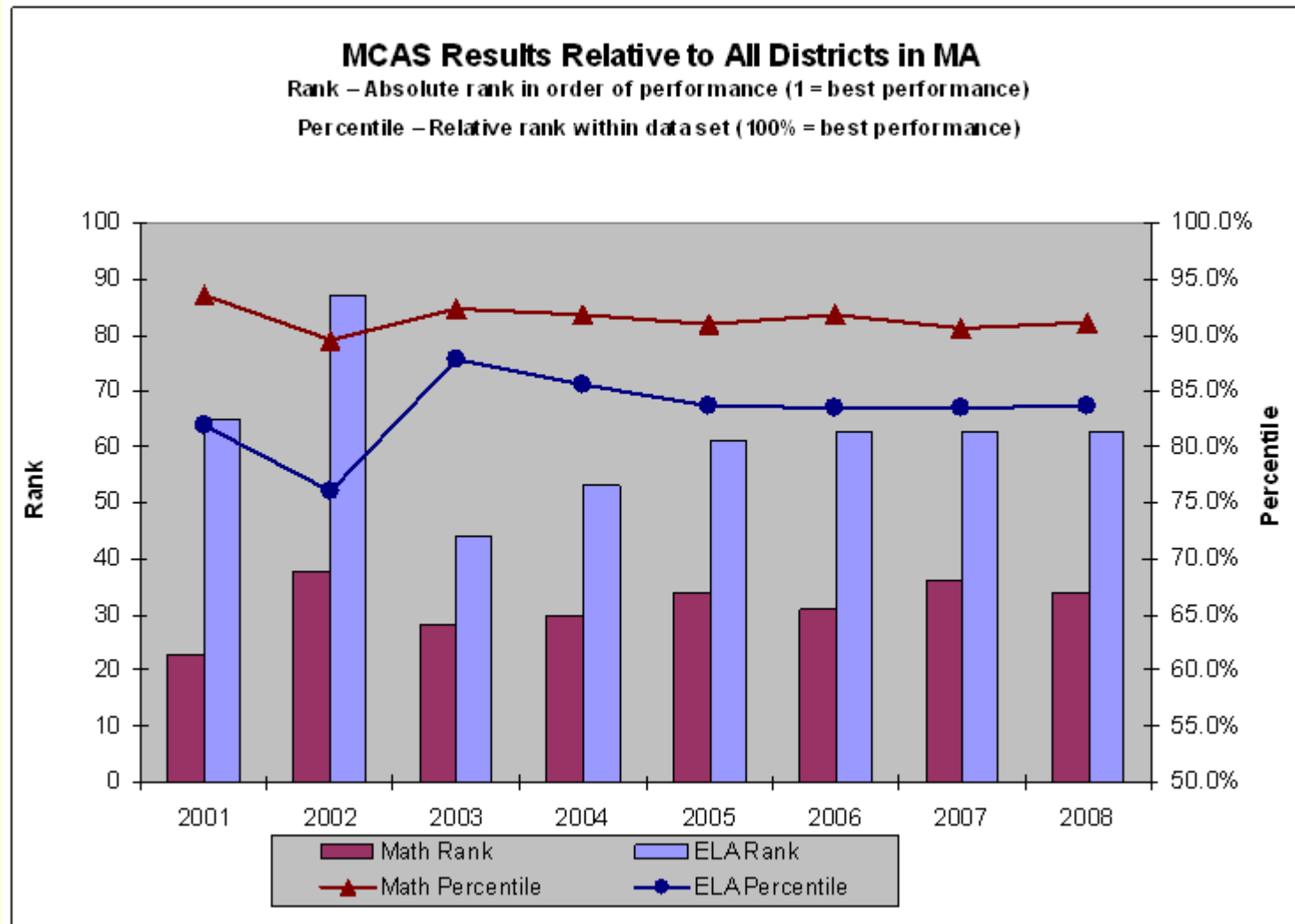


# MCAS Data Analysis

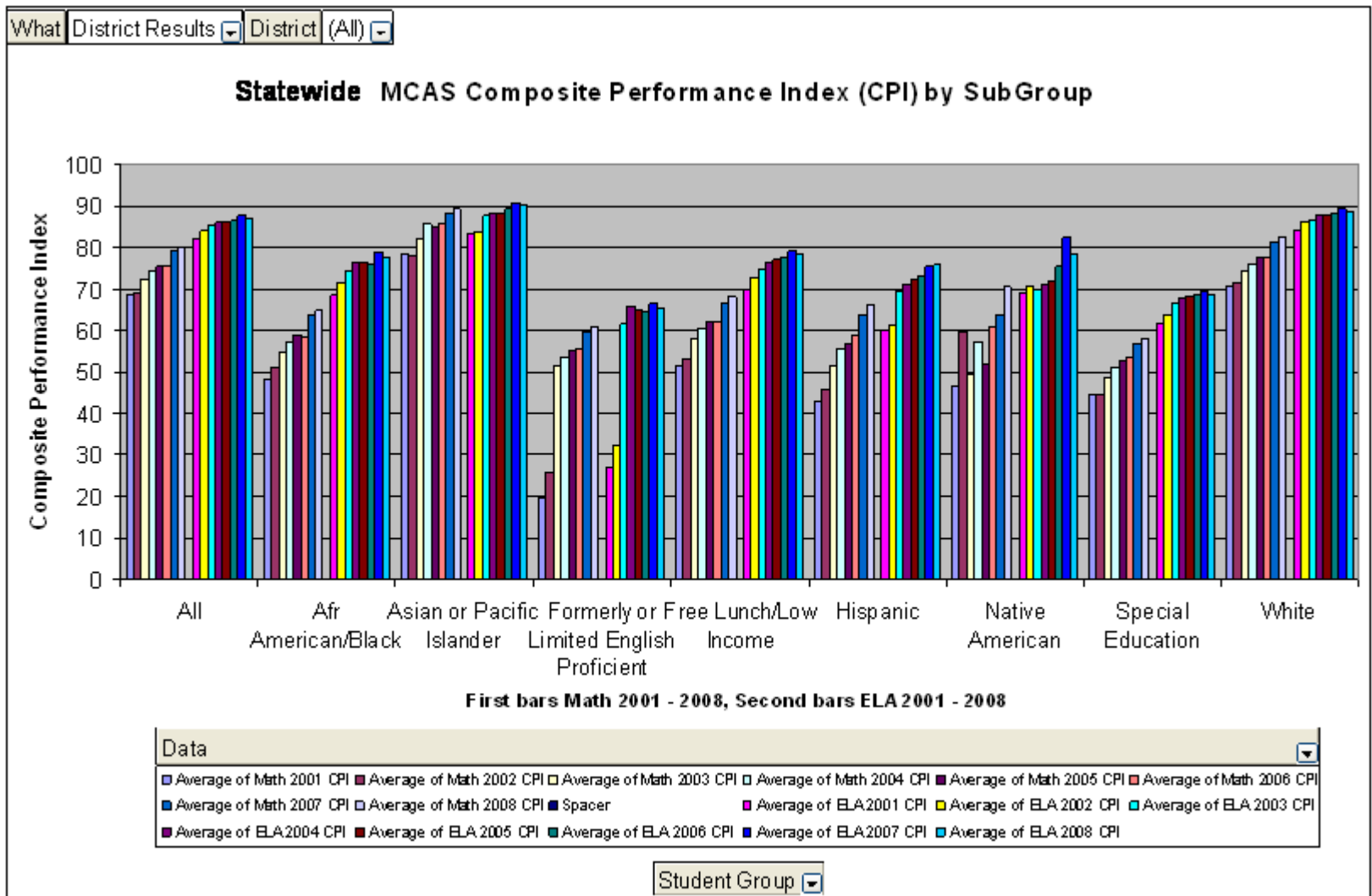
*October, 2009*

Dan Proskauer  
Candidate for School Committee

# Newton District Results: Not Much Change 2001-2008



# Statewide Results Show Consistent Improvement Across Subgroups – *but Achievement Gaps Exist*

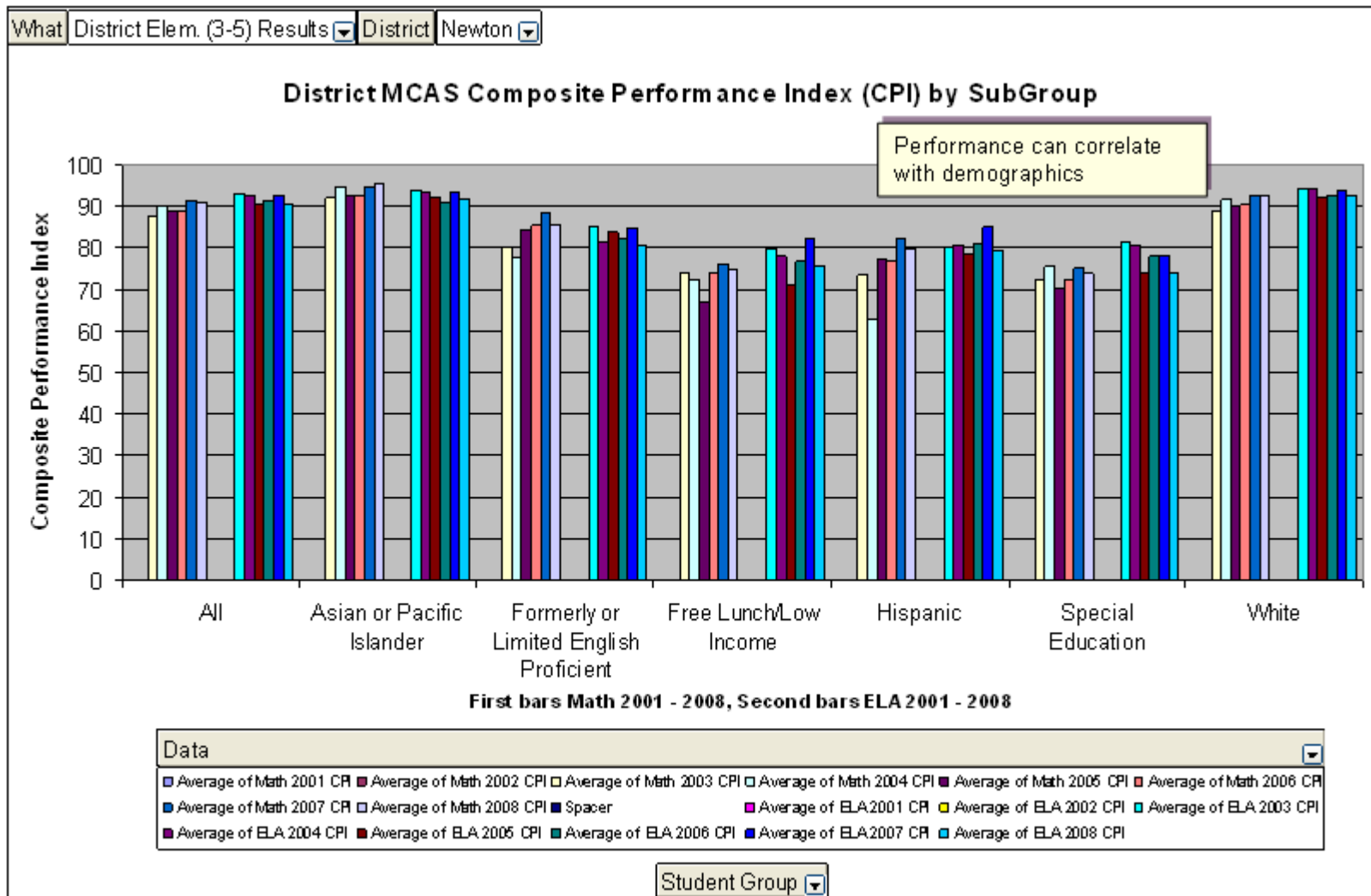


# A Note on Subgroups

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- Data on subgroups is available only when more than 40 members are present
- Academic performance tends to correlate with certain demographic characteristics
- Subgroups are shown on the previous slide to illustrate consistent improvement across all demographics
- Fewer subgroups will be explicitly shown on subsequent slides due to there being <40 members

# Newton Elementary Schools are Not Seeing Consistent Improvement



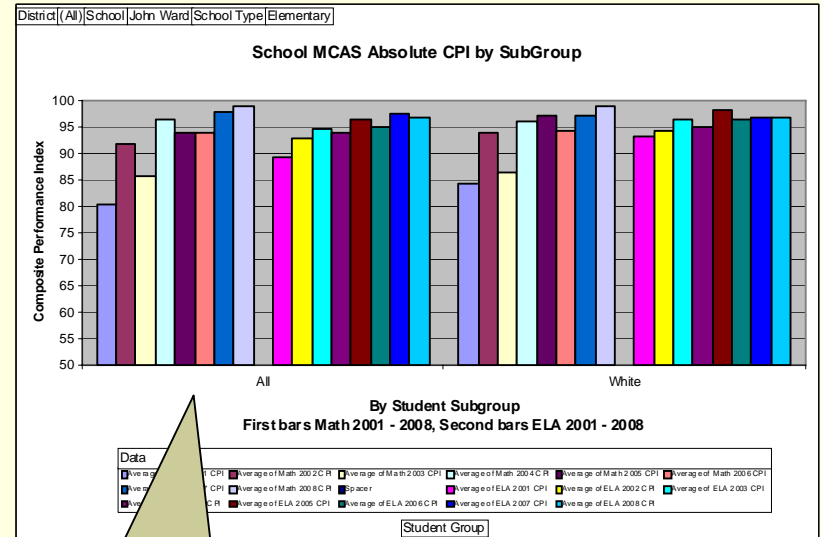
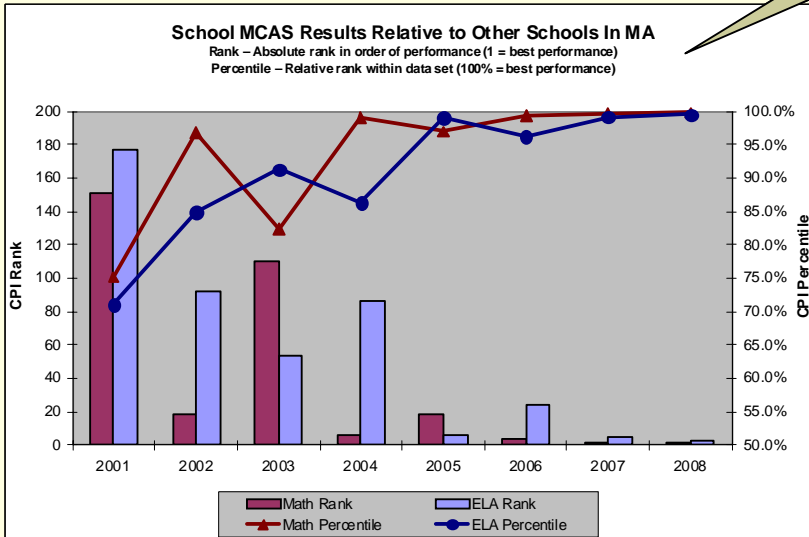
# Some Newton Elementary Schools are Excelling - Ward

Student Group:  
School:

All  
John Ward

Year	2001	2002	2003	2004	2005	2006	2007	2008
Math Rank	151	19	110	6	19	4	2	1
ELA Rank	177	92	54	86	6	24	5	3
Math Percentile	75.2%	96.9%	82.3%	99.0%	97.0%	99.4%	99.7%	99.8%
ELA Percentile	71.0%	85.0%	91.3%	86.3%	99.0%	96.2%	99.2%	99.5%
School Participation (schools)	608	613	621	627	630	635	636	637
Math Participation (students)	66	43	42	54	44	136	118	120
ELA Participation (students)	113	86	95	100	88	136	118	120

Near the top statewide



Fairly consistent improvement

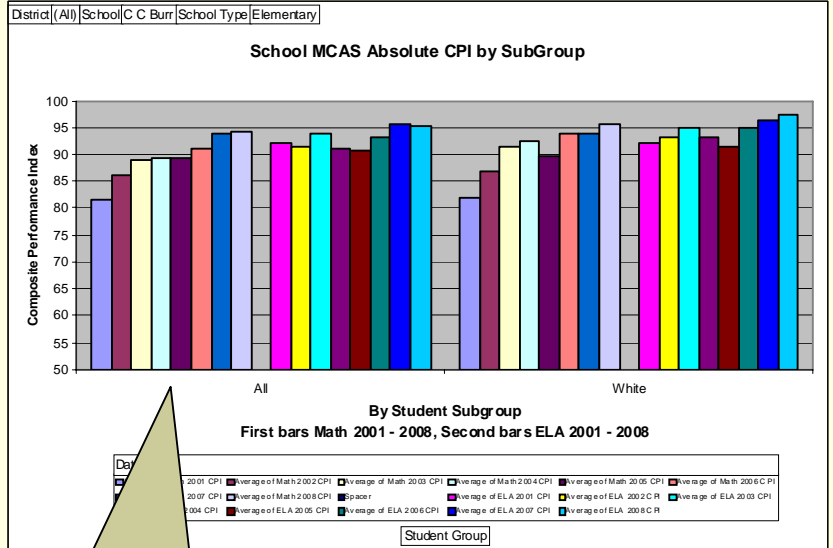
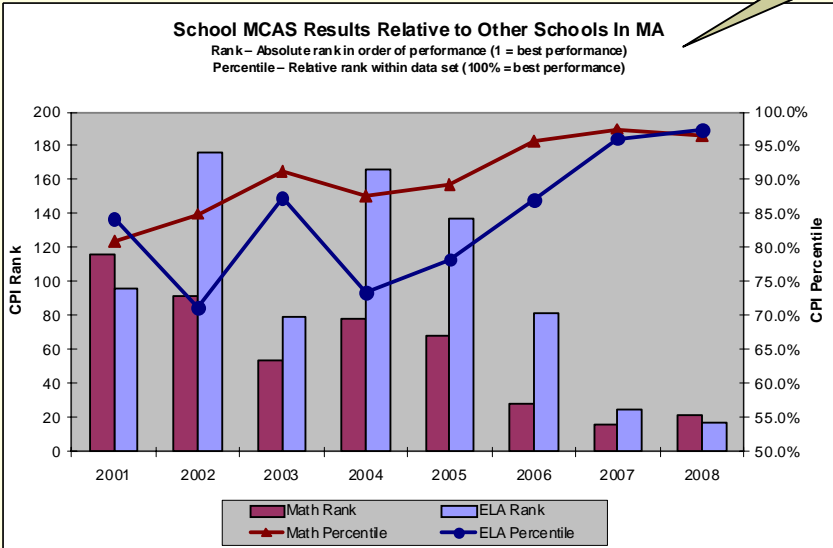
# Some Newton Elementary Schools are Excelling - Burr

Student Group:  
School:

All  
C C Burr

Year	2001	2002	2003	2004	2005	2006	2007	2008
Math Rank	116	92	54	78	68	28	16	22
ELA Rank	96	176	79	166	137	82	25	17
Math Percentile	80.9%	85.0%	91.3%	87.6%	89.2%	95.6%	97.5%	96.5%
ELA Percentile	84.3%	71.3%	87.3%	73.5%	78.3%	87.1%	96.1%	97.3%
School Participation (schools)	608	613	621	627	630	635	636	637
Math Participation (students)	45	45	55	45	45	151	160	159
ELA Participation (students)	90	97	101	87	101	151	162	159

Significant uptrend



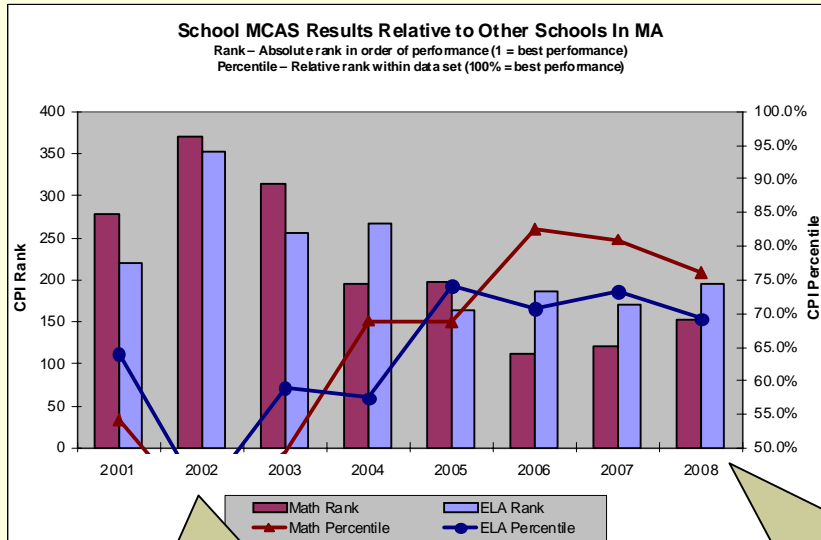
Fairly consistent improvement

# Others Are Not - Williams

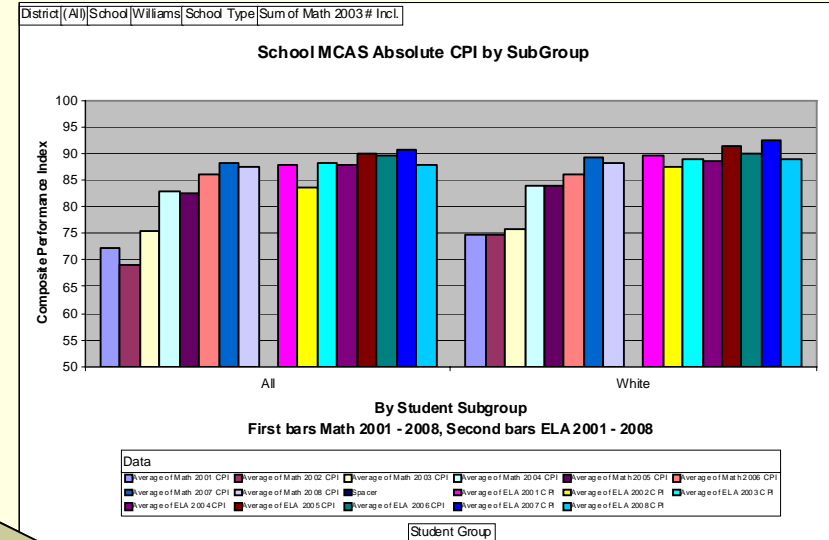
Student Group:  
School:

All  
Williams

Year	2001	2002	2003	2004	2005	2006	2007	2008
Math Rank	278	370	314	195	197	111	121	153
ELA Rank	220	352	255	267	163	186	170	196
Math Percentile	54.3%	39.6%	49.4%	68.9%	68.7%	82.5%	81.0%	76.0%
ELA Percentile	63.9%	42.6%	58.9%	57.4%	74.2%	70.7%	73.3%	69.2%
School Participation (schools)	608	613	621	627	630	635	636	637
Math Participation (students)	98	96	95	106	95	328	310	305
ELA Participation (students)	192	189	206	205	204	327	310	305



Started poorly, but was improving



Trend reversed and now significantly underperforming

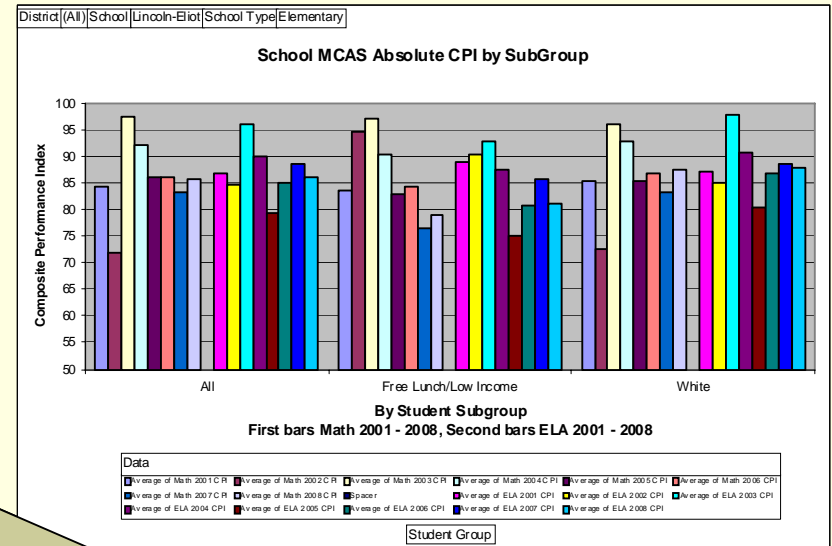
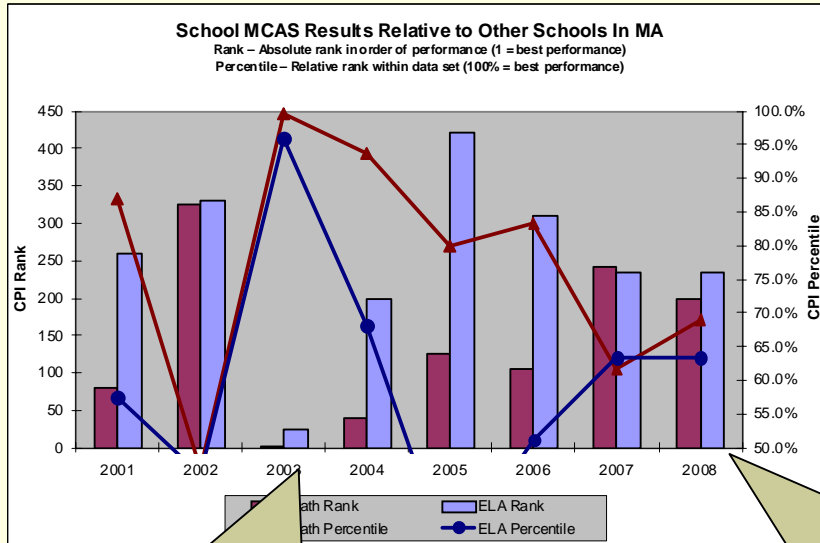
# Others Are Not – Lincoln-Eliot

Student Group:

All  
Lincoln-Eliot

School:

Year	2001	2002	2003	2004	2005	2006	2007	2008
Math Rank	79	326	3	39	126	106	243	198
ELA Rank	259	331	25	200	422	310	233	233
Math Percentile	87.0%	46.8%	99.5%	93.8%	80.0%	83.3%	61.8%	68.9%
ELA Percentile	57.5%	46.0%	96.0%	68.1%	33.1%	51.2%	63.4%	63.4%
School Participation (schools)	608	613	621	627	630	635	636	637
Math Participation (students)	52	40	38	28	46	135	126	134
ELA Participation (students)	101	84	63	73	84	135	126	134



From #25 to #422  
in ELA in two years

Wildly inconsistent results year  
to year, underperforming

# Some Surprising Declines - Cabot

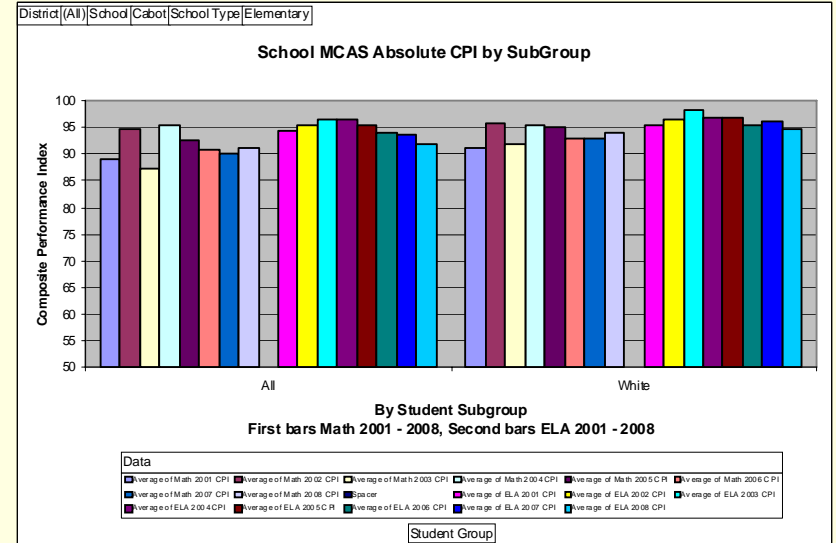
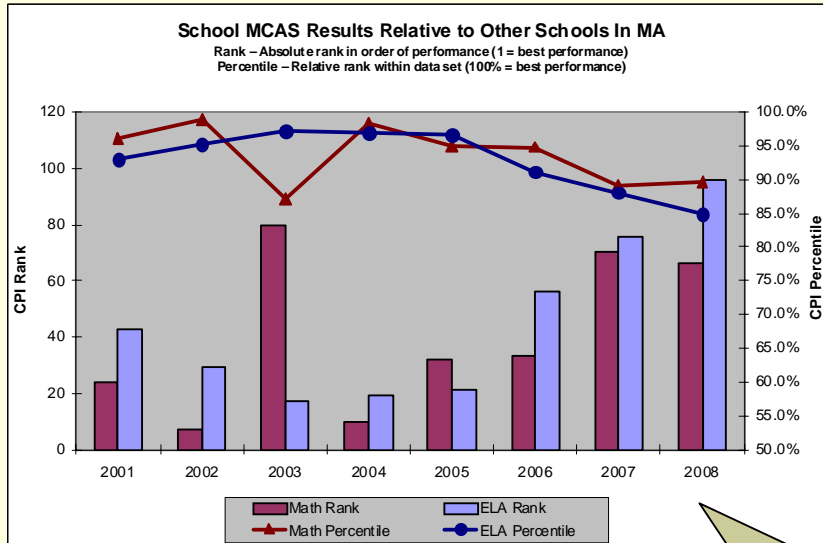
Student Group:

All

School:

Cabot

Year	2001	2002	2003	2004	2005	2006	2007	2008
Math Rank	24	7	80	10	32	33	70	66
ELA Rank	43	29	17	19	21	56	76	96
Math Percentile	96.1%	98.9%	87.1%	98.4%	94.9%	94.8%	89.0%	89.6%
ELA Percentile	93.0%	95.3%	97.3%	97.0%	96.7%	91.2%	88.1%	84.9%
School Participation (schools)	608	613	621	627	630	635	636	637
Math Participation (students)	64	55	69	60	47	180	189	206
ELA Participation (students)	125	124	129	106	107	180	190	206

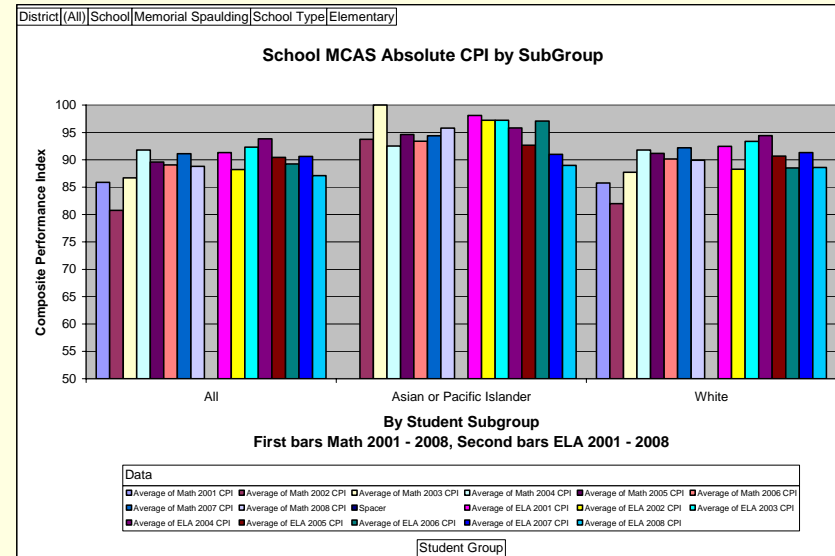
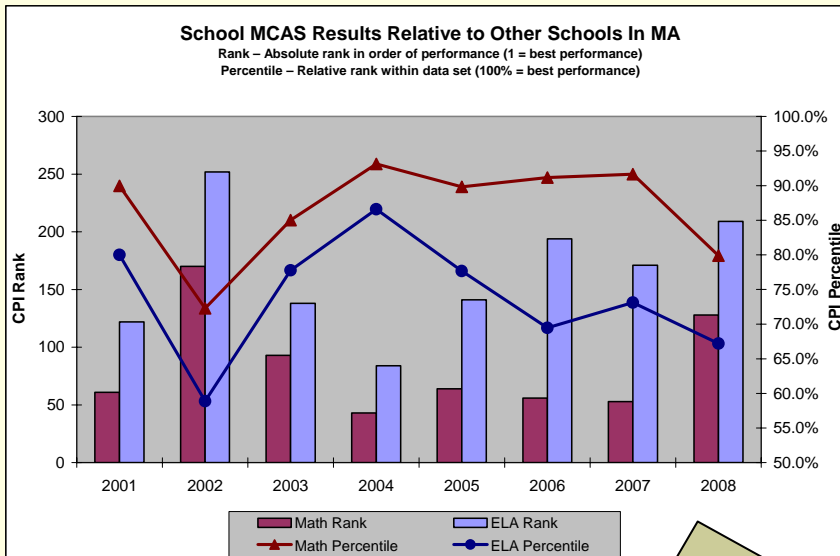


From top 3% down to 15% in five years

# Some Surprising Declines – Memorial Spaulding

Student Group: **All**  
 School: **Memorial Spaulding**

Year	2001	2002	2003	2004	2005	2006	2007	2008
<b>Math Rank</b>	61	170	93	43	64	56	53	128
<b>ELA Rank</b>	122	252	138	84	141	194	171	209
<b>Math Percentile</b>	90.0%	72.3%	85.0%	93.1%	89.8%	91.2%	91.7%	79.9%
<b>ELA Percentile</b>	80.0%	58.9%	77.8%	86.6%	77.7%	69.4%	73.1%	67.2%
<i>School Participation (schools)</i>	608	613	621	627	630	635	636	637
<i>Math Participation (students)</i>	62	87	77	82	72	210	224	235
<i>ELA Participation (students)</i>	148	161	156	154	136	211	224	235



Significantly underperforming and on a downward trend

# Takeaways

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- Newton consistently ranks in the top 10% - 15% as district;  
*~50 districts do better*
- There is wide deviation of performance and trend within our schools, especially at the elementary level
- 20% of our elementary schools are on a declining trend
- 40% of our elementary schools are visibly underperforming the district as a whole
- Several schools are at or near “corrective action” due to problems making Adequate Yearly Progress (AYP) for subgroups

**We need to ensure that we shore up achievement at our schools in need while continuing to challenge those that are healthy.**

# MCAS Data Analysis Method

## Data Source

- MCAS data is published by the Department of Elementary and Secondary Education (DESE).
- Detailed queries can be made here:  
[http://profiles.doe.mass.edu/state\\_report/mcas\\_item.aspx](http://profiles.doe.mass.edu/state_report/mcas_item.aspx)
- For my analysis I used “AYP History Data for Schools” and “AYP History Data for Districts” from 2008 (unfortunately 2009 data is not yet available in this format) from here:  
<http://www.doe.mass.edu/sda/ayp/2008/default.html?template=>
- I also cross referenced per-grade enrollment information for each school statewide reporting MCAS data to map school type (Elementary, Middle, High) so that appropriate school comparisons could be made. I erred on the side of not counting schools that were very different from our current structure (K-5, 6-8, 9-12).

## Methodology

- I used “Composite Performance Index” scores for each district, school and subgroup in determining rankings. For more information on CPI, see  
[http://www.doe.mass.edu/mcas/2008/results/interpretive\\_guide.pdf](http://www.doe.mass.edu/mcas/2008/results/interpretive_guide.pdf)
- In each case the selection of criteria (district, school, subgroup, etc.) is applied to all data and the CPI scores are ranked producing two numbers:
  - Ranking – Absolute rank in order of performance (1 = best performance, top of the heap)
  - Percentile – Relative rank within data set (100% = best performance, top of the heap)
- For example, if 200 districts reported data for the Asian / Pacific Islander subgroup and Newton ranked #50 in CPI for this subgroup we would have rank 50, 75% percentile. Meaning 49 districts outperformed us in this subgroup and those 49 represented 25% of the districts statewide.

Full Workbook containing data can be downloaded from:

<http://www.danforward4sc.org/mcas-analysis.html>

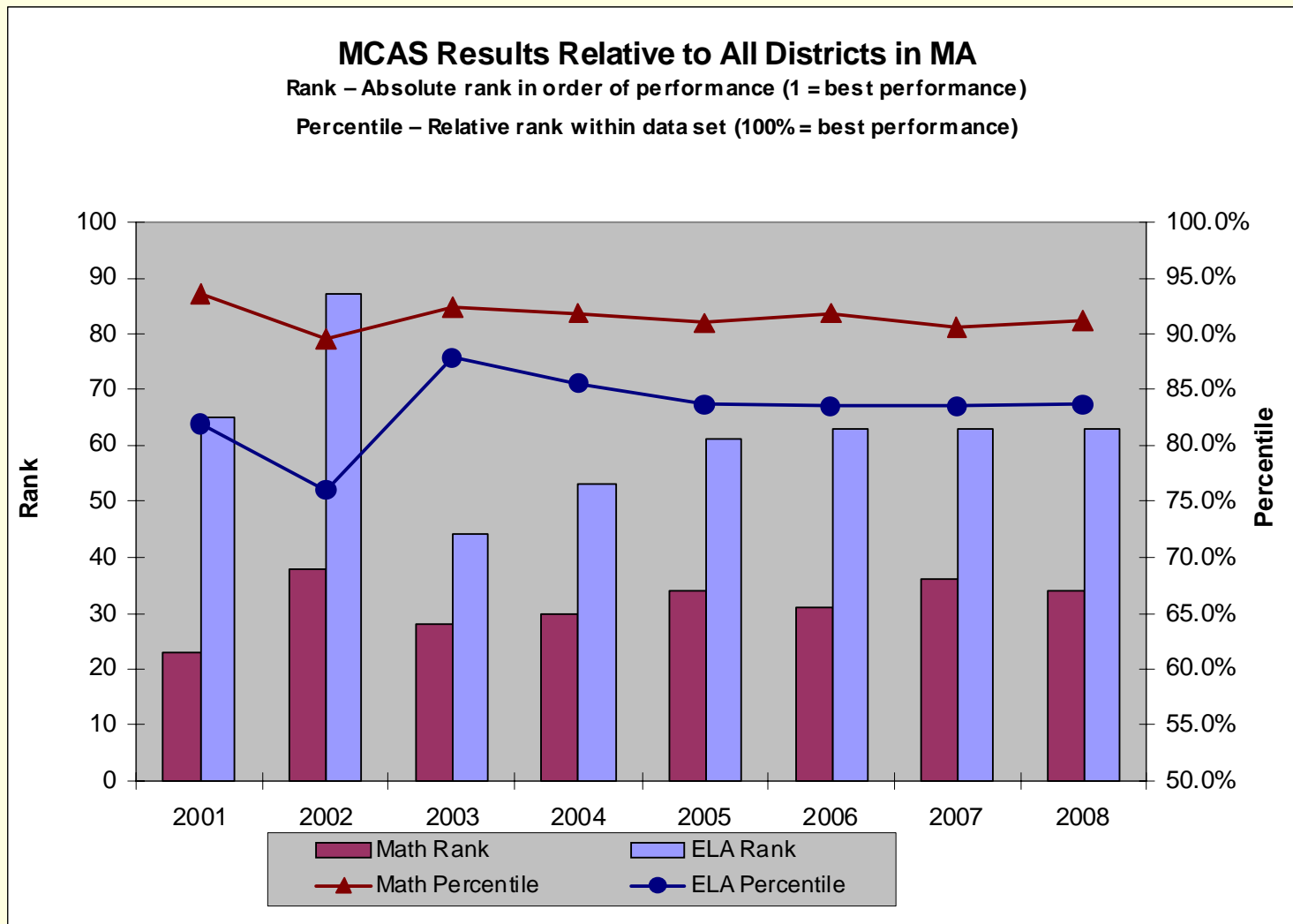
# Appendix A – Relative Performance of Subgroups

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- The following charts illustrate the *relative* performance of subgroups in Newton compared to all districts in Massachusetts
- If a subgroup does better than the Newton District results as a whole it means that subgroup is doing relatively *better* in Newton than in other districts
- This methodology allows us to examine the performance of subgroups in Newton normalizing out the demographic correlation by using the rest of the state as a “control”

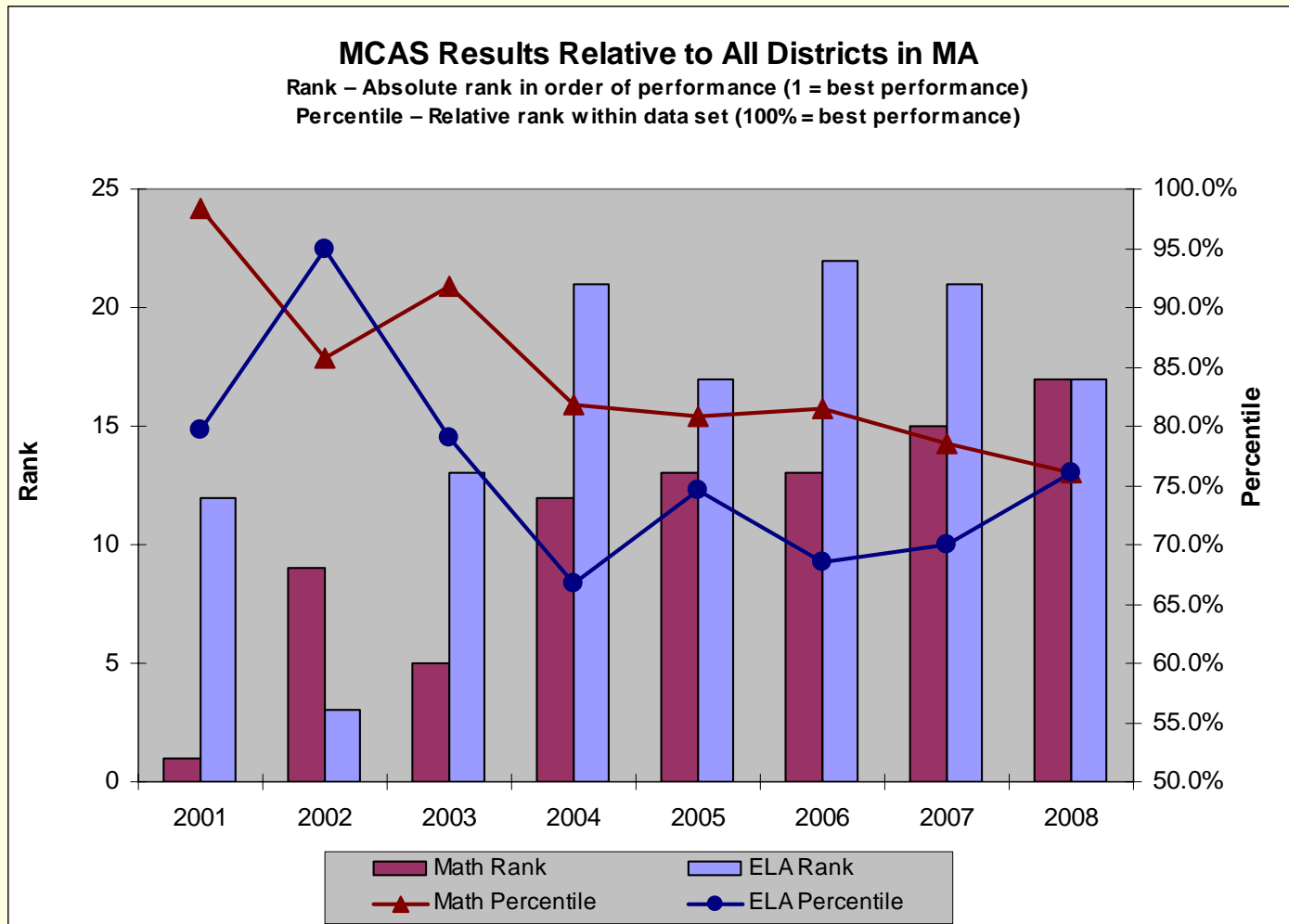
# Newton District Results:

## *This is the baseline*

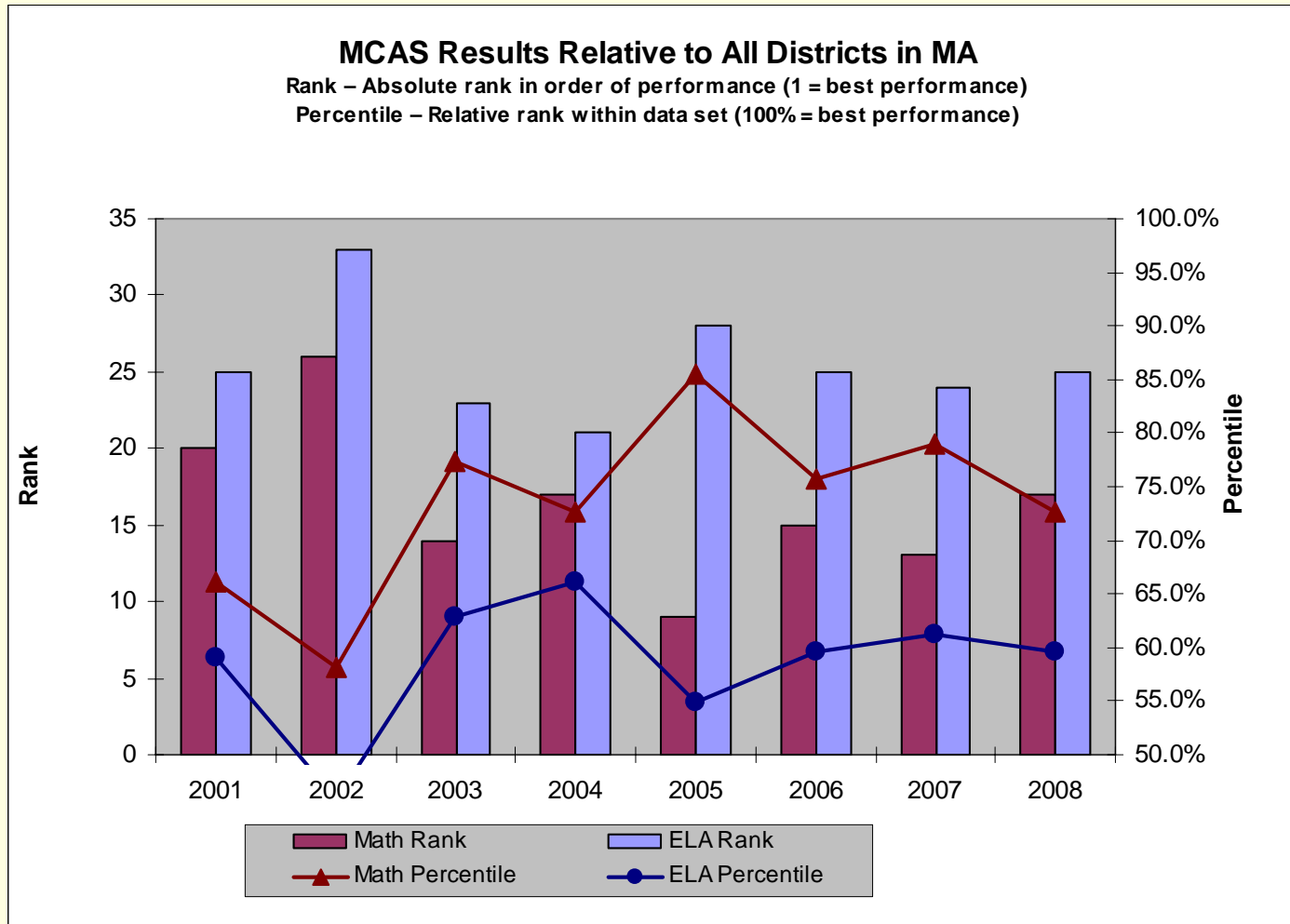


# African American

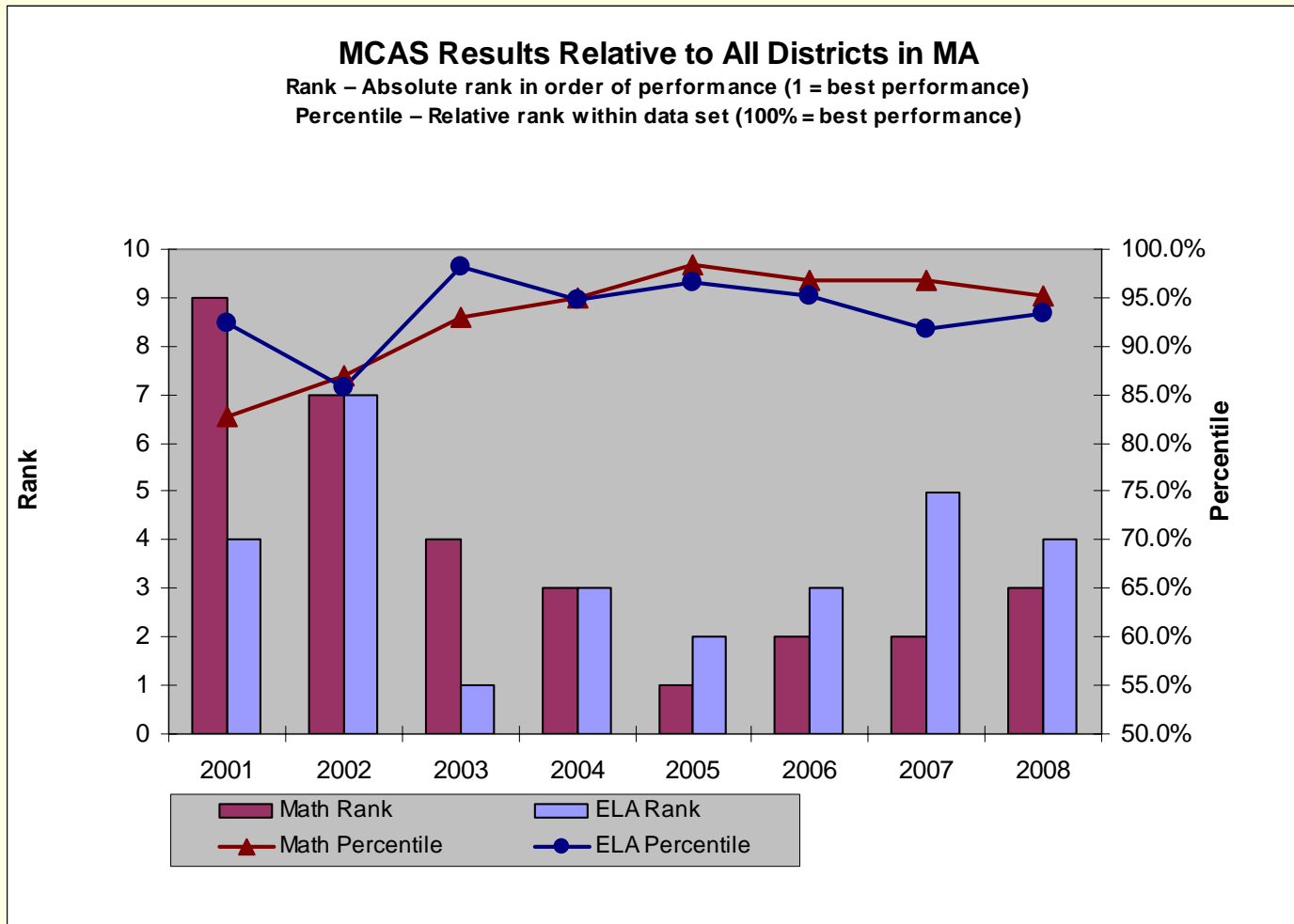
## *Underperforming in Newton*



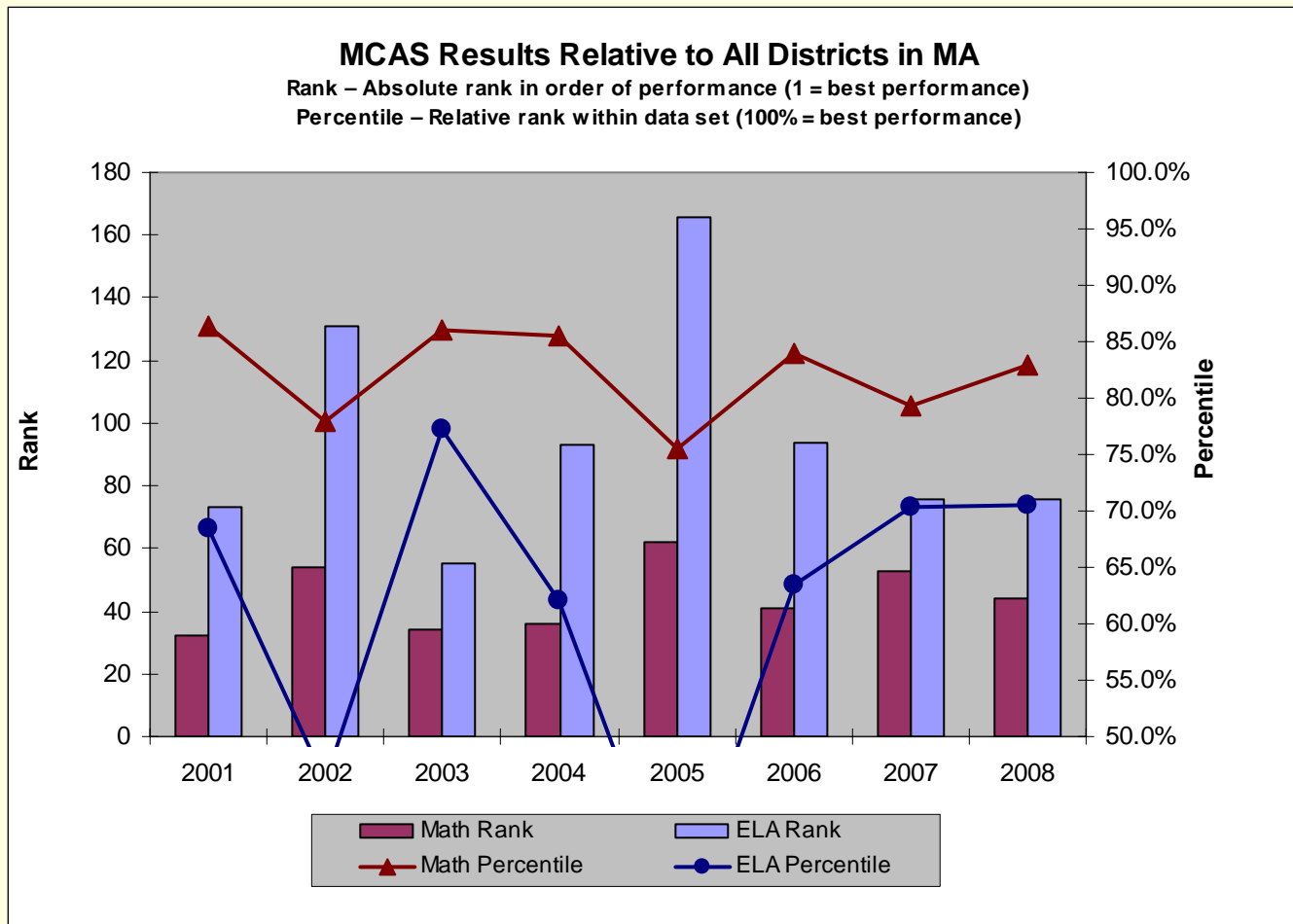
# Asian or Pacific Islander *Underperforming in Newton*



# Formerly or Limited English Proficient *Excelling in Newton*

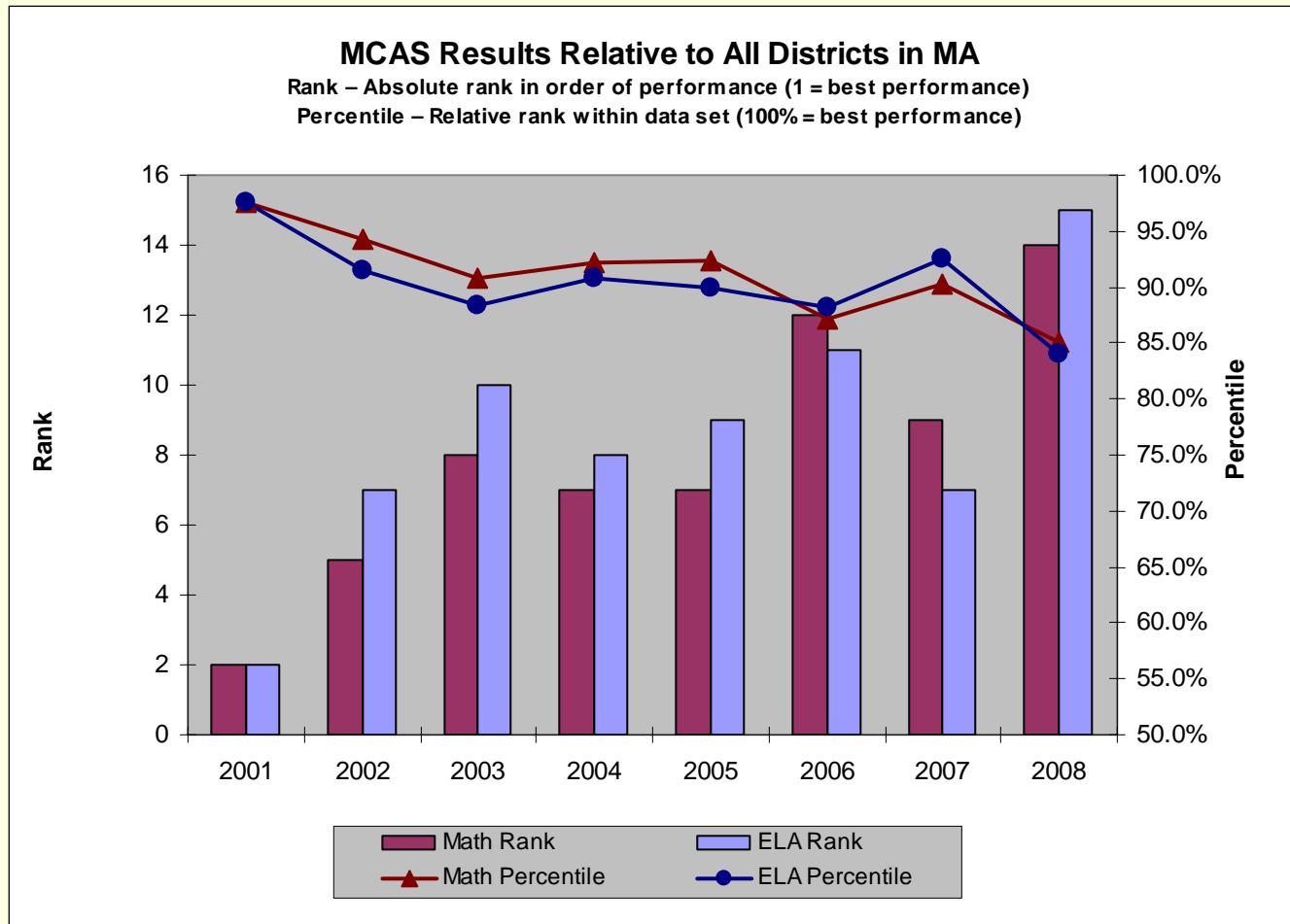


# Free Lunch/Low Income *Underperforming in Newton*



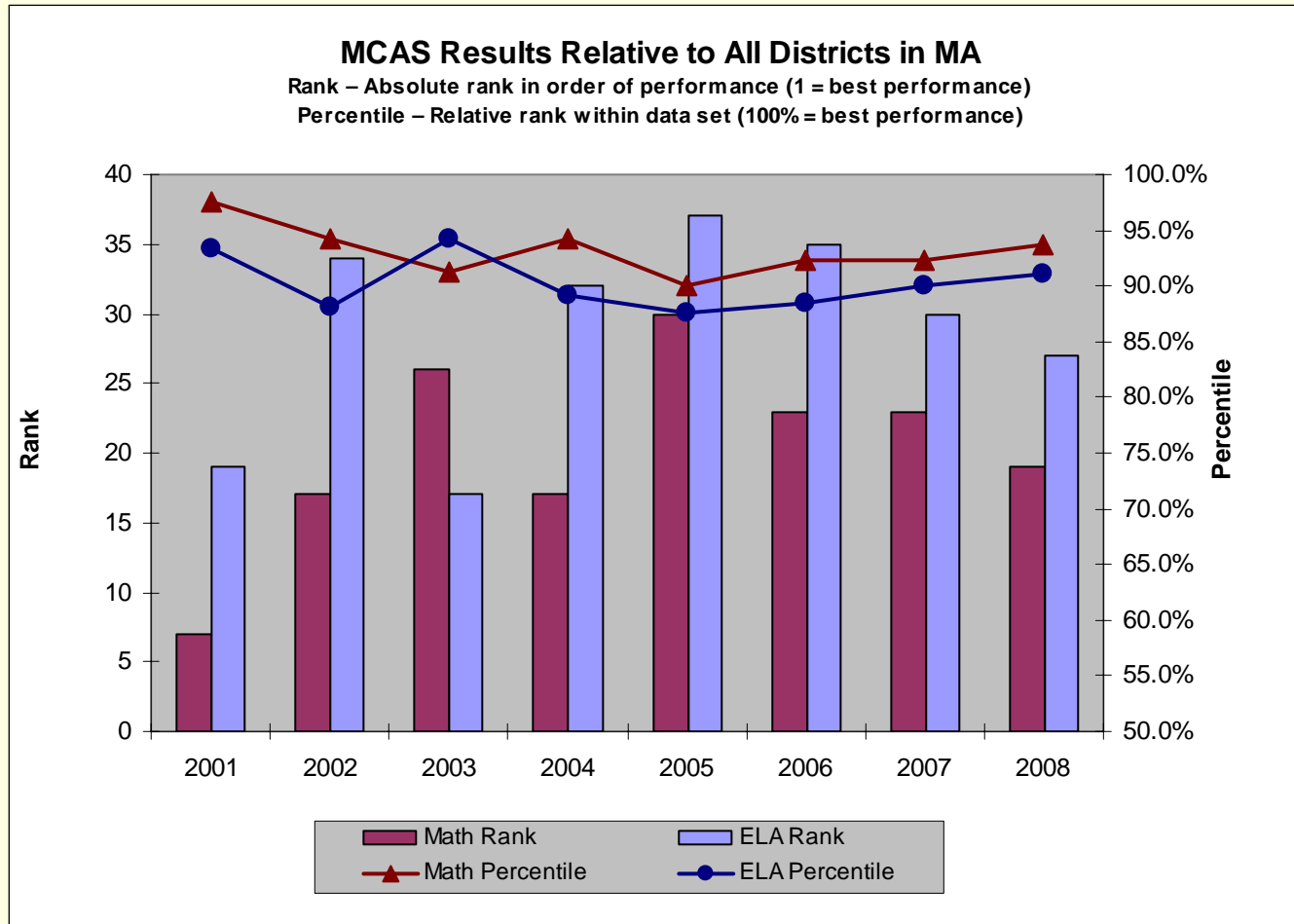
# Hispanic

## *On Par, but Declining*



# Special Ed

## *Excelling in Newton*



# Appendix B – A Note on Math

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- Across the state, most districts have higher CPI performance on ELA than on Math
- Newton is an anomaly in this and one of the following may be true:
  - We have superior math instruction in our schools
  - We have significant math instruction outside of our schools
  - We have inferior ELA instruction
- The data suggests an investigation into this is warranted