Burnsville All-Day Kindergarten
Year 4 Summary of Results

CENTER FOR
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Key findings:

- *Students who attended full-day kindergarten met expectations on the third grade MCA-II at a higher rate than those who attended half-day kindergarten*
- *In fourth grade, students who had attended universal full-day kindergarten far outscored their classmates who had attended kindergarten outside of the district on the MCA-II math and reading tests.*
- *The primary difference observed for students at risk (FRL, ELL) was between students who attended kindergarten outside of Burnsville and those who started kindergarten in the district, with Burnsville kindergarten student faring better on 3rd and 4th grade MCA-II tests.*

Burnsville Kindergarten: Year 4 Summary of Results

During the 2003-2004 school year, all kindergarten students in the Burnsville school district received full-day kindergarten. This was the first and only year that universal, free, full-day kindergarten was implemented in Burnsville. Each summer, the teachers who would receive the 03-04 universal full-day kindergarten cohort participated in a staff development program to prepare them for a potentially more advanced group of students. The 2003-04 kindergarten students were in 4th grade during the 2007-08 school year. Students' performance on the Minnesota Comprehensive Assessment (MCA-II) in reading and math was compared to the cohort of students who enrolled in kindergarten during the 2004-05 school year, as well as to all students who joined their class by transferring into Burnsville after kindergarten. The 2004-05 kindergarten group consists of students who attended full-day kindergarten for a fee, and those who attended free half-day kindergarten. There are also a number of students who joined that class after kindergarten, and who are labeled in this report as "No Burnsville K." Table 4 (see below) shows the number of students in each group that were included in the analyses.

Summary of Previous Findings

During the first year of the study, universal full-day kindergarten students made growth in all academic areas in kindergarten, closing gaps between racial, language (ELL/English) and socioeconomic (free or reduced lunch status) groups. As a group, the universal full-day kindergarten cohort entered and exited both 1st and 2nd grades ahead of the national average. They continued to record above average performance into 3rd grade. Although 3rd grade Gates scores for Fall 2006 dipped somewhat from 2nd grade Spring 2006 results (from 61.68 to 55.61), the group average Normal Curve Equivalent (NCE) scores for the Iowa Test of Basic Skills in Fall 2006 for 3rd grade were at or above 60 for both reading and math. Statistically significant differences in scores of at-risk and not at-risk students (based upon free or reduced lunch, racial group, and ELL status) were found at nearly every point in 1st, 2nd and 3rd grade. A survey of 1st grade teachers indicated higher achievement and better behavior in this group than in previous

classes. By 2nd grade, teachers continued to report a noticeable positive difference in the academic preparedness of this group, with little difference in social or emotional readiness. Most teachers in the district reported changing their use of curriculum materials to present a faster paced and more advanced level of work for students who came to 2nd grade with above average skills.

When both the universal full day and the fee-based full day kindergarten groups are combined and compared with free half-day kindergarten (04-05 kindergarten class), full-day cohorts scored significantly higher on the Gates-MacGinitie reading test than half-day students did in 1st and 2nd grade. This is true of whole-group comparisons as well as for every sub-group examined (FRL, ELL, and Ethnicity). Universal full-day cohort scores were significantly higher than the fee-based full-day cohort (04-05 kindergarten class) at the beginning of 2nd grade.

Analyses of data for students considered at-risk (received FRL, classified as ELL, ethnic minority students) indicated that all risk groups performed better in 1st and 2nd grade when they had attended full-day rather than half-day kindergarten. During the 04-05 school year, far more students received FRL, had a home language other than English, and were racial minorities had attended the free half-day kindergarten program rather than fee-based full-day program. Teachers reported concern that the difference in program enrollment (full-day versus half-day) increased the gap in opportunity between "haves" and "have-nots" and was ultimately related to differences in academic performance.

Current Findings

Comparisons of 3rd grade MCA-II math and reading scores showed significant differences in MCA scores based on the type of kindergarten program attended. Students who attended kindergarten outside of Burnsville scored significantly lower than both the half- and full-day Burnsville kindergarten groups ($p \leq .001$) in both reading and math. Further analysis showed that the difference in reading scores between the half- and full-day cohorts was not significant ($p = .068$) with the full-day group performing higher. The differences between half- and full-day groups were not significant on the math portion of the 3rd grade MCA-II ($p > .05$).

Fourth grade MCA-II math and reading scores were compared between the 2003-04 full-day kindergarten cohort and students who attended kindergarten outside of Burnsville. The differences between the two groups were significant in math ($p \leq .001$) and reading ($p \leq .001$). Students who were enrolled in universal full-day kindergarten scored higher than students who did not attend kindergarten in Burnsville.

Effect sizes, using Cohen's *d*, were also calculated to further examine differences in student performance across kindergarten types. Cohen's *d* expresses the difference between two means in terms of standard deviation. These values are presented in Tables 5-7.

Differences in the Percentage of Students in the "Meets or Exceeds Standards" Range

3rd Grade MCA-II Reading

We also wanted to know if the differences in cohort performance on the MCA-II were evident in the percentage of students who scored in the "meets or exceeds standards" range (see Tables 1 and 5). The 2003-04 and 2004-05 full day kindergarten (FDK) cohorts had a significantly higher percentage of students that scored in this range than students who attended kindergarten outside of Burnsville ($p \leq .01$). The percentage of students scoring in the "meets or exceeds standards" range was also significantly higher in the FDK cohorts than students in the 2004-05 half day kindergarten cohort (HDK; $p \leq .01$). The 2004-05 HDK cohort did not have a significantly higher percentage of students in the "meets or exceeds range" than students who attended kindergarten outside of Burnsville ($p = .68$). There was no statistically significant difference in the percentage of students between the two FDK cohorts ($p > .05$). In summary, the percentage of students meeting 3rd grade reading expectations on the MCA-II was significantly greater for groups who attended full day kindergarten than for those who attended half-day kindergarten or did not attend kindergarten in Burnsville.

Differences in MCA-II performance were also compared for students who met criteria for Free or Reduced Lunch (FRL) and English Language Learner (ELL) status (see Tables 8 and 9). For students who were identified as ELL, the 2003-04 FDK cohort had a significantly higher percentage of students who scored in the "meets or exceeds standards" range than students who attended kindergarten in another district ($p \leq .01$). The 2004-05 FDK also had a significantly higher percentage of students that scored in the "meets or exceeds standards" range than the students that did not attend Burnsville kindergarten ($p \leq .05$). No other significant differences were observed.

Among students who received free or reduced lunch in the 2007-08 school year, the both FDK cohorts had a significantly higher percentage of students that scored in the "meets or exceeds standards" range than students who attended kindergarten in another district ($p \leq .01$). No other differences between the cohorts were significant at the $p < .05$ level.

3rd grade MCA-II math

The difference between the cohorts on the MCA-II math assessment follows a similar pattern to the 3rd grade reading. The 2003-04 and 2004-05 FDK cohorts had a significantly higher percentage of students who scored in the "meets or exceeds standards" range than students who attended half-day kindergarten ($p \leq .01$) and those who attended kindergarten outside of Burnsville ($p \leq .01$). The 2004-05 HDK cohort had a significantly higher percentage of students in the "meets or exceeds range" than students who attended kindergarten outside of Burnsville ($p \leq .05$). There was no statistical difference in the percentage of students between the two FDK cohorts ($p > .05$).

For students who were identified as ELL, significant differences in the number of students scoring in "meets or exceeds standards" range were observed between both 2004-05 cohorts and students who attended kindergarten outside of Burnsville ($p \leq .05$ 04-05 FDK; $p \leq .01$ 04-05 HDK). The 2003-04 FDK cohort did not show significant differences from any other cohort.

Among students who received free or reduced lunch in the 2007-08 school year, the 2003-04 and 2004-05 FDK cohorts had a significantly higher percentage of students who scored in the "meets or exceeds standards" range than students who attended kindergarten in another district ($p \leq .01$). There were no significant differences between any of the other kindergarten cohorts.

4th grade MCA-II Reading

When comparing the percentage of students meeting or exceeding reading standards on the 4th grade MCA-II reading there was a significant difference between the 2003-04 FDK cohort and students that did not attend kindergarten in Burnsville ($p \leq .01$). Among students who received FRL, the difference between the 2003-04 FDK cohort and students that did not attend Burnsville kindergarten was significant ($p \leq .05$). Finally, the difference in the percentage of students who met or exceeded standards was significant for students identified as ELL ($p \leq .01$).

4th Grade MCA-II Math

Math results mirrored reading results for the 4th grade class. When comparing the percentage of students meeting or exceeding math standards on the 4th grade MCA-II there was a significant difference between the 2003-04 FDK and No Burnsville K students ($p \leq .01$). In addition, students who received FRL in 2007-08 and those who were classified as ELL were compared by kindergarten type, and again a significant difference was observed ($p \leq .01$).

Overall, it appears that students who attended full-day kindergarten in Burnsville were more likely to meet or exceed standards on the 4th grade math and reading MCA-II than were students who did not attend kindergarten in Burnsville. This difference was observed for students receiving FRL and those students classified as ELL.

Data for students who did not attend Burnsville Kindergarten

The percentage of students who met or exceeded standards on the MCA-II was compared for students that did not attend kindergarten in Burnsville. Students were grouped into cohorts by the number of years that they have attended school in Burnsville (as measured by the number of years for which we have achievement data on file). On the 3rd grade reading MCA-II, students who attended the district for 2 years had a significantly higher ($p \leq .05$) percentage of students scoring in the "meets or exceeds standards" range than students in the district for 1 year. This difference was more pronounced between students who were in the district for four years versus students in the district for 1 year. Interestingly, there was no statistical difference between students who attended the district for 3 years and students who attended for 1 year. There were no statistical differences between students who attended the district for 2 years, 3 years, and 4 years. See Table 14 for percentages in each group.

On the 3rd grade MCA-II math, students who attended the district for 2 years had a significantly higher ($p \leq .05$) percentage of students in the "meets or exceeds" range than students who attended the district for 1 year. Students who attended the district for 3 years also had significantly higher ($p \leq .05$) percentage of students in the "meets or exceeds" range than students who attended the district for 1 year. There were no statistical differences between students who attended the district for 1 year and 4 years ($p > .05$) or students who attended the district for 2, 3, or 4 years ($p > .05$). On the 4th grade MCA-II math and reading, tests there were no significant differences between students that attended the district for 2 years, 3 years, or 4 years.

Overall, it appears that students who enter Burnsville schools after kindergarten come in at a deficit to their peers. This finding is especially strong when students have only attended one year of school in Burnsville, as compared to two, three or four years.

Summary of results

On 3rd grade reading and math MCA-II tests, the mean score for the No Burnsville K group fell significantly lower than the other groups. Full-day kindergarten groups scored significantly higher than the half-day kindergarten group on the reading MCA-II. When the percentage of students who met or exceeded standards was taken into consideration, the differences between groups were reinforced. The percentage of students meeting 3rd grade reading and math expectations on the MCA-II was significantly greater for groups who attended full-day kindergarten than for those who attended half-day kindergarten or did not attend kindergarten in Burnsville. In the area of math, students who attended half-day kindergarten also outscored the No Burnsville K group.

Fourth grade MCA-II scores could only be compared between the 03-04 FDK and No Burnsville K cohorts. In both reading and math, the 03-04 FDK group far outscored the No Burnsville K group in terms of mean scores and percent of students meeting or exceeding expectations on the MCA-II.

Due to the consistent finding that the No Burnsville K group scored lower than other groups, their scores were evaluated based on how long they had been in Burnsville. Although 3rd grade assessment results appear to improve with length of time enrolled in Burnsville schools, statistical analyses suggest that the main difference exists between those who had been in the district for one year (as of 07-08) and those who attended for more than one year. One important point seems to be that those students who transfer into the district appear to come in with more academic need than their peers who already attended Burnsville schools.

Overall, it appears that academic gains for full-day kindergarten groups persist at least through 3rd grade, when the outcome variable is meeting standards on a statewide test in reading and math. Students who attended full-day kindergarten as a part of the universal cohort or during the following year's fee-based full-day kindergarten class were more likely to "pass" the MCA-II than those who attended half-day kindergarten and those who attended kindergarten outside of Burnsville. In 4th grade, half-day kindergarten students cannot be identified until next year. However, students who attended the universal full day kindergarten program on 2003-04 continue to score higher than their classmates who did not attend kindergarten in Burnsville.

Summary of results for at-risk students

Across assessments and kindergarten types, at-risk students scored lower than students of lower risk status. Additional analyses were conducted to determine if differences existed within subgroups when they attended different kindergarten types

Racial Groups: When racial minority groups were compared, no significant full day vs. half-day cohort differences for 3rd grade reading or math (kindergarten type compared for each minority group) were found. In 4th grade, students of color in the 2003-04 FDK cohort scored higher on reading and math MCA-II than their peers in the No Burnsville K group.

Free or Reduced Lunch (FRL): No significant differences were found for mean scores on 3rd grade MCA-II tests among groups for students receiving FRL (p = .239 reading and .209 math). However, when the percentage of students meeting or exceeding expectations was taken into account, several differences emerged. On the reading portion of the test, both full-day kindergarten groups had a significantly higher percentage of students who received FRL and met the expectations than did the No Burnsville K group. In math, only the 2004-05 FDK cohort had

significantly more students meeting expectations than the No Burnsville K cohort. Fourth grade differences between FRL and non-FRL students were significant between kindergarten groups ($p \leq .001$). Students in the 03-04 full-day kindergarten group who received FRL were more likely to meet expectations on the reading and math MCA-II than were students in the No Burnsville K group.

For students receiving FRL, it appears that full-day kindergarten may offer some benefit over attending kindergarten outside of Burnsville. Although the results varied somewhat, full-day kindergarten FRL groups tended to have significantly more students who met expectations on the reading and math MCA-II in 3rd and 4th grade than did the No Burnsville K groups.

English Language Learners (ELL): An analysis of mean MCA-II scores on the 3rd grade reading and math tests showed a similar pattern to the whole group. In both cases, differences by kindergarten type were observed (reading $F = 10.691$, $p < .001$; math $F = 8.857$; $p < .001$). In the area of reading, both full-day cohorts scored higher than the No Burnsville K students at $p < .05$. There was no significant difference between full-day and half-day cohorts. In math, both full-day cohorts and the half-day cohort scored higher than the No Burnsville K group ($p < .05$). Again, there were no significant differences between half-day and full-day cohorts. Differences between the mean scores of ELL students in the 03-04 full-day kindergarten cohort and their ELL peers who came to Burnsville after kindergarten were significant for both reading and math MCA tests in 4th grade ($p < .001$; $F = 27.007$ reading, $F = 49.192$ math). The 03-04 full-day cohort scored higher in both cases.

The percentage of students who were identified as ELL and met or exceeded expectations on the MCA-II reading test in 3rd grade was significantly higher for the 03-04 FDK and 04-05 FDK groups than the No Burnsville K cohort. In math, both 04-05 (half- and full-day) cohorts had significantly more "passing" scores than did the No Burnsville K group. On 4th grade tests, the percent of ELL students who met or exceeded expectations was significantly higher for 03-04 FDK students than for their peers who did not attend kindergarten in Burnsville.

For ELL students, those who did not attend kindergarten in Burnsville consistently scored below their peers on math and reading MCAs, in terms of mean scores and percent of students meeting or exceeding expectations. There is not a clear pattern of difference in results based on kindergarten type (half- or full-day) when students attended kindergarten in district.

Achievement Test Results

The tables below provide greater detail about the information discussed in narrative above.

Table 1

3rd grade MCA-II Reading

Significant difference among groups, $p < .001$ ($F = 30.867$)

Meets or exceeds grade-level expectations:

Group	% meeting expectations
Full-day 03-04	87.1
Full-day 04-05	85.5
Half-day 04-05	73.5
No Burnsville K	63.8

Table 2

3rd grade MCA-II Math

Significant difference among groups, $p < .001$ ($F = 21.799$)

Meets or exceeds grade-level expectations

Group	% meeting expectations
Full-day 03-04	84.5
Full-day 04-05	87.3
Half-day 04-05	75.5
No Burnsville K	65.2

Table 3

4th grade MCA reading and Math

Reading - Significant difference between groups, $p < .001$ ($F = 96.485$). The 03-04 full-day kindergarten group scored higher than the No Burnsville K group.

Math - Significant difference between groups, $p < .001$ ($F = 125.927$). The 03-04 full-day kindergarten groups scored higher than the No Burnsville K group.

Group	% meeting expectations: Reading	% meeting expectations: Math

Full-day 03-04	84.3	81.5
Full-day 04-05	-	-
Half-day 04-05	-	-
No Burnsville K	55.6	46

Table 4

Numbers of students and demographics of each group

These numbers indicate the number of students in each cohort who had any achievement scores in 3rd and 4th grade

Cohort	3rd grade scores reported			4th grade scores reported		
	Total Sample	ELL	FRL	Total Sample	ELL	FRL
03-04 FDK	512	76 (14.8%)	109 (21.3%)	480	63 (13.1%)	97 (20.2%)
04-05 FDK	347	44 (12.7%)	73 (21%)	-	-	-
04-05 HDK	147	44 (29.9%)	57 (38.8%)	-	-	-
No Burnsville K	349	110 (31.5%)	173 (49.6%)	235	84 (35.7%)	118 (50.2%)

<u>Effect Size Analyses</u>

Table 5

3rd Grade Reading

Group 1	Group 2	d_{all}	d_{FRL}	d_{ELL}
03-04 FDK	No Burnsville K	.712	.462	.806
03-04 FDK	04-05 HDK	.454	.393	.532
03-04 FDK	04-05 FDK	.015	.060	.193
04-05 FDK	No Burnsville K	.685	.480	.587
04-05 FDK	04-05 HDK	.432	.414	.302
04-05 HDK	No Burnsville K	.244	.119	.343

Note: Effect sizes are presented in terms of Cohen's d. This statistic is calculated by subtracting the mean of group 2 from the mean of group 1 and dividing the value by the pooled variance. The statistic is interpreted as a difference between means in terms of standard deviations. Effect sizes less than .2 are very small or trivial; .2 to .6, moderate; .6 to 1.2, large; 1.2 to 2.0, very large; and 2.0 to 4.0 nearly perfect.

Table 6

3rd Grade Math

Group 1	Group 2	d_{all}	d_{FRL}	d_{ELL}
03-04 FDK	No Burnsville K	.627	.303	.758
03-04 FDK	04-05 HDK	.323	.165	.063
03-04 FDK	04-05 FDK	.015	.077	.005
04-05 FDK	No Burnsville K	.639	.369	.737
04-05 FDK	04-05 HDK	.337	.240	.066
04-05 HDK	No Burnsville K	.296	.154	.708

Table 7

4th Grade Math and Reading

	Group 1	Group 2	d_{all}	d_{FRL}	d_{ELL}
4th Gr. Math	03-04 FDK	No Burnsville K	.897	.548	1.167
4th Gr. Read	03-04 FDK	No Burnsville K	.783	.423	.869

<u>Z-tests for 2 Independent Proportions</u>

Table 8

All Students

	Group 1	Group 2	*Z* value	*P* value
3rd Grade Reading	03-04 FDK	No Burnsville K	$z = 8.104$	$p \leq .01$
	03-04 FDK	04-05 HDK	$z = 4.172$	$p \leq .01$
	03-04 FDK	04-05 FDK	$z = 0.994$	$p > .05$

	04-05 FDK	No Burnsville K	$z = 6.316$	$p \leq .01$
	04-05 FDK	04-05 HDK	$z = 3.062$	$p \leq .01$
	04-05 HDK	No Burnsville K	$z = 1.847$	$p > .05$
3rd Grade Math	03-04 FDK	No Burnsville K	$z = 6.467$	$p \leq .01$
	03-04 FDK	04-05 HDK	$z = 2.271$	$p \leq .01$
	03-04 FDK	04-05 FDK	$z = 2.607$	$p > .05$
	04-05 FDK	No Burnsville K	$z = 6.531$	$p \leq .01$
	04-05 FDK	04-05 HDK	$z = 3.124$	$p \leq .01$
	04-05 HDK	No Burnsville K	$z = 2.03$	$p \leq .05$
4th Grade Reading	03-04 FDK	No Burnsville K	$z = 4.494$	$p \leq .01$
4th Grade Math	03-04 FDK	No Burnsville K	$z = 5.315$	$p \leq .01$

Table 9

Students eligible for FRL

	Group 1	Group 2	*z* value	*p* value
3rd Grade Reading	03-04 FDK	No Burnsville K	$z = 3.689$	$p \leq .01$
	03-04 FDK	04-05 HDK	$z = 2.022$	$p \leq .01$
	03-04 FDK	04-05 FDK	$z = -0.167$	$p > .05$
	04-05 FDK	No Burnsville K	$z = 3.287$	$p \leq .01$
	04-05 FDK	04-05 HDK	$z = 1.863$	$p > .05$
	04-05 HDK	No Burnsville K	$z = .067$	$p > .05$
3rd Grade Math	03-04 FDK	No Burnsville K	$z = 2.195$	$p \leq .05$
	03-04 FDK	04-05 HDK	$z = 0.047$	$p > .05$
	03-04 FDK	04-05 FDK	$z = .0963$	$p > .05$

	04-05 FDK	No Burnsville K	$z = 2.026$	$p \leq .05$
	04-05 FDK	04-05 HDK	$z = .0963$	$p > .05$
	04-05 HDK	No Burnsville K	$z = .527$	$p > .05$
4th Grade Reading	03-04 FDK	No Burnsville K	$z = 2.327$	$p \leq .05$
4th Grade Math	03-04 FDK	No Burnsville K	$z = 3.553$	$p \leq .01$

Table 10

Students identified as ELL

	Group 1	Group 2	z value	*p* value
3rd Grade Reading	03-04 FDK	No Burnsville K	$z = 4.575$	$p \leq .01$
	03-04 FDK	04-05 HDK	$z = 1.696$	$p > .05$
	03-04 FDK	04-05 FDK	$z = 1.442$	$p > .05$
	04-05 FDK	No Burnsville K	$z = 2.167$	$p \leq .05$
	04-05 FDK	04-05 HDK	$z = .001$	$p > .05$
	04-05 HDK	No Burnsville K	$z = 1.912$	$p > .05$
3rd Grade Math	03-04 FDK	No Burnsville K	$z = 1.893$	$p > .05$
	03-04 FDK	04-05 HDK	$z = 0.294$	$p > .05$
	03-04 FDK	04-05 FDK	$z = -0.14$	$p > .05$
	04-05 FDK	No Burnsville K	$z = 1.988$	$p \leq .05$
	04-05 FDK	04-05 HDK	$z = 0.453$	$p > .05$
	04-05 HDK	No Burnsville K	$z = 2.722$	$p \leq .01$
4th Grade Reading	03-04 FDK	No Burnsville K	$z = 5.283$	$p \leq .01$
4th Grade Math	03-04 FDK	No Burnsville K	$z = 4.021$	$p \leq .01$

Table 11

Data for students identified as ELL during at least 1 year

03-04 FDK	*N*	*M*	% of students who met standards	% who did not meet standards
Grade 3 Reading	32	354.59	77.6	22.4
Grade 3 Math	73	360.29	64.7	35.3
Grade 4 Reading	63	455.97	74.6	25.4
Grade 4 Math	63	456.54	71.4	26.8

04-05 FDK	*N*	*M*	% of students who met standards	% of students who did not meet standards
Grade 3 Reading	44	354.64	63.6	36.4
Grade 3 Math	44	356.80	63.6	36.4

04-05 HDK	*N*	*M*	% of students who met standards	% of students who did not meet standards
Grade 3 Reading	44	354.00	61.4	38.6
Grade 3 Math	44	351.68	70.5	29.5

No Burnsville K	*N*	*M*	% of students who met standards	% of students who did not meet standards
Grade 3 Reading	82	347.07	42.7	57.3
Grade 3 Math	108	345.96	43.4	56.6
Grade 4 Reading	83	444.57	39.8	60.2
Grade 4 Math	84	443.17	26.3	73.8

Table 12

Data for Students who were indicated as FRL for at least 1 year

03-04 FDK	*N*	*M*	% of students who met/exceed standards	% of students who did not meet/partially
Grade 3 Reading	114	358.75	75.6	24.4
Grade 3 Math	90	354.58	63.8	36.2
Grade 4 Reading	108	453.26	63.9	36.1
Grade 4 Math	109	452.96	62.4	37.6

04-05 FDK	*N*	*M*	% of students who met/exceed standards	% of students who did not meet/partially
Grade 3 Reading	84	352.92	75.0	25.0
Grade 3 Math	85	352.98	71.8	28.2

04-05 HDK	*N*	*M*	% of students who met/exceed standards	% of students who did not meet/partially

Grade 3 Reading	61	352.92	59.0	41.0
Grade 3 Math	61	352.98	62.3	37.7

No Burnsville K	*N*	*M*	% of students who met/exceed standards	% of students who did not meet/partially
Grade 3 Reading	189	350.95	53.6	46.4
Grade 3 Math	168	351.42	57.9	42.1
Grade 4 Reading	128	447.30	47.7	52.3
Grade 4 Math	128	446.09	38.3	61.7

Table 13

No Burnsville K Group: Data by years of enrollment in district:

*Years of enrollment in district determined by number of years data were available in 1st – 4th grades (through 2007-2008 school year)

Grade 3 MCA II Reading

No Burnsville K	*N*	*M*	% of students who met standards	% of students who did not meet standards
1 year	113	350.65	52.2	47.8
2 years	125	355.66	68.8	31.2
3 years	41	358.57	70.7	29.3
4 years	30	367.36	86.7	13.3

Grade 3 MCA II Math

No Burnsville K	*N*	*M*	% of students who	% of students who did not meet

			met standards	standards
1 year	116	351.51	55.2	44.8
2 years	126	353.90	69.0	31.0
3 years	41	357.15	78.0	22.0
4 years	30	359.33	76.7	23.3

Grade 4 MCA II Reading

No Burnsville K	*N*	*M*	% of students who met standards	% of students who did not meet standards
1 year	-	-	-	-
2 years	51	456.33	72.5	27.5
3 years	20	451.65	65.0	35.0
4 years	28	459.14	75.0	25.0

Grade 4 MCA II Math

No Burnsville K	*N*	*M*	% of students who met standards	% of students who did not meet standards
1 year	-	-	-	-
2 years	51	453.08	60.8	39.2
3 years	20	452.65	70.0	30.0

4 years	28	456.39	71.4	28.6

Table 14

z-Tests for 2 Independent Proportions for No Burnsville K

Grade 3 MCA-II Reading

Group 1	Group 2	*z*	*p*
In district 1 Year	In district 2 Years	$z = 2.389$	$p \leq .05$
In district 1 Year	In district 3 Years	$z = 1.811$	$p > .05$
In district 1 Year	In district 4 Years	$z = 3.162$	$p \leq .01$
In district 2 Years	In district 3 Years	$z = .046$	$p > .05$
In district 2 Years	In district 4 Years	$z = 1.783$	$p > .05$
In district 3 Years	In district 4 Years	$z = 1.306$	$p > .05$

Grade 3 MCA-II Math

Group 1	Group 2	*z*	*p*
In district 1 Year	In district 2 Years	$z = 2.114$	$p \leq .05$
In district 1 Year	In district 3 Years	$z = 2.411$	$p \leq .05$
In district 1 Year	In district 4 Years	$z = 1.881$	$p > .05$
In district 2 Years	In district 3 Years	$z = .907$	$p > .05$
In district 2 Years	In district 4 Years	$z = .533$	$p > .05$
In district 3 Years	In district 4 Years	$z = -.08$	$p > .05$

Grade 4 MCA-II Reading

Group 1	Group 2	*z*	*p*

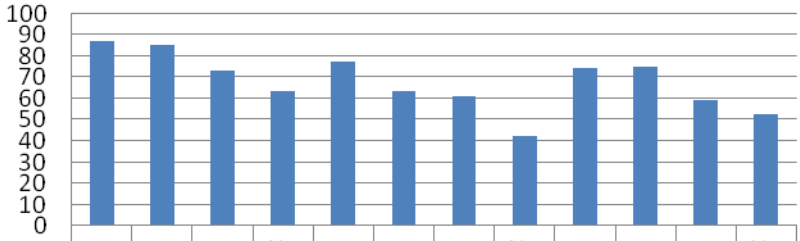
In district 2 Years	In district 3 Years	$z = .292$	$p > .05$
In district 2 Years	In district 4 Years	$z = .023$	$p > .05$
In district 3 Years	In district 4 Years	$z = .429$	$p > .05$

Grade 4 MCA-II Math

Group 1	Group 2	z	p
In district 2 Years	In district 3 Years	$z = .513$	$p > .05$
In district 2 Years	In district 4 Years	$z = .732$	$p > .05$
In district 3 Years	In district 4 Years	$z = -.24$	$p > .05$

Figure 1

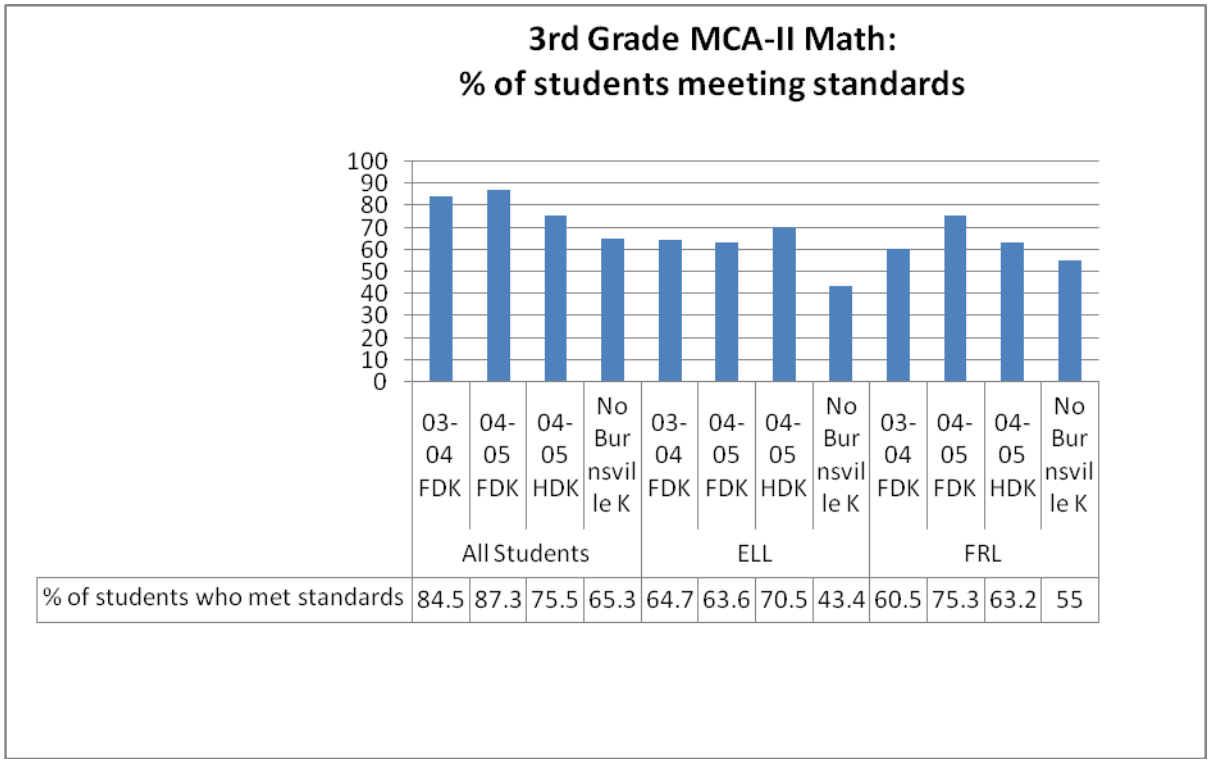
Percent of students who met or exceeded standards on 3rd grade MCA-II – Reading



	All Students				ELL				FRL			
	03-04 FDK	04-05 FDK	04-05 HDK	No Burnsville K	03-04 FDK	04-05 FDK	04-05 HDK	No Burnsville K	03-04 FDK	04-05 FDK	04-05 HDK	No Burnsville K
% of students who met standards	87.1	85.5	73.5	63.9	77.6	63.6	61.4	42.7	74.3	75	59.6	52.6

Figure 2

Percent of students who met or exceeded standards on 3rd grade MCA-II –Math



	All Students				ELL				FRL			
	03-04 FDK	04-05 FDK	04-05 HDK	No Burnsville K	03-04 FDK	04-05 FDK	04-05 HDK	No Burnsville K	03-04 FDK	04-05 FDK	04-05 HDK	No Burnsville K
% of students who met standards	84.5	87.3	75.5	65.3	64.7	63.6	70.5	43.4	60.5	75.3	63.2	55

Figure 3

Percent of students who met or exceeded standards on 4th grade MCA-II –Reading

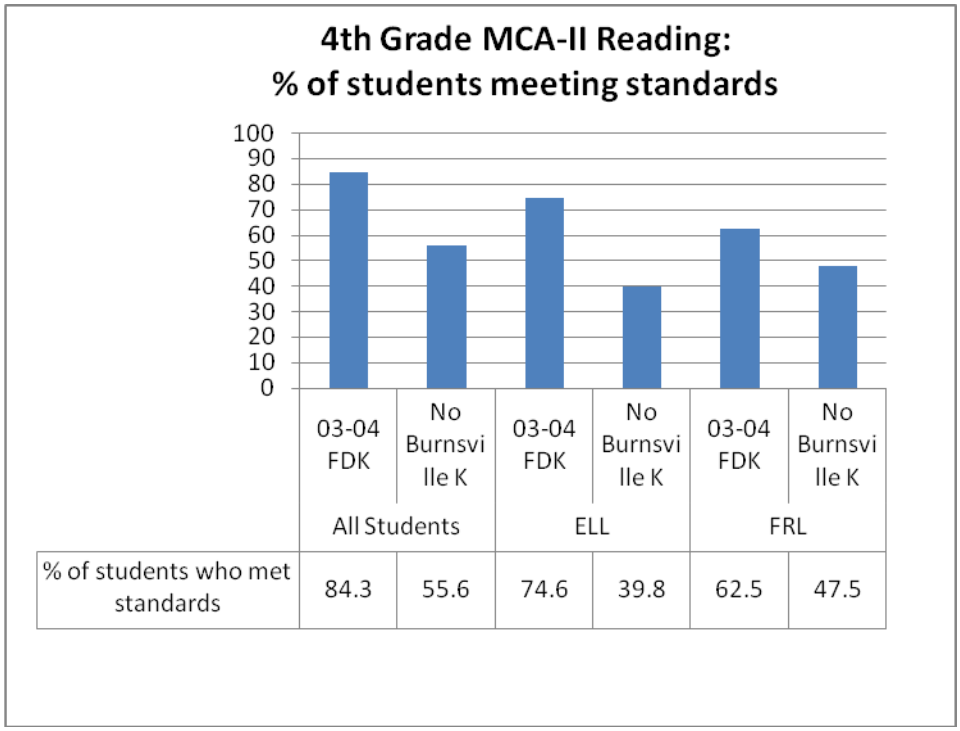
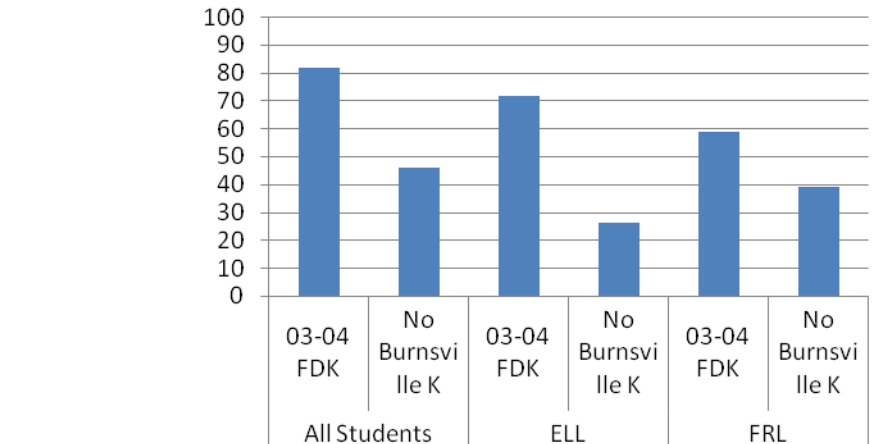


Figure 4

Percent of students who met or exceeded standards on 4th grade MCA-Math



	All Students		ELL		FRL	
	03-04 FDK	No Burnsville K	03-04 FDK	No Burnsville K	03-04 FDK	No Burnsville K
% of students who met standards	81.5	46	71.4	26.3	58.8	39