

Impact of Interruptions on 2013 ISTEP+ Test Scores

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Overall Statement

- There is no way to determine definitively how students would have scored without interruptions, either individually or in aggregate
- However, every analysis done suggests that the impact of the interruptions was negligible on test scores for the vast majority of students, and had no discernible effect on aggregated data

- That is not to say that the interruptions had no effect
 - May have had an effect on individual students and further studies are being done to see whether those students can be identified
 - The interruptions unquestionably had a marked effect on both students and school personnel, and took valuable time to overcome
- However, it appears as though the efforts of students and school personnel to cope with the interruptions were highly successful

Description of the Interruptions

- About one-sixth of the population directly affected
- Widely distributed—90% of schools had at least one interrupted student
- Unknown number of indirectly affected students
 - Students who were not interrupted but in a class where other students were interrupted
 - Students who were interrupted in one test but still had other tests to take

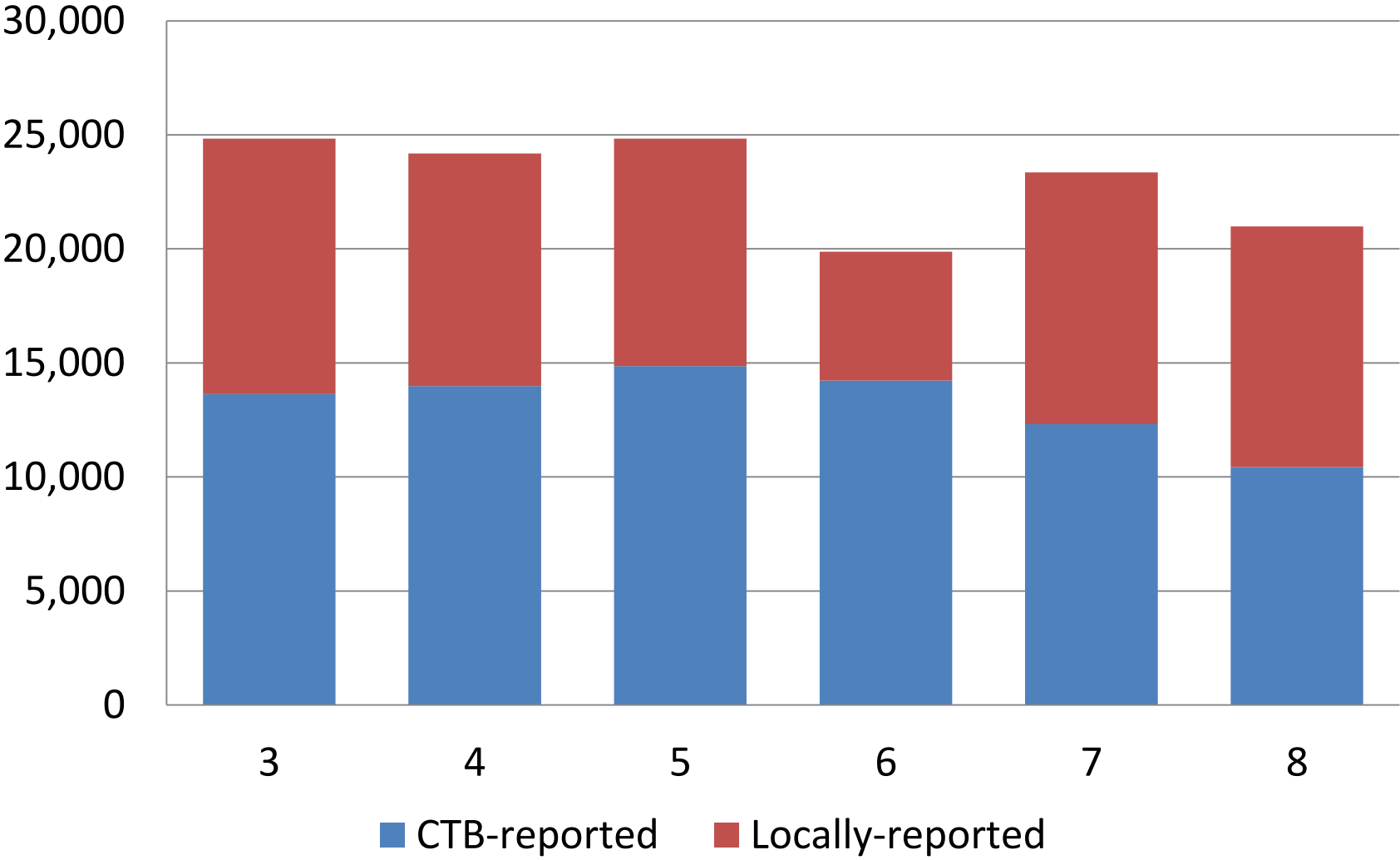
Background

- Online testing for 95% of students
- Increase from 71% in 2012
- Servers overloaded
- Students interrupted mostly in first two days
- Since math is the first test taken, more students interrupted in math than other tests

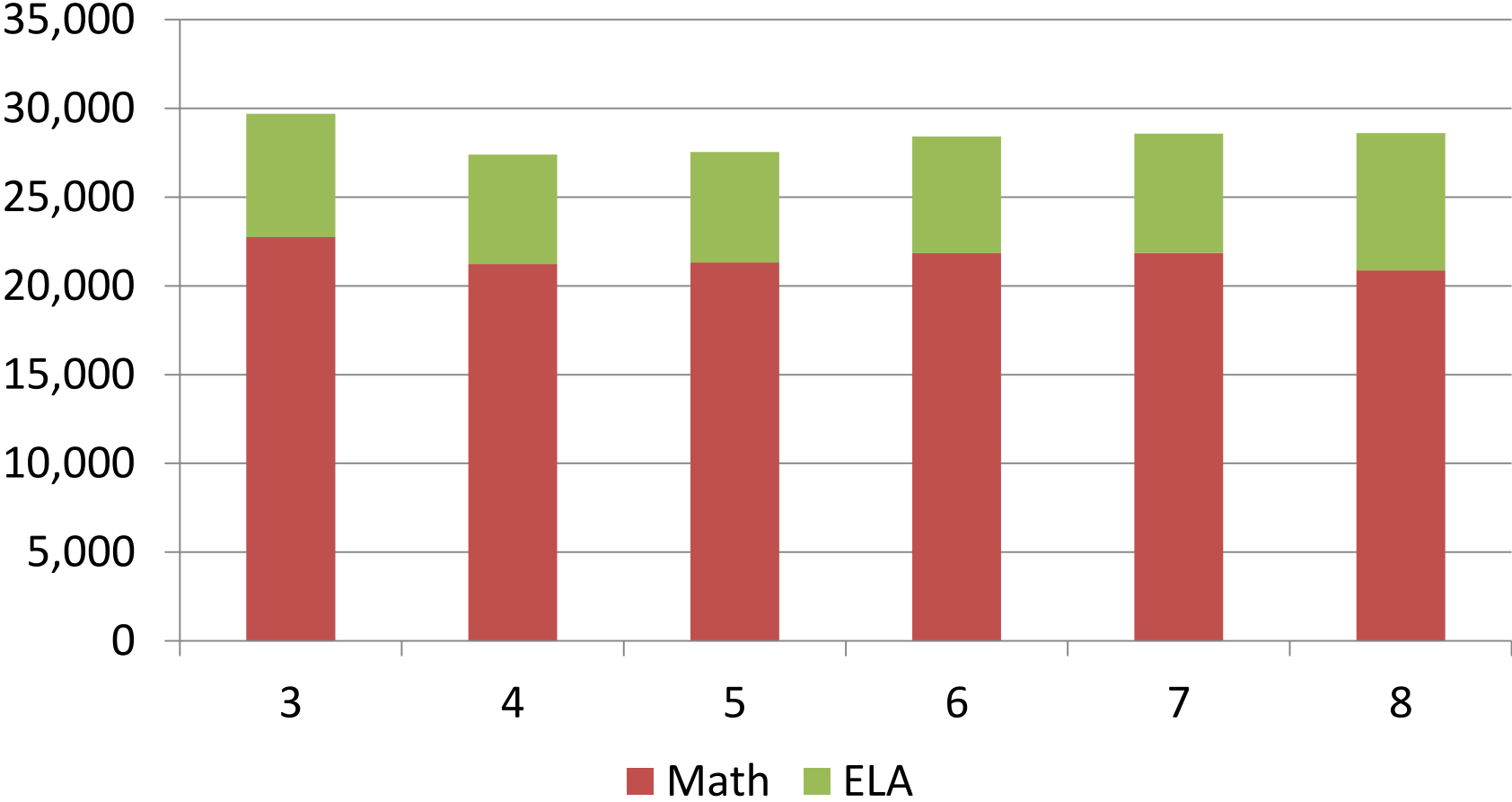
Reported of Interruptions

- Two sources
 - CTB has produced a detailed data base of the interruptions
 - A list of all CTB-identified students sent to districts so that they could append additional students not identified by CTB

Interruptions by Grade



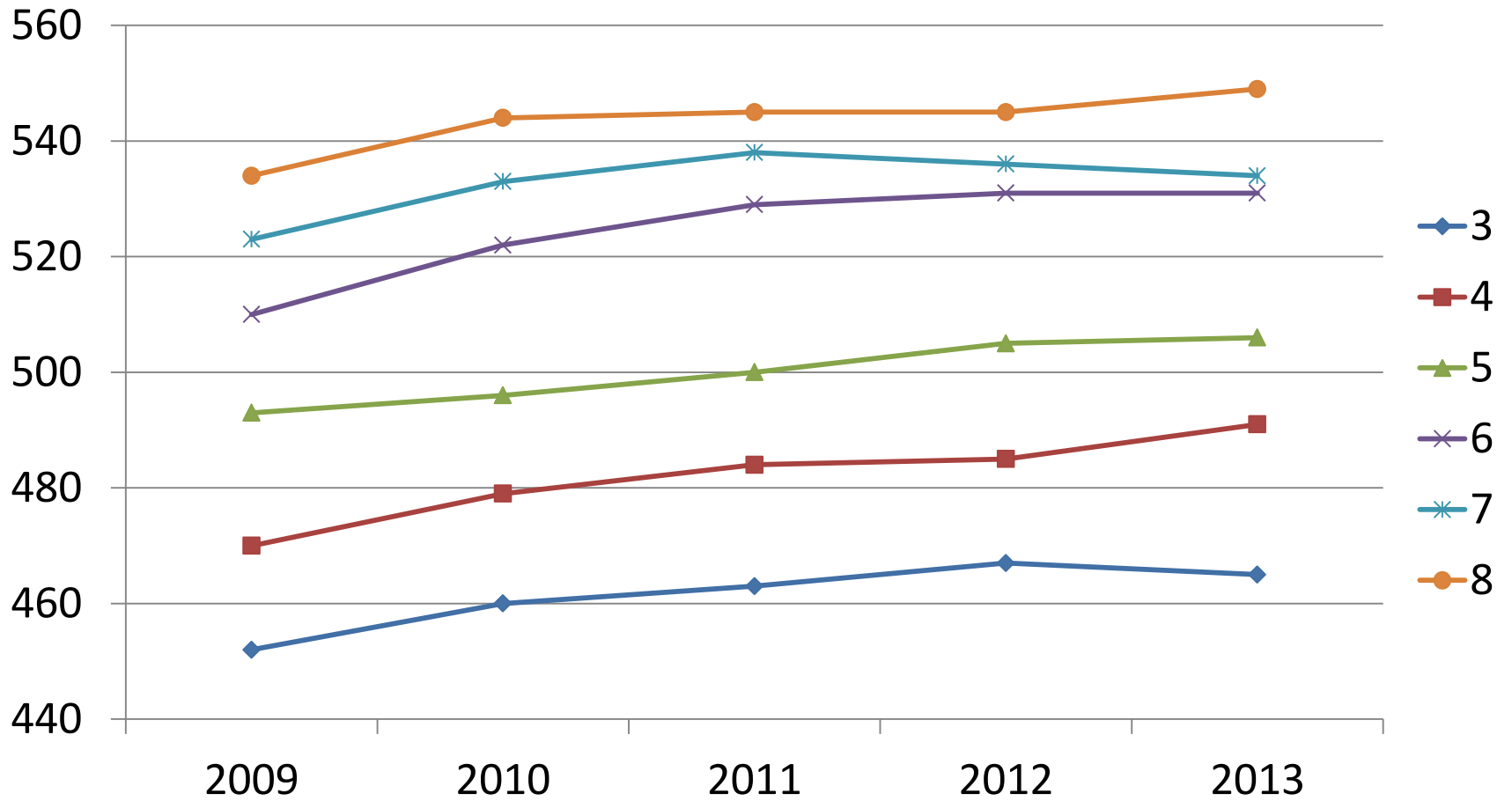
Interruptions by Test



Includes both CTB- and locally-reported interruptions

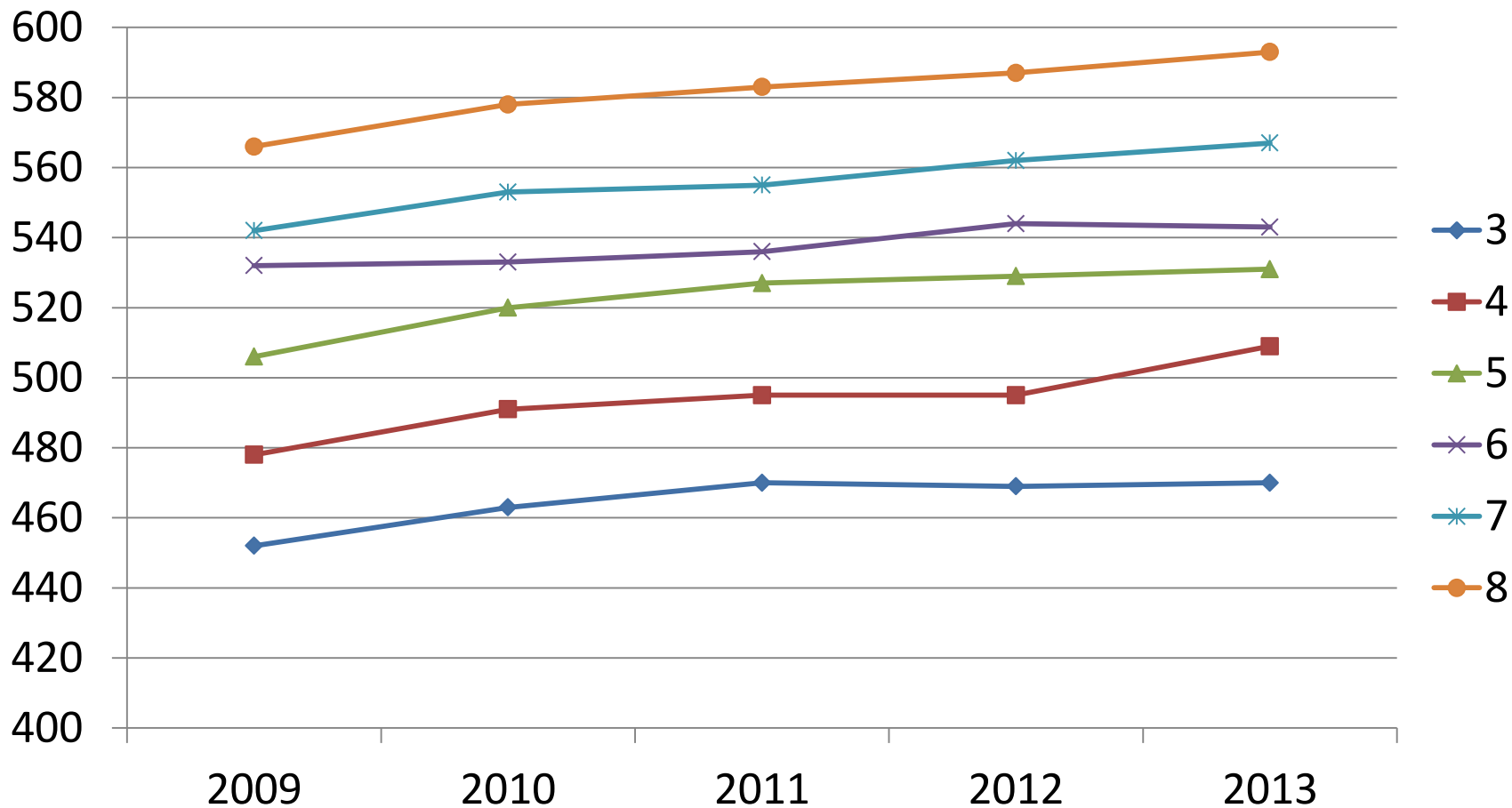
Changes in Mean Scores over Years

ELA



Changes in Mean Scores over Years

Mathematics



Additional Center Analyses

- School-by-school improvement at same grade between 2012 and 2013
- School-by-school gain, following same cohort of students across grades
- Student-level gain by students matched from 2012 to 2013

CTB Analyses

- Group Analyses
 - Overall statewide averages
 - Interrupted vs. non-interrupted within 2013
 - Scores before interruption vs. scores after interruption
- Individual Analyses
 - Before vs. after interruption
 - Performance predicted from previous tests
- All analyses were well-conceived, well-executed and interpreted appropriately

Results

- All analyses—both the Center’s and CTB’s—yield the same result: no consistent, discernible effect of interruptions
- While there is minimal impact when measured across all students, it is reasonable to presume that some students were adversely affected by the interruptions

Invalidations

- Modified model established in 2011
 - Identified as interrupted, either by CTB or local school personnel
 - Performance relative to prediction
 - Identified students scoring three or more raw score points below prediction
 - Time
 - Identified students who took less than 20 minutes or more than 70 (mathematics) or 90 (ELA)

Numbers of Proposed Invalidations

Variable	Value	Math	ELA
Grade	3	266	64
	4	248	33
	5	191	53
	6	134	54
	7	129	47
	8	133	36
Who Reported	CTB	822	152
	Local	279	135
Amount of Time Taken	Too Little	125	147
	Too Much	976	140
Total		1101	287

Conclusions

- Quality of CTB interruptions data allowed study of this issue in great detail
- We will never know definitively how students would have performed had the interruptions not occurred
- It appears that the impact of interruptions on student scores was negligible for the vast majority of students
- Credit goes to students and school personnel for minimizing the impact of the interruptions on scores
- A limited number of students will have their scores invalidated