

SCHOOL OF ONE 2010

Results from Afterschool and In School Program

September 2010

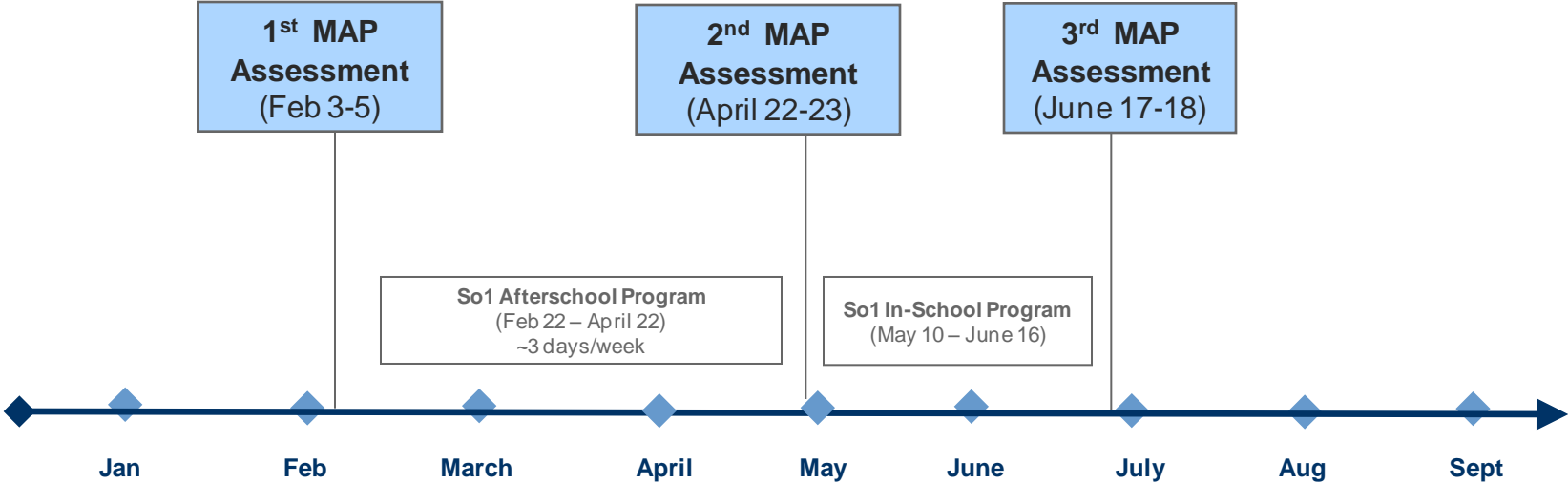
Executive Summary

- In the after-school implementation of School of One, participating students gained significantly more than did non-School of One students.
- During the in-school implementation of School of One, participating students showed positive gains while those who did not continue to participate in School of One saw their scores decline.
- Students who participated only in the School of One in-school program showed gains that, when annualized, would equate to one half to two-thirds of an additional year of gain in relation to their predicted academic trajectory without School of One.
- Surveys of both teachers and students showed highly favorable attitudes toward School of One.

Agenda

1. Evaluation Design
2. After-School Results
3. In-School Results
4. Internal Data
5. Survey Data

Students from three participating schools took the MAP Assessment at three points during the year.



Agenda

1. Evaluation Design
2. After-School Results
3. In-School Results
4. Internal Data
5. Survey Data

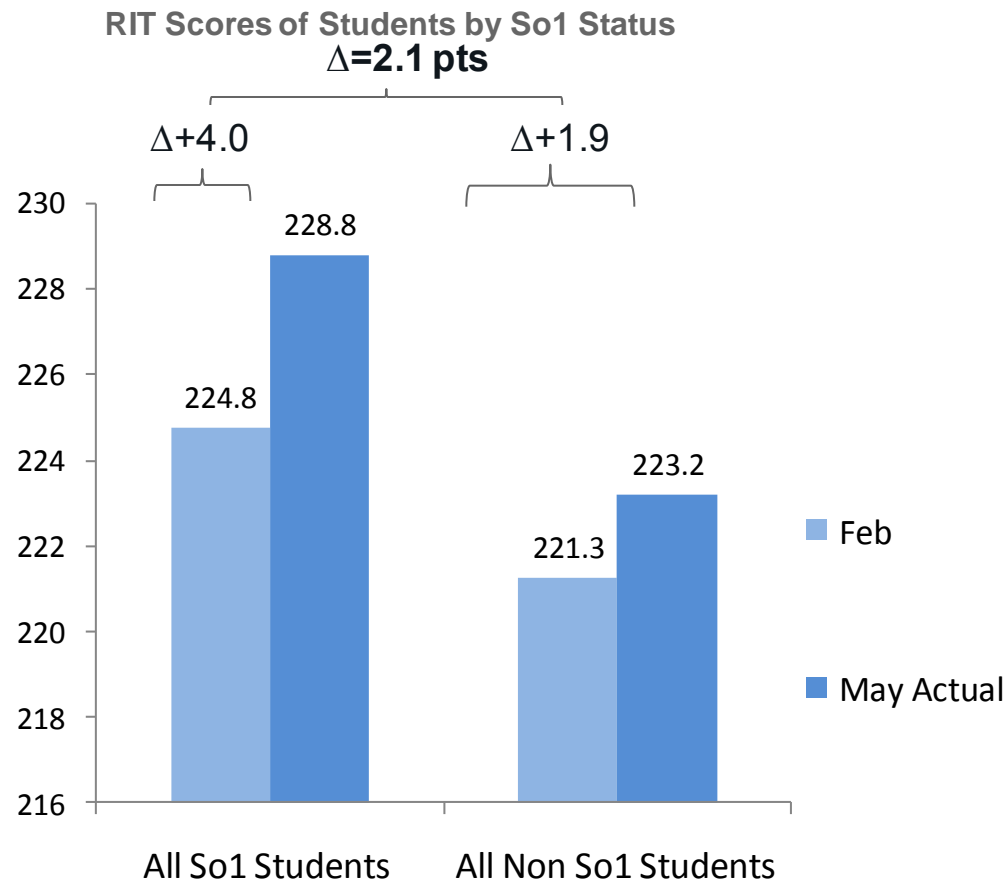
Quasi-Experimental Research Question #1

- Do students who participated in the School of One (So1) afterschool program (in addition to their regular in-school math instruction) show changes in math achievement that differ from their peers who only received their regular in-school math instruction?

In the after-school program, School of One students more than doubled the gains of non-School of One students.

Feb - May Gains

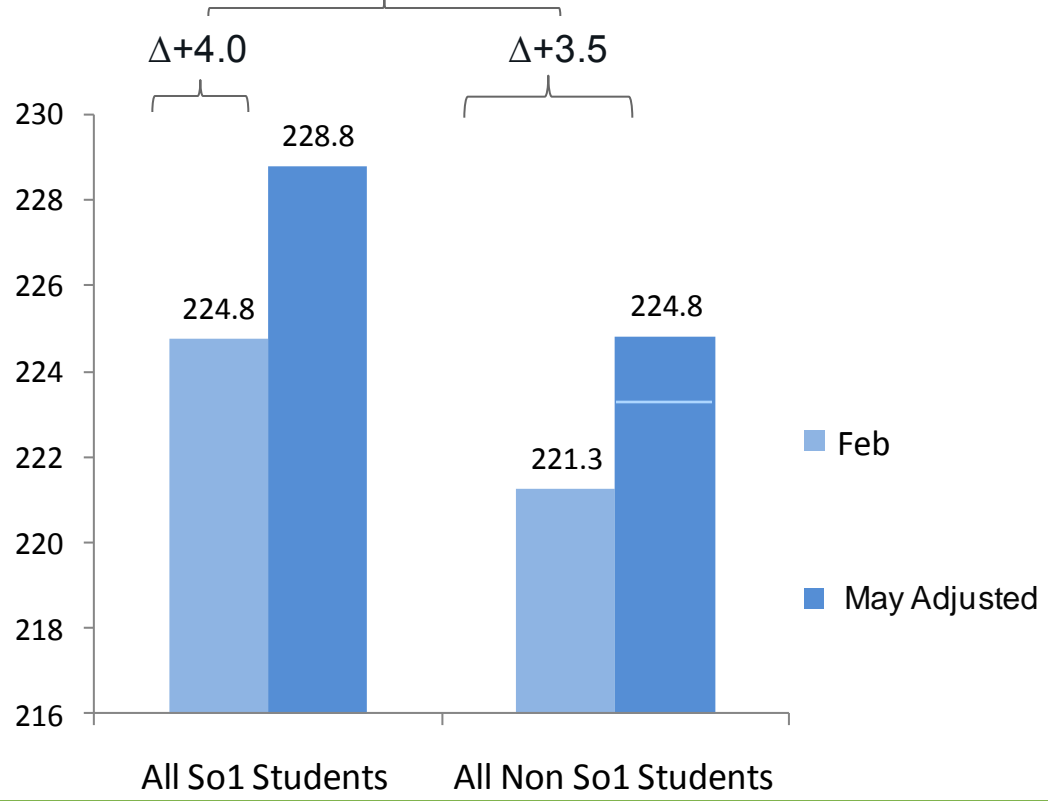
All So1 Students (n=118): +4.0 pts.
All Non So1 Students (n=202): +1.9 pts.



When adjusting non-School of One scores to account for the difference in instructional time, School of One continued to outperform non-School of One students.

Feb - May Gains
All So1 Students (n=118): +4.0 pts.
All Non So1 Students (n=202): +1.9 pts.
All Non So1 Students *Adjusted* (n=202): +3.5 pts.

RIT Scores of Students by So1 Status
 $\Delta=0.5$ pts



To estimate the magnitude of the impact, we annualized the gains over a full school year.

	M131	X339	K228
available program mins	1,800	1,890	1,995
Instructional days in regular school year	180	180	180
minutes per day (math)	61.6	72	76.8
minutes per year (math)	11,088	12,960	13,824
annualization factor	6.16	7.31	6.50

Weighted Avg: 6.743

An increase of .5 points over ~1,900 minutes would annualize to an additional one half to two thirds of an academic year.

Increase in MAP Scores From Time 1 to Time 2	
<i>Non School of One Students (Adjusted)</i>	<i>School of One Students</i>
3.5 pts.	4.0 pts.

vs.

Magnitude of Difference in MAP increase be/w So1 Students and Non So1 Students From Time 1 to Time 2

0.5 pts.

Average Annualization Factor

6.743

X

Projected Difference in MAP Scores b/w So1 Students and Non So1 after 1 Year

3.37 pts.

Standard One Year Gain
Mean = 5.5 pts.
Median = 6.0 pts

Additional Years Worth of Growth Gained by So1 Students

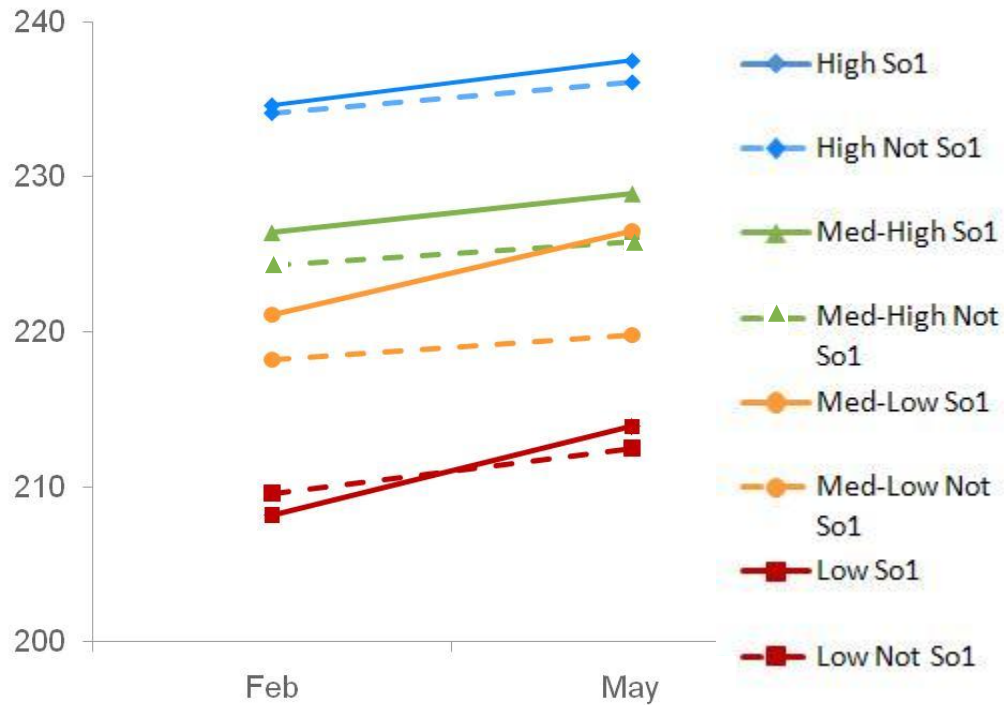
.562-.613

No significant associations were found between School of One participation and changes in NY State Math test results from 2009-2010

- However, state test results are collected over the course of a full year, and are therefore not the best means of assessment of academic gains in response to an 8-week program
 - Many other factors can come into play in the intervening additional 9-10 months

The School of One model appears to be especially effective at improving the performance of lower performing students

Increases in MAP RIT Score From Feb to May by 2009 NY State Test Score Quartile



Performance	So1	Non So1 (actual)	Δ
High	2.9	2.0	0.9
Mid-High	2.5	1.5	1.0
Mid-Low	5.4	1.6	3.8
Low	5.7	2.9	2.8

Agenda

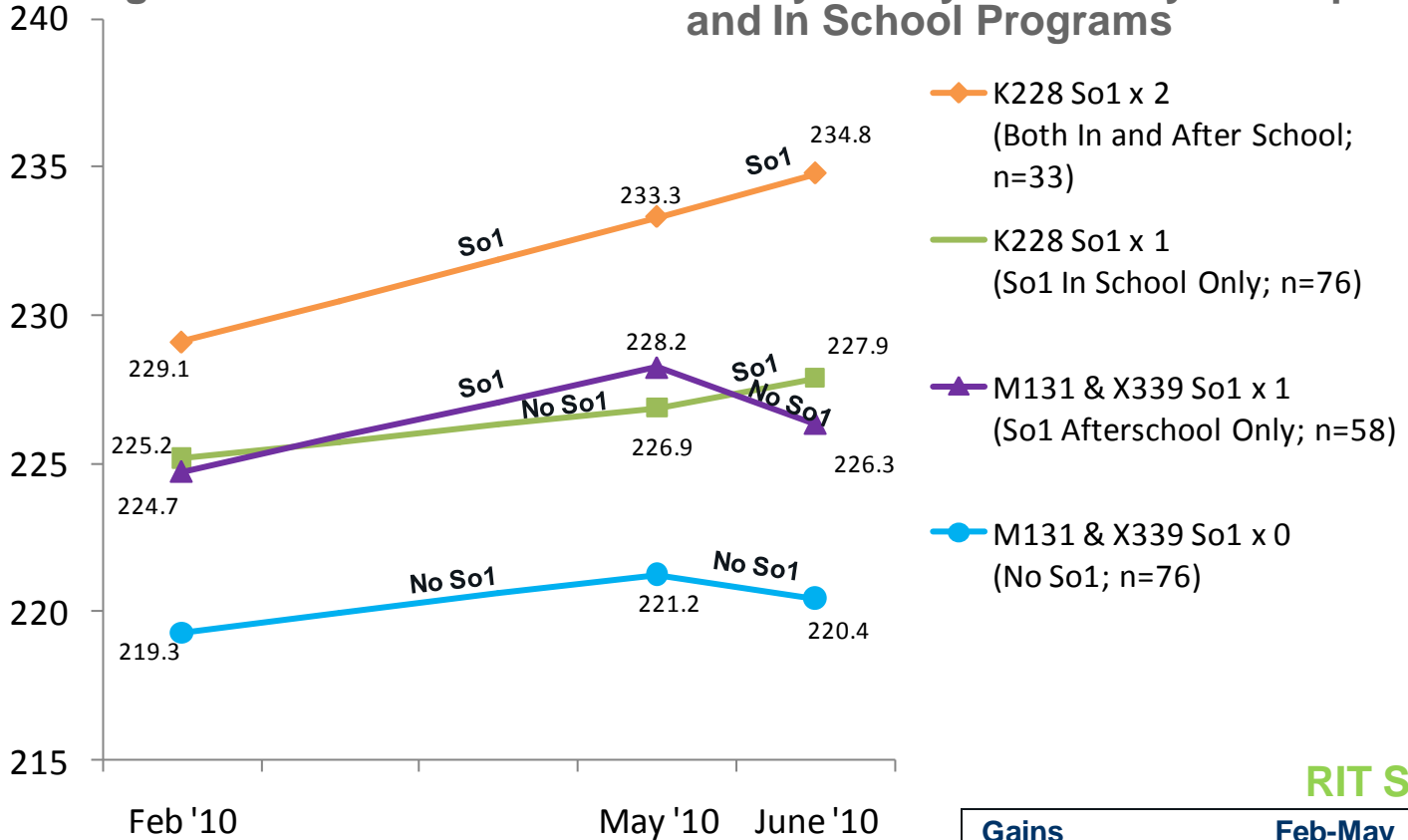
1. Evaluation Design
2. After-School Results
3. In-School Results
4. Internal Data
5. Survey Data

Quasi-Experimental Research Question #2

- Do the trend lines across all three schools suggest that School of One's impact on academic performance is meaningful?

Students who participated in the In School program showed positive gains while those who did not showed declines

Changes in MAP Scores From February to May to June by Participation in So1 Afterschool and In School Programs



RIT SCORES

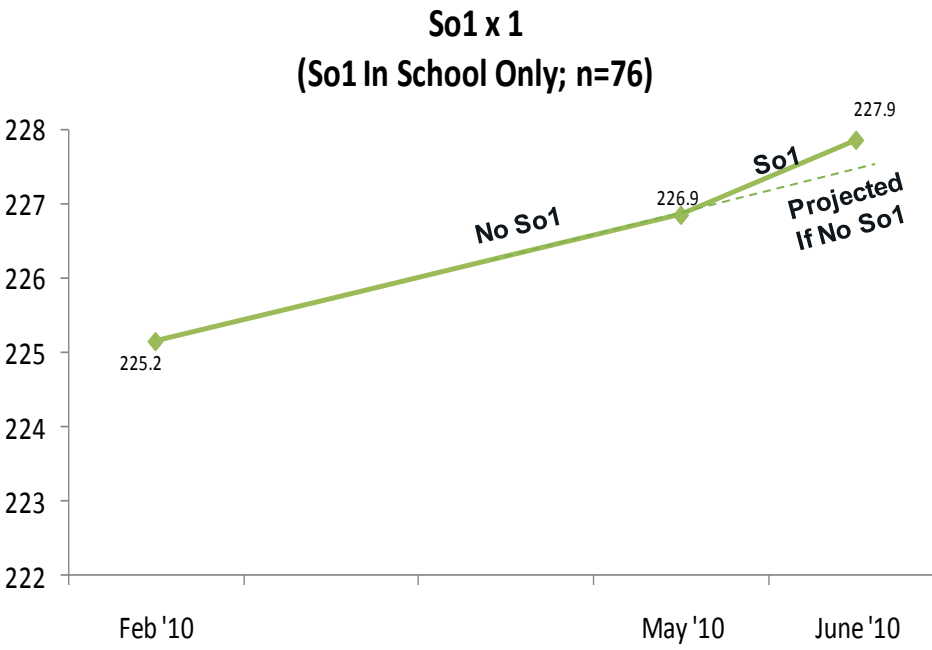
Gains	Feb-May (Afterschool)	May-June (In School)	Feb-June
So1x2:	+ 4.2 pts.	+ 1.5 pts.	+5.7 pts.
So1x1 (In School):	+ 1.8 pts.	+1.3 pts.	+3.1 pts.
So1x1 (Afterschool)	+ 3.4 pts.	- 1.8 pts.	+1.6 pts.
So1x0	+ 1.9 pts.	- 0.8 pts.	+0.8 pts
Average Student	+ 1.5 pts.	+0.5 pts	+ 2.0 pts.



*Data included for: Afterschool So1 Students with 70% or higher attendance, Students without Negative Growth between Feb and May or May and June, Students not in the bottom 5% at any time point

Students who participated *only* in the In School model showed gain rates that would annualize to an additional one half to two thirds of an academic year.

Comparison of Actual vs. Expected Gains for So1 In School Participants Who Had Not Previously Participated in So1 After School



	K228
(A) Increase in MAP Following School of One In School	1.00 pts.
(B) Projected Increase in MAP w/o School of One	.567 pts.
(C) Difference in Change Over Time b/w So1 and Non So1 Students (B-A)	.433 pts.
(D) In-School Annualization Factor	8.03
(E) Projected Difference in MAP Scores b/w So1 Students and Non So1 after 1 Year (C x D)	3.5 pts
(F) Average One Year Worth of Gain	5.5-6.0
(G) Additional Years Worth of Growth Gained by So1 Students (E/F)	.583 -.636

*Data included for: Afterschool So1 Students with 70% or higher attendance, Students without Negative Growth between Feb and May or May and June, Students not in the bottom 5% at any time point

Agenda

1. Evaluation Design
2. After-School Results
3. In-School Results
4. Internal Data
5. Survey Results

Annualized Pace of Learning

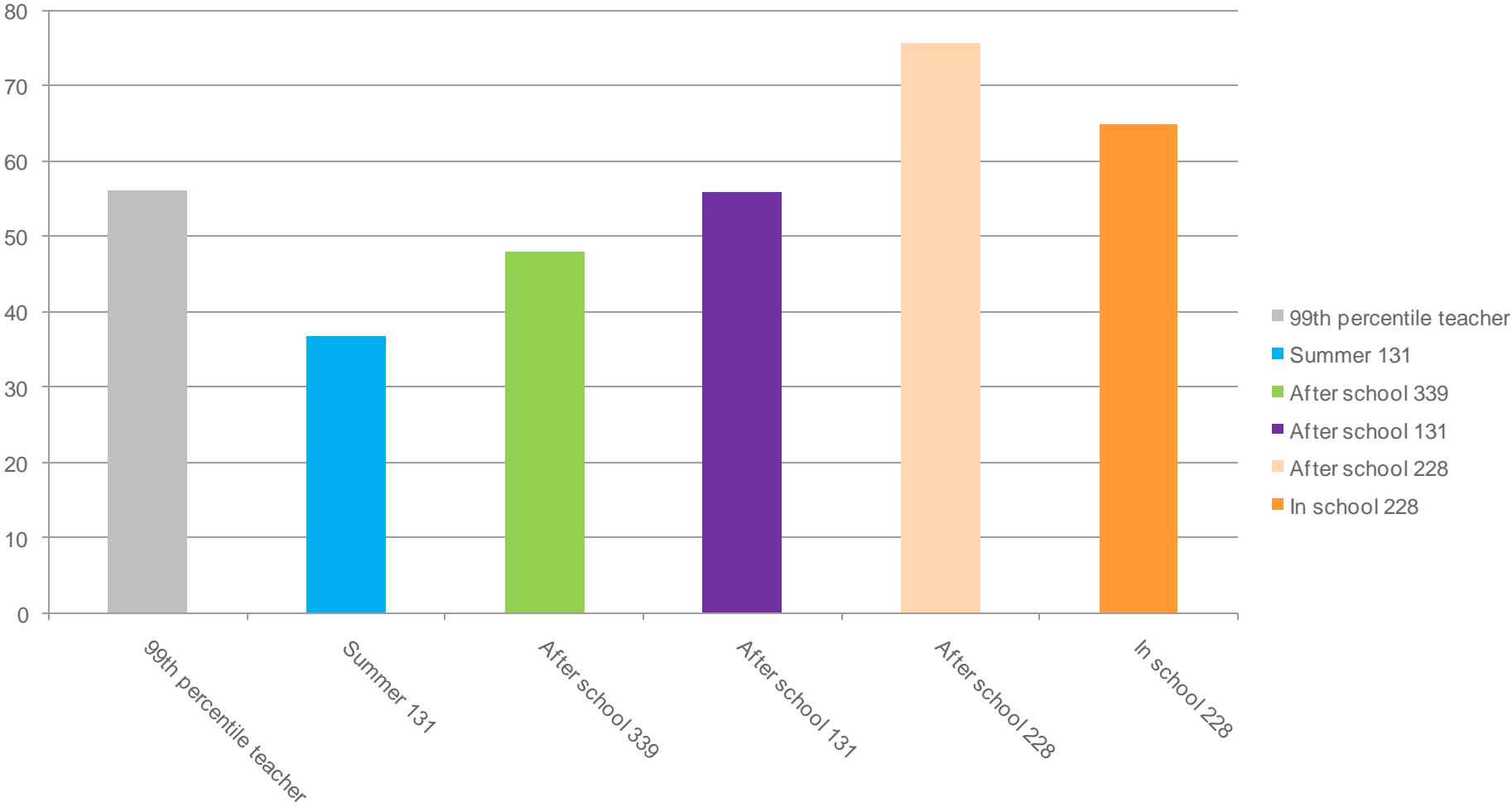
- Defined: The total number of skills student learn within a given period of time, annualized to the same number of instructional minutes as the school spends on math instruction.

$$\# \text{ skills mastered in program} * \frac{\text{instructional time / year}}{\text{instructional time / program}} = \text{APL}$$

Partial Data Snapshot of Students in Teacher's Class

	7.A.2	7.A.3	8.N.1	8.N.2	8.A.6	8.A.7	8.A.8	8.A.9
<i>Students:</i>								
Average by Skill	85.0%	91.7%	87.5%	100.0%	82.1%	82.3%	95.8%	83.3%
Katrina	0.80	1.00	0.75	1.00	0.86	0.75	1.00	1.00
Billy	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.83
Deserie	1.00	1.00	0.75	1.00	0.86	1.00	1.00	0.83
Julia	0.60	0.67	0.75	1.00	0.71	0.50	0.67	0.83
Adam	0.80	1.00	0.75	1.00	0.71	0.50	1.00	0.83
William	1.00	1.00	1.00	1.00	0.86	1.00	1.00	0.83
Darvon	0.60	1.00	0.75	1.00	0.57	0.50	0.67	0.67
Antonio	0.60	0.67	0.75	1.00	0.57	0.50	1.00	0.83
Nellie	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.83
Cindy	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.83
Horace	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.83
Paolo	1.00	1.00	1.00	1.00	0.86	0.75	1.00	0.83
Corey	1.00	1.00	1.00	1.00	0.86	0.75	1.00	1.00
Emily	0.40	0.67	0.75	1.00	0.71	0.75	1.00	1.00
Esteban	1.00	1.00	0.75	1.00	0.86	1.00	1.00	0.83
Allison	0.80	1.00	0.75	1.00	0.71	0.75	1.00	0.83

Program APLs compared favorably to those of a high performing NYC teacher.



Research Questions

- What do *teachers* think of School of One?
 - Overall, teachers had favorable attitudes towards the program
 - School of One has the potential to be an effective instructional model for teaching math during the regular school days
 - School of One did not negatively impact students' social skills
- *What do students think of School of One?*
 - Students enjoyed School of One and would like to have it as their regular math classroom
 - Students most liked working with other students, learning from an online teacher, and working by themselves on a computer.
 - Students least liked working by themselves on worksheets and taking daily assessments*

*A number of students noted in the open ends that they wished the assessments included more questions as they felt they were too short to gauge what they knew

FOR MORE INFORMATION

Kathryn (Handwerger) Brohawn, Ph.D.

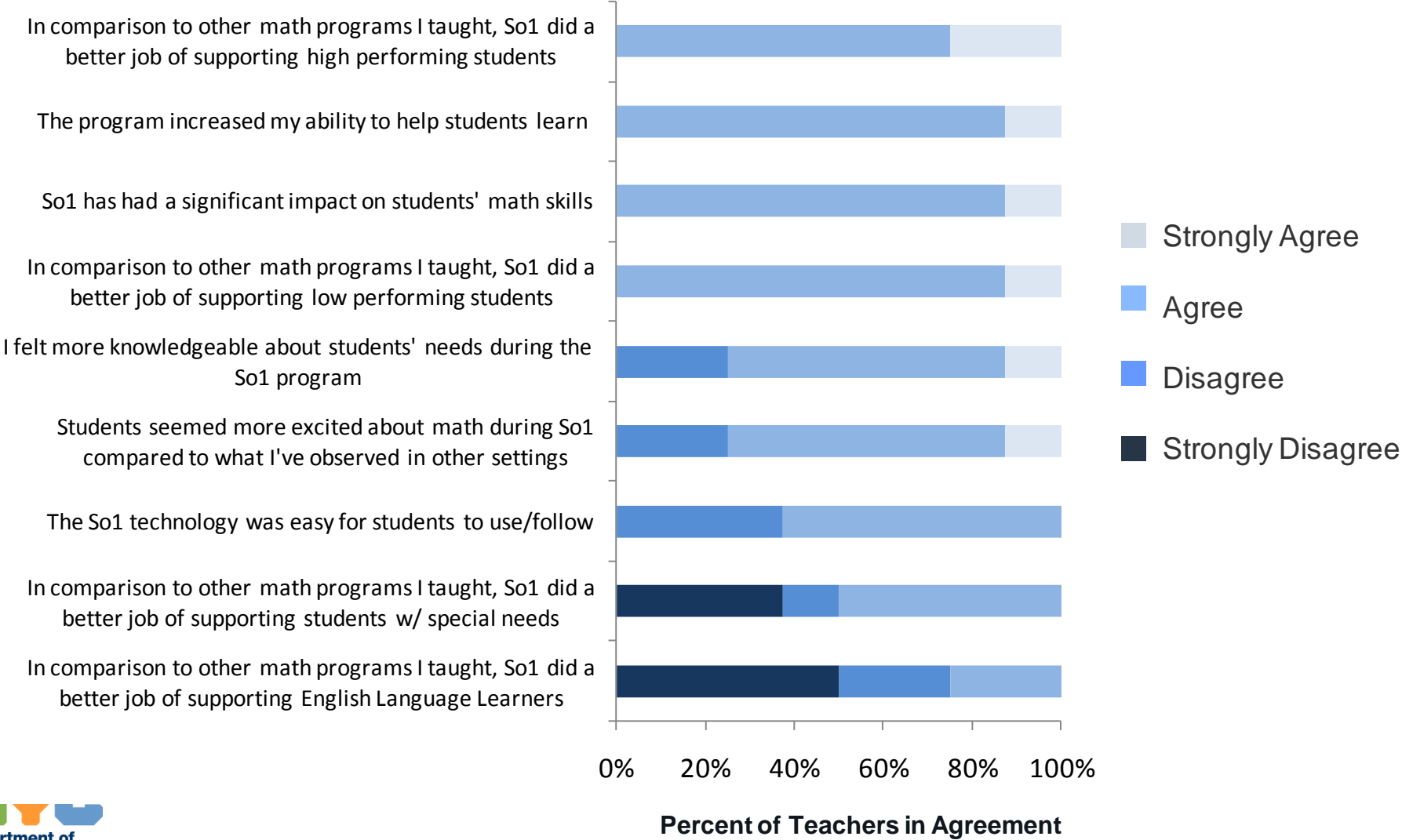
Ph: 212-374-0230

KBrohawn@schools.nyc.gov

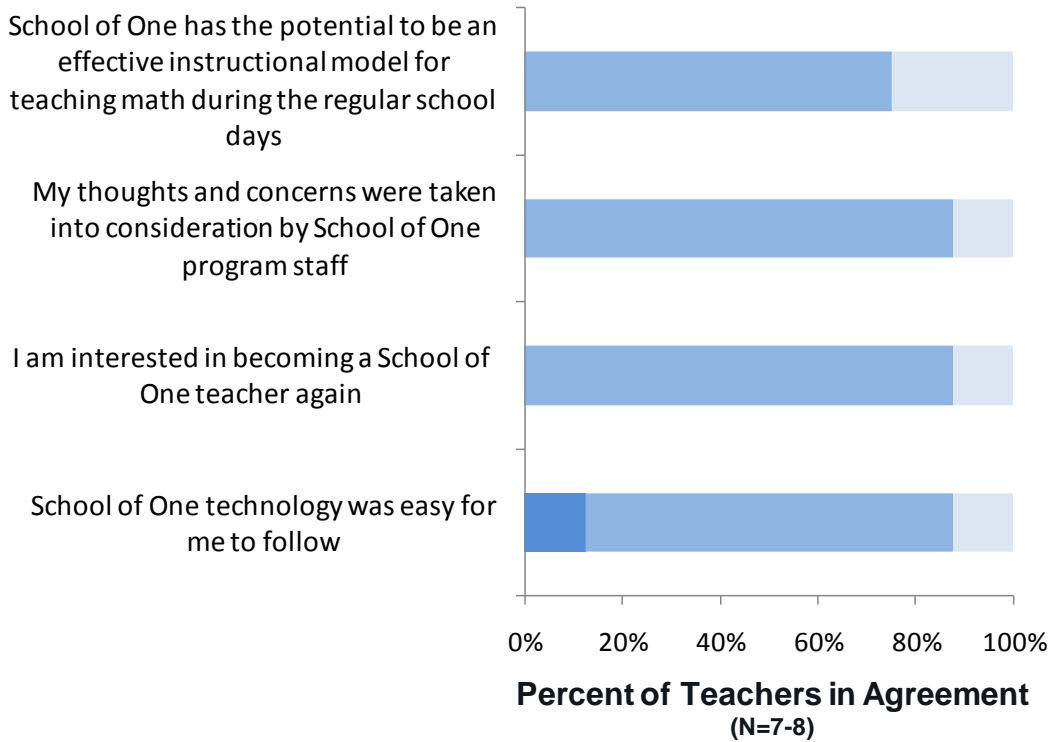
www.nyc.gov/schools

Appendices

Participating teachers had favorable attitudes toward School of One.

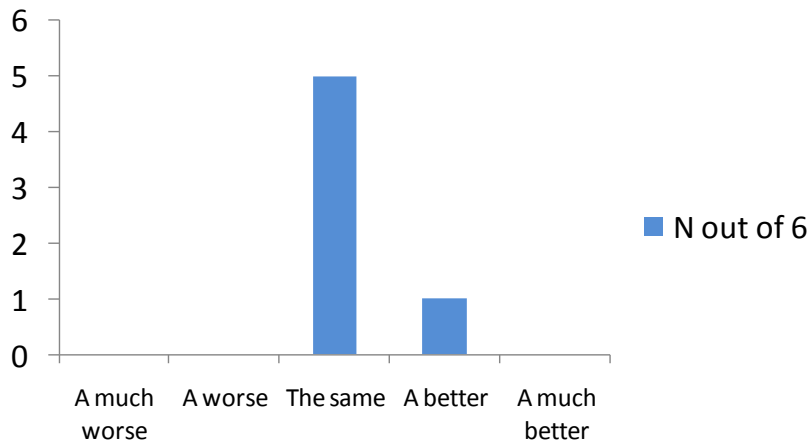


Participating teachers had favorable attitudes toward So1

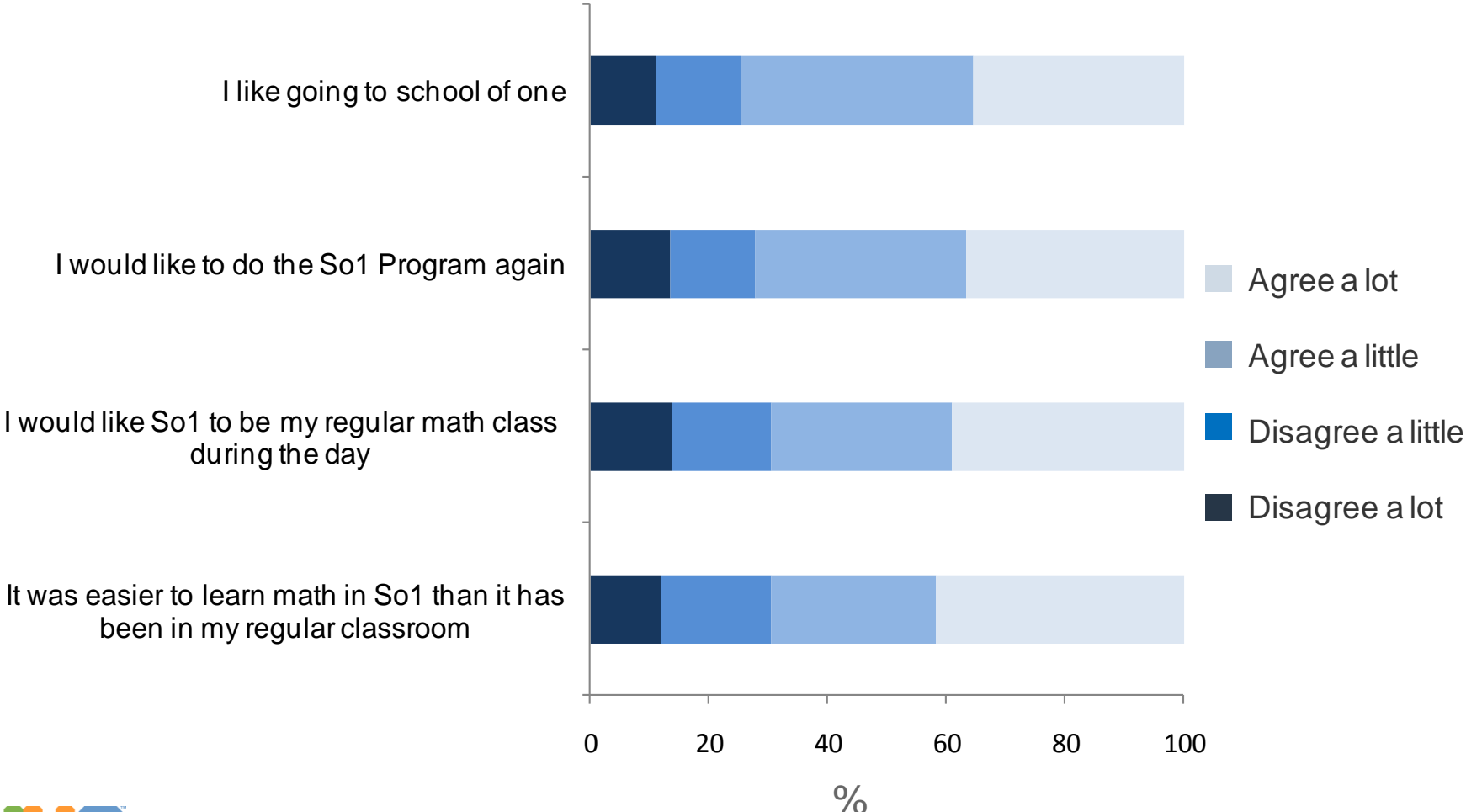


- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Compared to traditional schooling, School of One has _____ impact on students' development of social skills

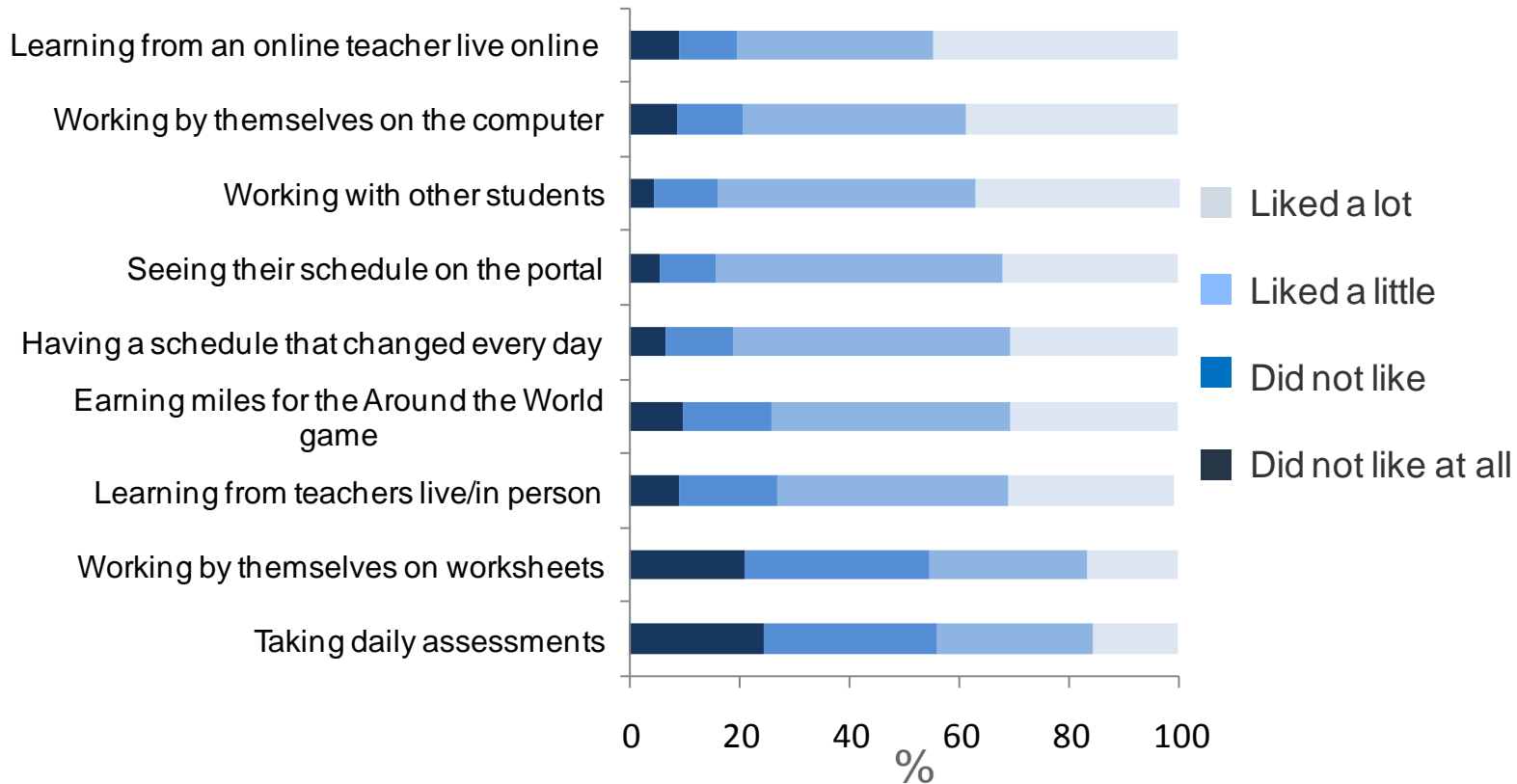


Most students who participated in the in school program also had favorable attitudes toward the model.



Student Opinions of the School of One Program

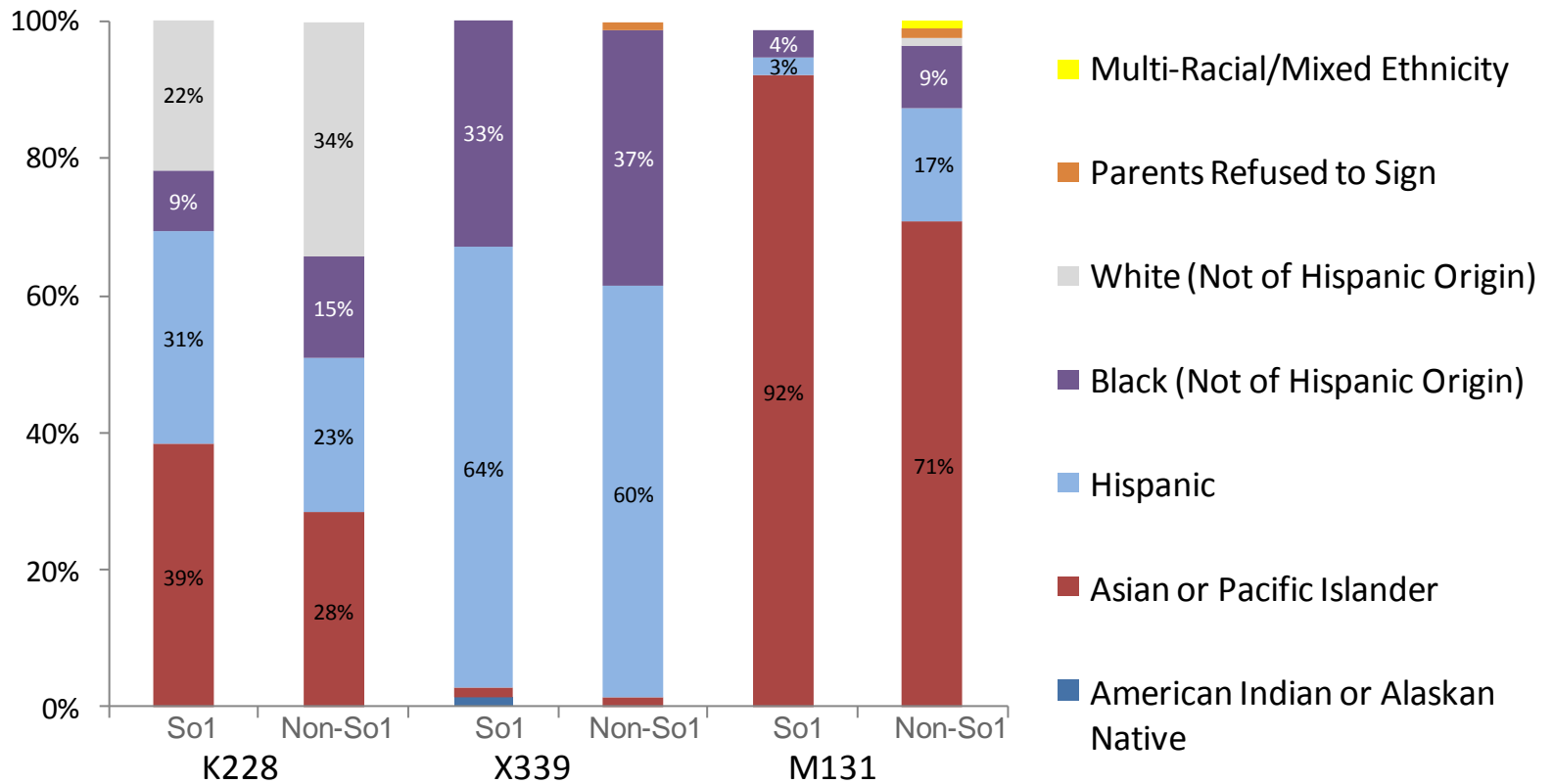
On average, students most liked working with other students, learning from an online teacher, and working by themselves on a computer. Students least liked working by themselves on worksheets and taking daily assessments*



*A number of students noted in the open ends that they wished the assessments included more questions as they felt they were too short to gauge what they knew

There was not a statistically significant difference in the demographics of the control and treatment groups at each site.

However, at MS131, there was a slightly higher proportion of Asian students who chose to participate.



There was not a statistically significant difference in the incoming achievement levels of the control and treatment groups at each site.

	School					
	K228		X339		M131	
	So1	Non-So1	So1	Non-So1	So1	Non-So1
MAP Test Feb 2010 RIT Score	224.8	221.6	210.0	210.5	224.7	220.4
Math Scale Score	697	689	674	671	704	696
ELA Scale Score	675	671	659	655	669	667