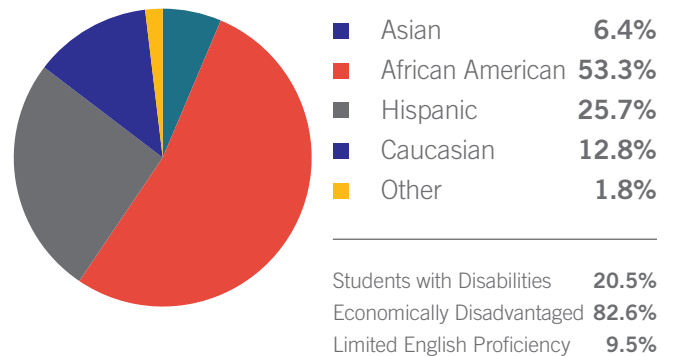
Edgenuity Odyssey Students Exceed Growth Expectations on the Star 360® Reading and Math Assessments

EVALUATION OVERVIEW

GRADES: 1–8

MEASURE: Renaissance Star 360 Reading and
Star 360 Math assessments

DISTRICT DEMOGRAPHICS



PROGRAM OVERVIEW

Boys & Girls Clubs of Greater Milwaukee (BGCGM), one of the largest and oldest youth service agencies in Wisconsin, offers structured after-school and summer programs to more than 43,000 children and teens each year. In 2015, the organization received a \$5 million grant to establish the MarVan Scholars After-School Program, an extended learning day program, in partnership with Milwaukee Public Schools (MPS).

The MarVan Scholars Program was motivated by the desire to improve stagnant student test scores in the district. Since 2010, only 14 percent of MPS students achieved proficiency on the Wisconsin Student Assessment System (WSAS) reading test and 20 percent achieved proficiency on the WSAS math test. While after-school programs were providing tutors and homework help for struggling students, no formal program was in place to connect the teaching and learning that was taking place during and after school. In addition, few after-school programs were designed to boost students' school attendance and academic performance.

To reverse this trend, BGCGM decided to utilize online learning to better differentiate instruction, engage students, strengthen relationships between students and teachers, and allow students to have more time to apply what they were learning during the school day to new settings. BGCGM selected Edgenuity Odyssey based on its research base, its actionable data, and its track record of success in MPS.

IMPLEMENTATION

During the 2015–2016 school year, MarVan Scholars piloted Edgenuity Odyssey in eight after-school programs at Allen-Field Elementary School, Brown Street Elementary School, George Washington Carver Academy, Cass Street School, Clarke Street School, Engleburg School, Hayes Bilingual, and Dr. Martin Luther King Jr. Elementary School.

Students participate in Boys & Girls Clubs Academic Intervention and Enrichment Programming two to three hours a day, up to five days a week. The MarVan Scholars Program focuses on the academic performance of the students. During the afterschool programming, students rotate through three programming areas, spending 60 minutes at each. The three stations are: 30 minutes of instructional software and 30 minutes of homework help; 60 minutes of hands-on academic enrichment activities; and 60 minutes of arts, character and leadership, and recreational wellness programming. On Fridays, students receive specialized lessons and go on field trips.

Every day, students are expected to spend 10 to 15 minutes completing Edgenuity Odyssey reading and math activities that are customized based on their performance on the Renaissance Star 360 Reading and Math assessments. Students are assessed throughout the program and must demonstrate content mastery before they can move on.

A cornerstone of the MarVan Scholars Program is its focus on data-driven instruction to promote student learning. Students are supported by a collaborative leadership team of academic coaches, counselors, computer lab staff, Club managers, and content teachers who meet regularly to set data goals for the program, track whether students are logging on to Odyssey and mastering content material, and determine who needs additional support. In addition, academic coaches and counselors regularly share reports with students to encourage and monitor student progress. Students are rewarded for their effort and commitment to learning with incentives such as Chromebooks, LeapReaders, and trophies.

STUDY SAMPLE

This report tracks the performance of BGCGM students who participated in the MarVan Scholars Program during the 2015–2016 school year.

MEASURES

Odyssey Program Data

Odyssey tracks a wide array of student progress, engagement, and achievement data. This study collected data on the total number of after-school students, the total number of activities completed in each learning path, and the average time spent per student.

Renaissance Star 360 Reading and Math Assessments

The Renaissance Star 360 Reading and Star 360 Math tests are computer-adaptive assessments administered to students in grades 1 through 12. The Star 360 Reading test focuses on measuring students' word knowledge and skills, as well as their ability to construct meaning from text, understand the author's craft, analyze literary texts, dissect arguments, and evaluate texts. The Star 360 Math test assesses eight topics in mathematics: numeration concepts, computation processes, word problems, estimation, data analysis and statistics, geometry, measurement, and algebra skills. The Star 360 Reading and Star 360 Math scale score data were collected and analyzed for K-8 students who were assigned Odyssey activities during the 2015–2016 school year.

Renaissance conducted two studies describing how more than 3 million students in grades K–12 performed on the Star 360 Reading and Math assessments at three time points during the year. By testing students who had the same characteristics as the overall U.S. school population, the study provided grade-specific, rank-ordered distributions of performance. This information can be used to determine how a single student, a school, or an entire district's performance or growth compares to a much larger group—a norm sample.

RESULTS

Participation Level

Odyssey usage data were collected for 849 BGCGM after-school students who were assigned online reading activities and 760 students who were assigned online math activities. The time spent and number of activities completed varied by grade and subject. Overall, students assigned reading learning paths spent an average of 658 minutes (11 hours) online and completed 72 activities (Figure 1). Students assigned math learning paths spent 470 minutes (8 hours) online and completed 37 activities (Figure 2).

Figure 1. Boys & Girls Clubs of Greater Milwaukee Odyssey Students, Grades 1–8 (N = 849)

Odyssey Online Reading Activity Data, 2015–2016

Grade Level	Number of Unique After-School Students	Average Time Spent per Student (minutes)	Average Number of Activities Completed
1	53	370	30
2	121	433	53
3	162	499	63
4	139	732	88
5	166	762	89
6	66	641	74
7	74	1,001	79
8	68	900	80
ALL GRADES	849	658	72

Figure 2. Boys & Girls Clubs of Greater Milwaukee Odyssey Students, Grades 1–8 (N = 760)

Odyssey Online Math Activity Data, 2015–2016

Grade Level	Number of Unique After-School Students	Average Time Spent per Student (minutes)	Average Number of Activities Completed
1	4	223	15
2	125	435	32
3	152	400	32
4	137	485	41
5	164	554	47
6	58	369	31
7	61	411	28
8	59	631	39
ALL GRADES	760	470	37

To measure changes in student comprehension, Star 360 Reading data were obtained for 577 BGCGM after-school students who were assigned online reading activities during the 2015–2016 school year. Findings show that after one year of Odyssey, students demonstrated significant gains on the Star 360 Reading test (Figure 3). Overall, students improved from a fall 2015 scale score of 299 to a spring 2016 scale score of 398, resulting in a significant gain of 99 points. Students in the second and third grades made the largest improvements, gaining 504 and 131 points, respectively.

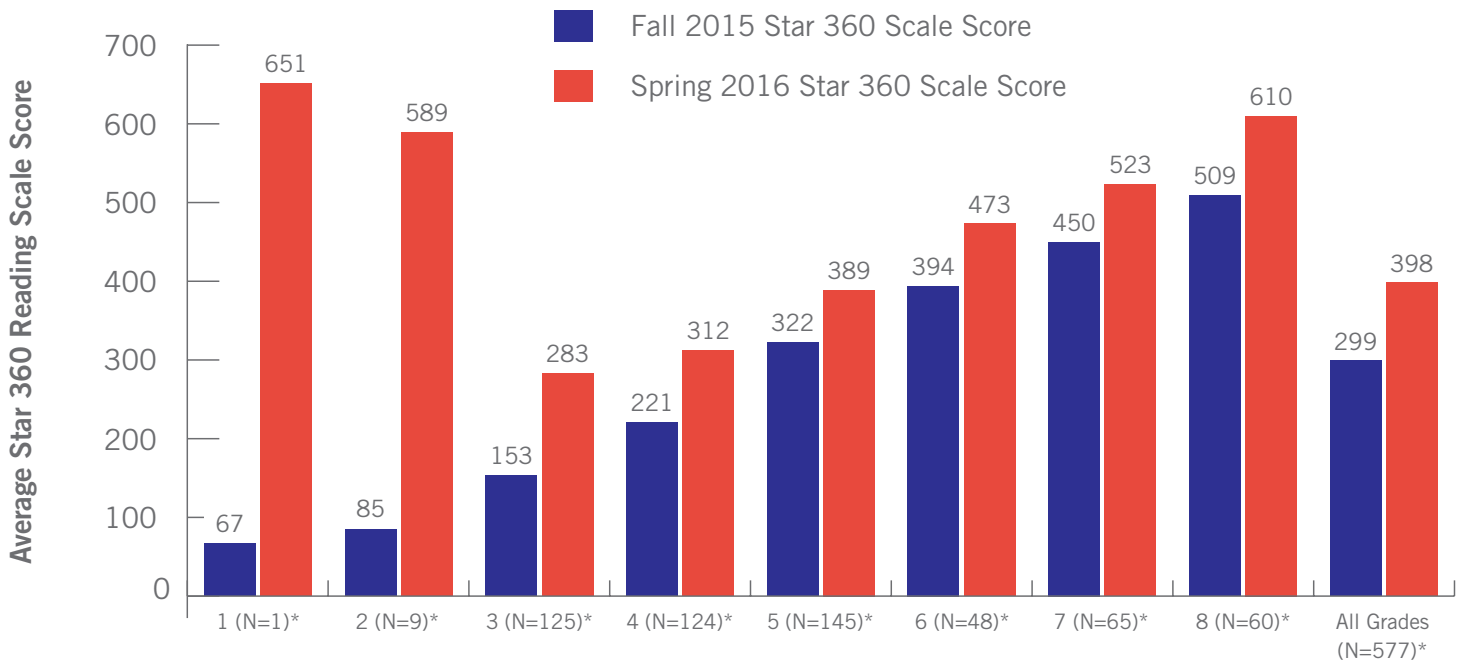
BGCGM after-school students also demonstrated significant gains on the Star 360 Math test (Figure 4). The 624 students who had valid pre- and post-test data improved from a fall 2015 scale score of 458 to a spring 2016 scale score of 543. Dependent t-tests revealed that students demonstrated significant gains across all grade levels.

Results also showed that Odyssey students had higher average growth than what would typically be expected on the Star 360 Reading and Math assessments. On the Star 360 Reading assessment, expected growth will typically range from 33 to 104 points. Students who utilized Odyssey showed growth ranging from 67 to 584 points (Figure 5). On the Star 360 Math assessment, expected growth will typically range from 36 to 131 points. Students who utilized Odyssey showed growth ranging from 52 to 114 points (Figure 6).

Data also showed that there was a relationship between the number of activities completed and growth on the Star 360 Reading and Math assessments. For example, students who completed 19 to 44 activities demonstrated greater growth on the Star 360 Reading and Math assessments than those who completed 0 to 5 activities (Figures 7 and 8).

Figure 3. Boys & Girls Clubs of Greater Milwaukee Odyssey Students, Grades 1–8 (N = 577)

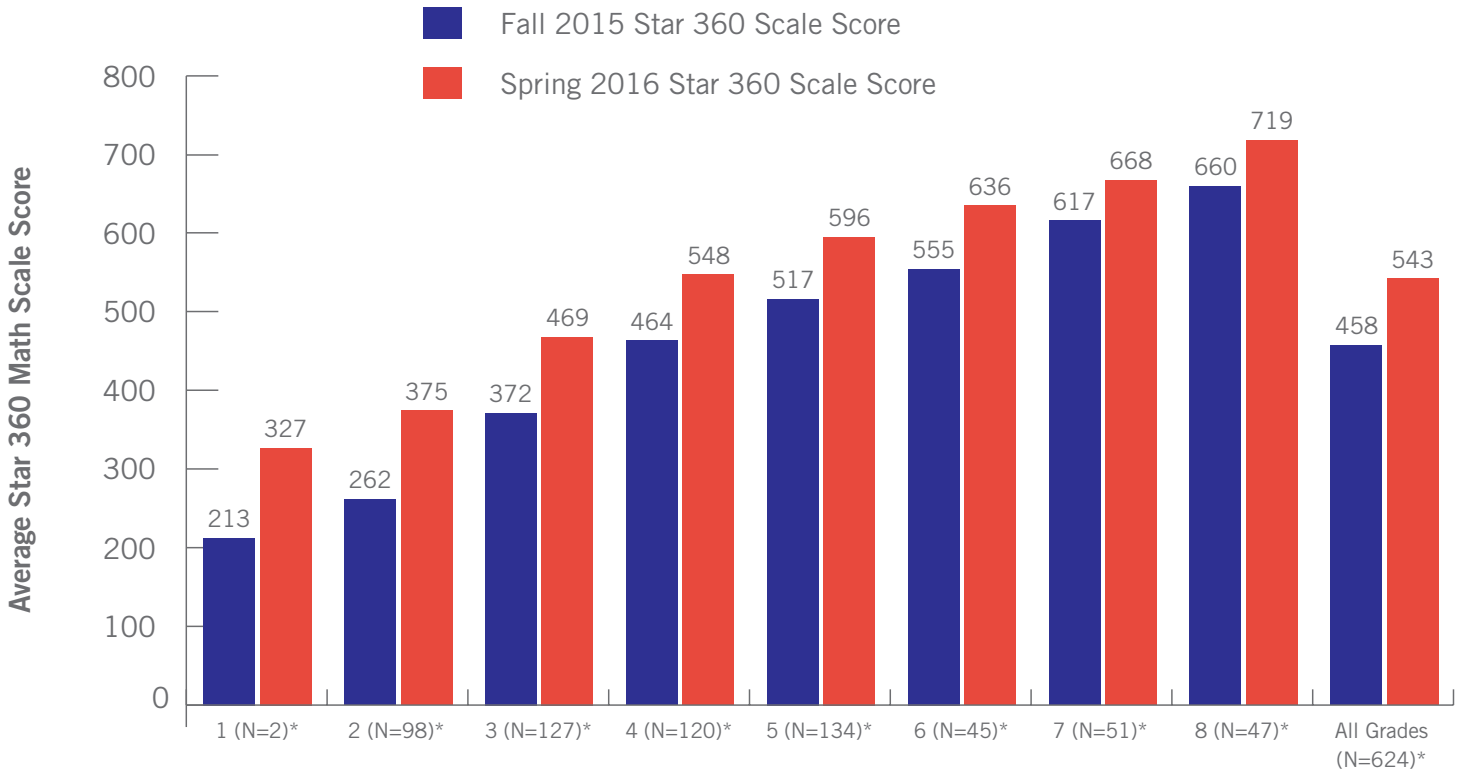
Performance on the Star 360 Reading Assessment, Fall 2015 to Spring 2016



Note: Paired t-tests revealed gains were statistically significant at ($p \leq 0.05$).

Figure 4. Boys & Girls Clubs of Greater Milwaukee Odyssey Students, Grades 1–8 (N = 624)

Performance on the Star 360 Math Assessment, Fall 2015 to Spring 2016



Note: Paired t-tests revealed gains were statistically significant at ($p \leq 0.05$).

Figure 5. Boys & Girls Clubs of Greater Milwaukee Odyssey Students, Grades 1–8 (N = 577)

Actual Growth vs. Expected Growth on the Star 360 Reading Assessment, Fall 2015 to Spring 2016

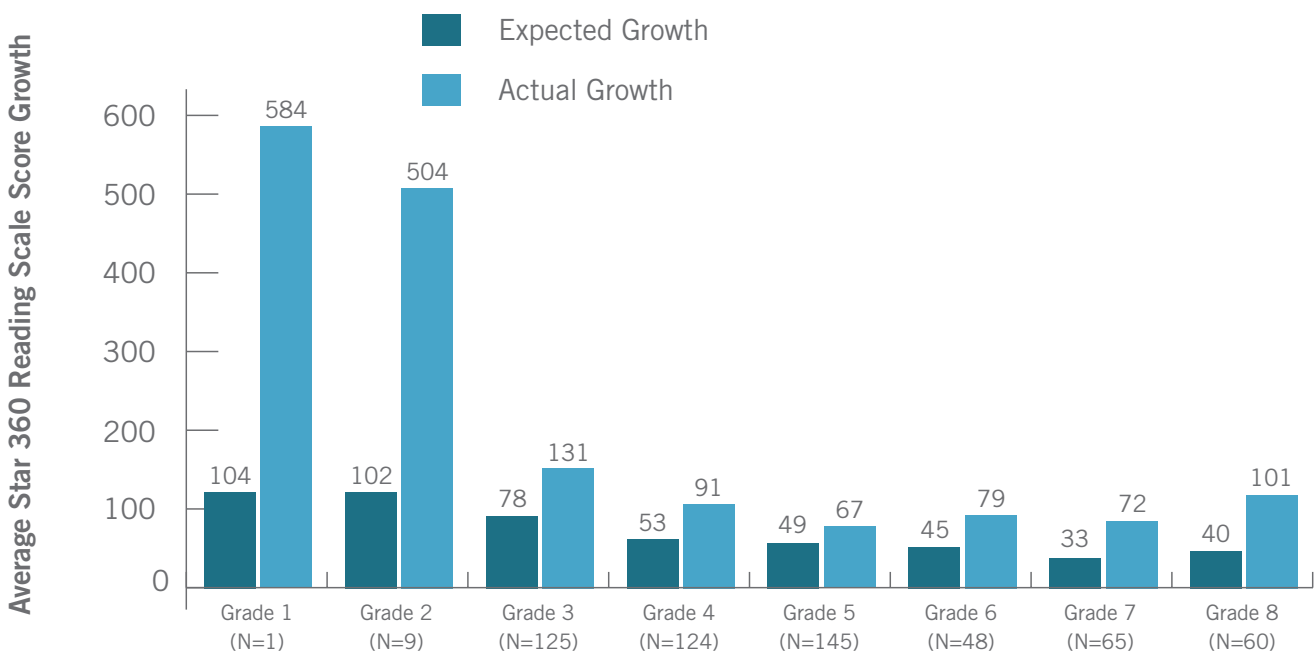


Figure 6. Boys & Girls Clubs of Greater Milwaukee Odyssey Students, Grades 1–8 (N = 624)

Actual Growth vs. Expected Growth on the Star 360 Math Assessment, Fall 2015 to Spring 2016

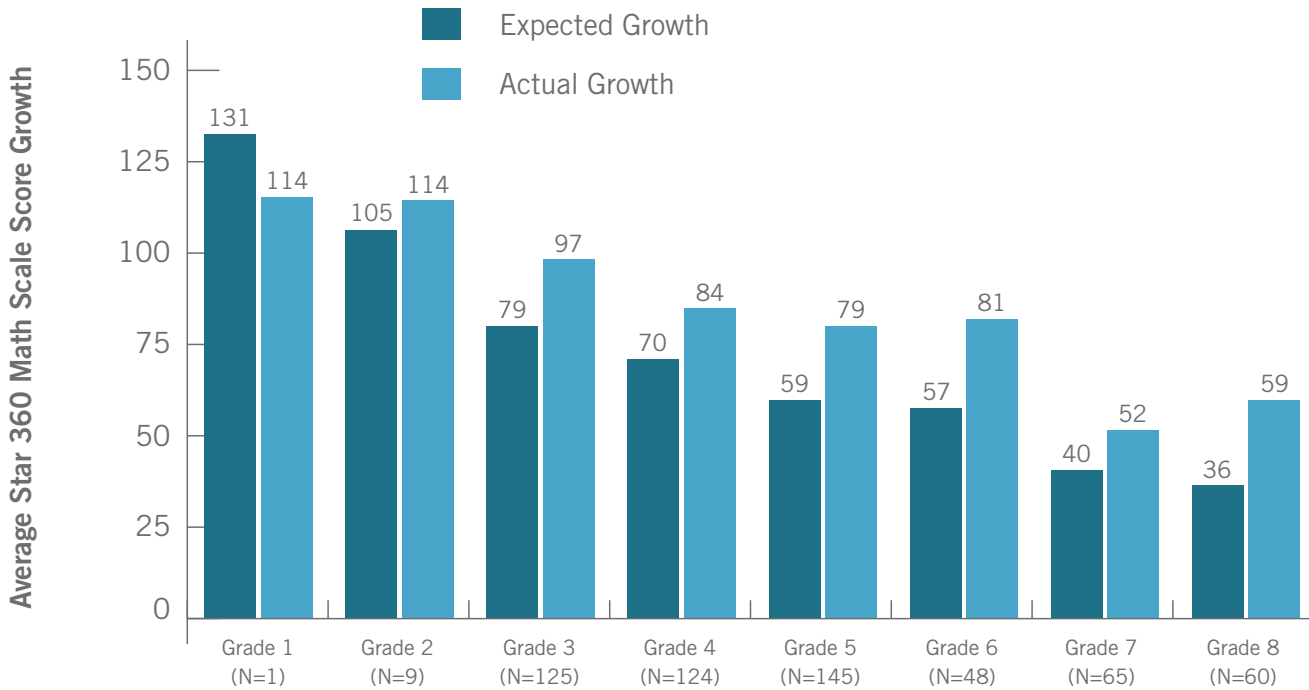


Figure 7. Boys & Girls Clubs of Greater Milwaukee Odyssey Students, Grades 1–8 (N = 577)

Average Growth on the Star 360 Reading Assessment, by Number of Activities Completed, Fall 2015 to Spring 2016

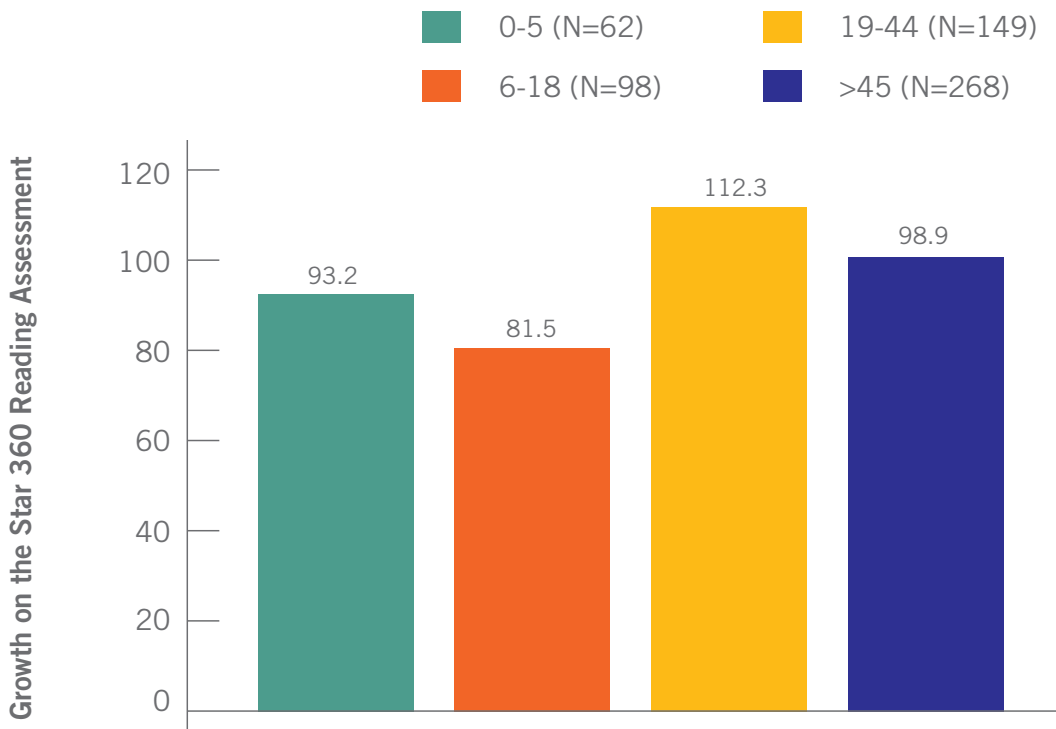
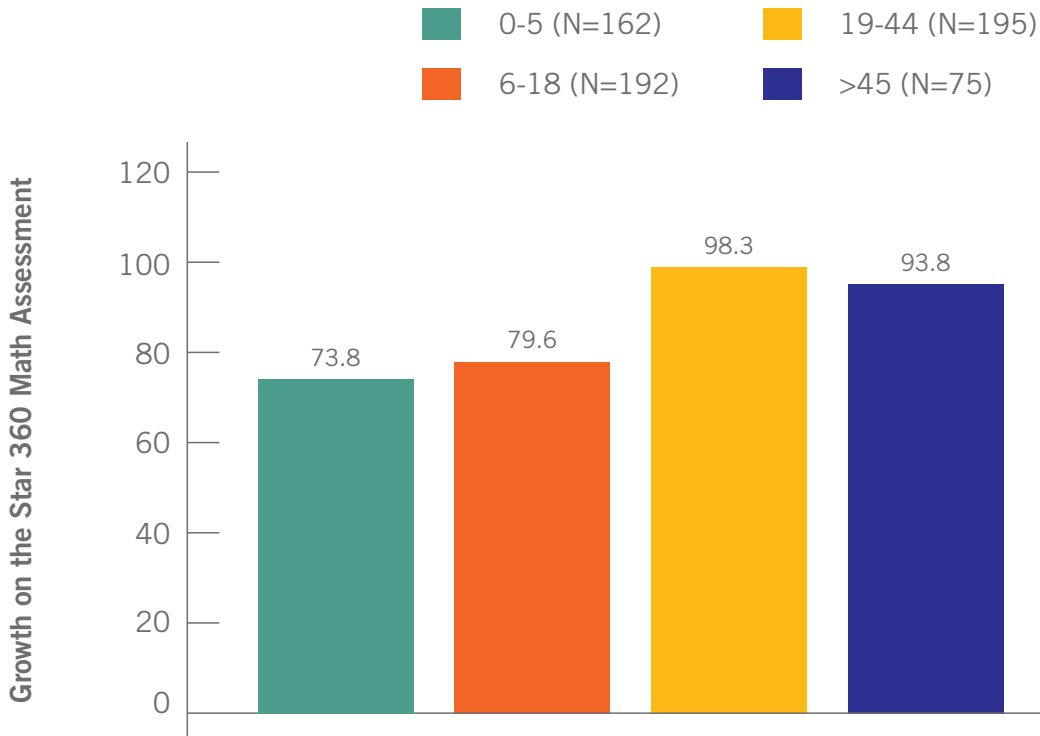


Figure 8. Boys & Girls Clubs of Greater Milwaukee Odyssey Students, Grades 1–8 (N = 624)

Average Growth on the Star 360 Math Assessment, by Number of Activities Completed, Fall 2015 to Spring 2016



CONCLUSION

In conclusion, results from this study provide evidence that BGCGM after-school students benefited from participation in Odyssey reading and math activities. From fall 2015 to spring 2016, BGCGM students enrolled in Odyssey courses made significant improvements in their reading and mathematics skills, and exceeded growth expectations on the Renaissance Star 360 Reading and Math assessments. Moreover, data showed that students who completed 19 to 44 activities demonstrated greater growth on the Star 360 Reading and Math assessments. As a result of these successful findings, MarVan Scholars/Edgenuity Odyssey was expanded into 18 Milwaukee Public Schools that are in partnership with Boys & Girls Clubs of Greater Milwaukee for after-school programming.