



Elementary Program Review

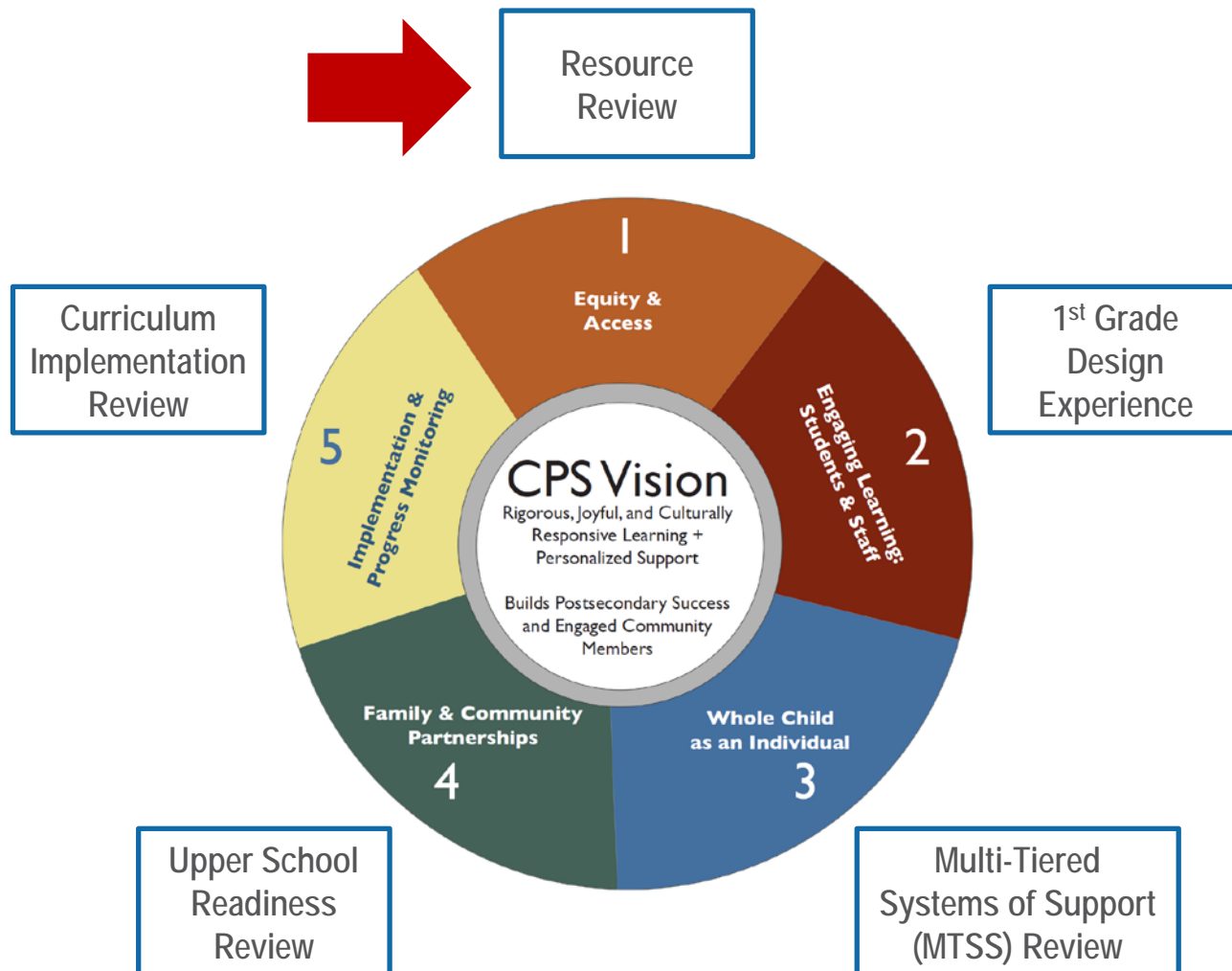
School Committee Meeting • January 23, 2018

REVISED January 27, 2018

Today's discussion

- Context
 - How this work fits within the Elementary Program Review
 - Defining our performance challenge
- Resource use in our elementary schools
 - How much do we have?
 - How well do we use it?
- Implications and potential next steps

The Elementary Program Review is focused on ensuring all Cambridge students can read by 3rd grade



About Education Resource Strategies

ERS is a **non-profit organization** dedicated to **transforming** how urban school systems organize **resources** (people, time, and money) so that **every school succeeds for every student**.

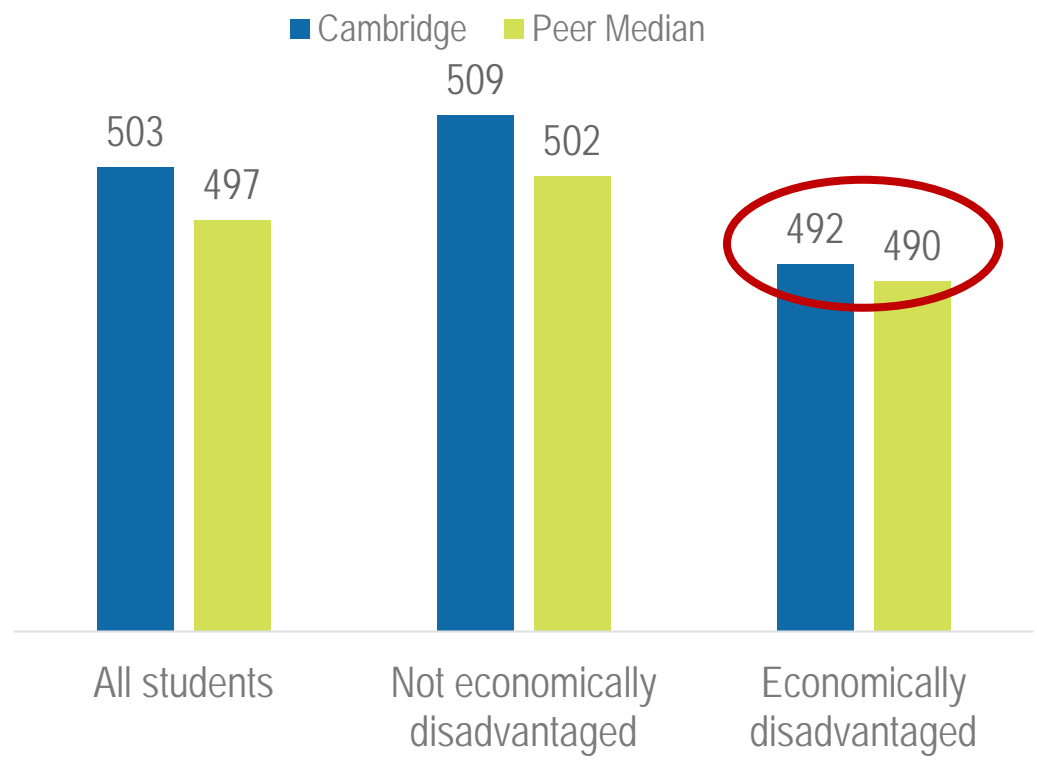
We believe:

- **All students deserve a great education** tailored to their needs.
- One school-at-a-time reform is not enough; **we must redesign school systems** to create the conditions for all schools to succeed.
- It's not *just* about how much you have, but how well you use it: districts can restructure their resources to meet their strategic goals and schools' unique needs.



Our economically disadvantaged students perform on par with their peers in other districts, in spite of higher funding levels

Average Grades 3-5 MCAS ELA scaled scores, 2017



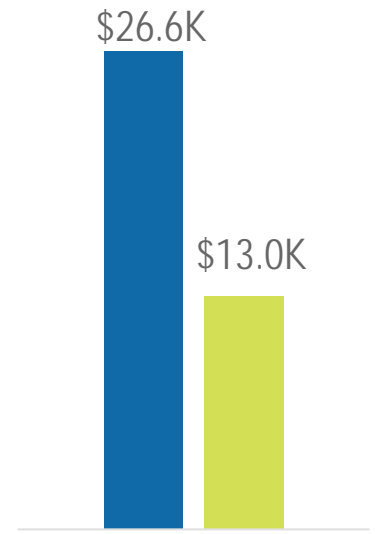
CPS vs. Peer Median

+ 6 points

+7 points

+ 2 points

In-district Expenditures per pupil, 2016



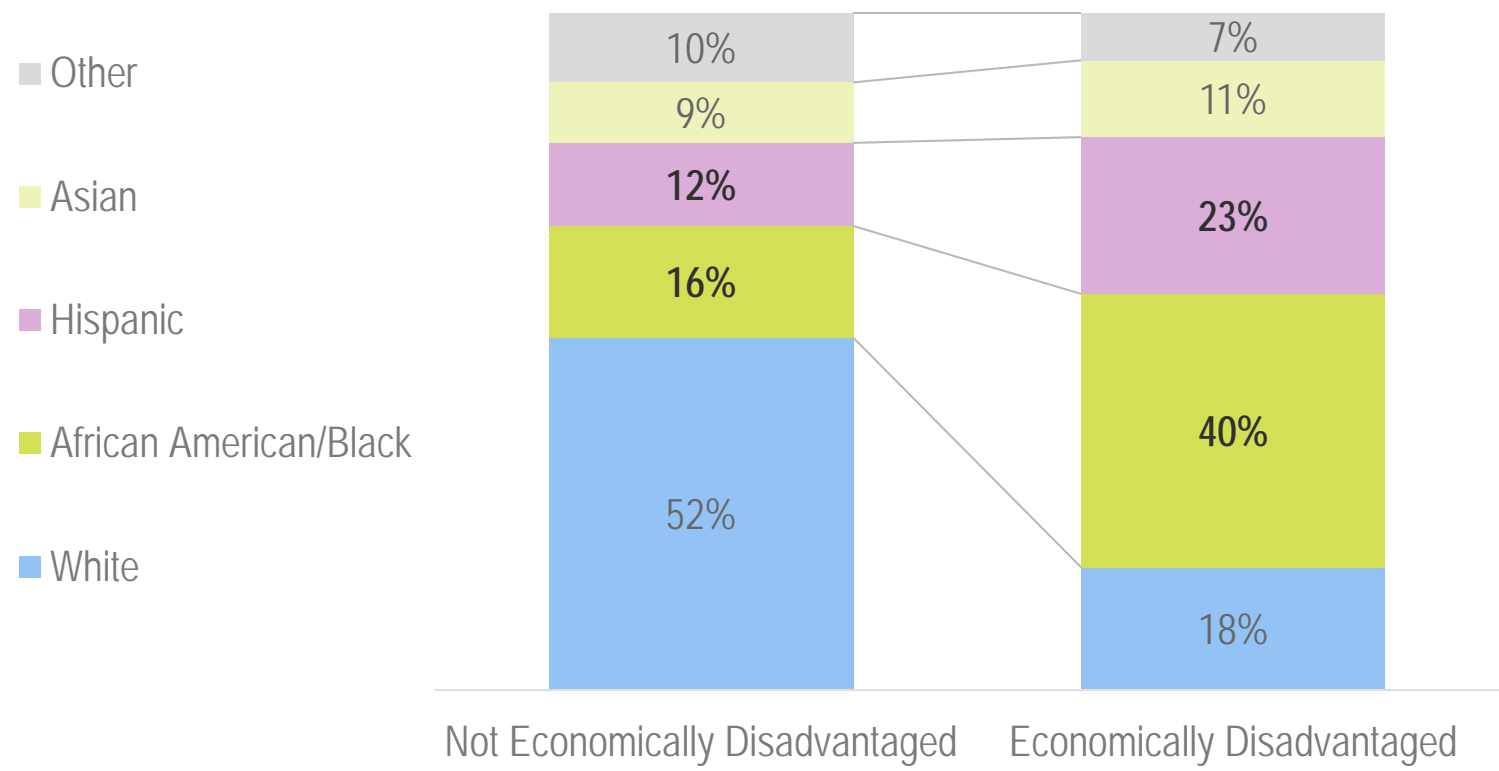
\$ per pupil

+ \$13,600

Source: Mass DESE. Expenditures are 2016 DESE-reported in-district expenditures. Peer districts as defined by DESE are Attleboro, Beverly, Framingham, Haverhill, Leominster, Medford, Methuen, Peabody, and Waltham. Each has between 26% and 45% economically disadvantaged students and spends between \$12,600 and \$19,300 per pupil.

Economically disadvantaged students are disproportionately students of color

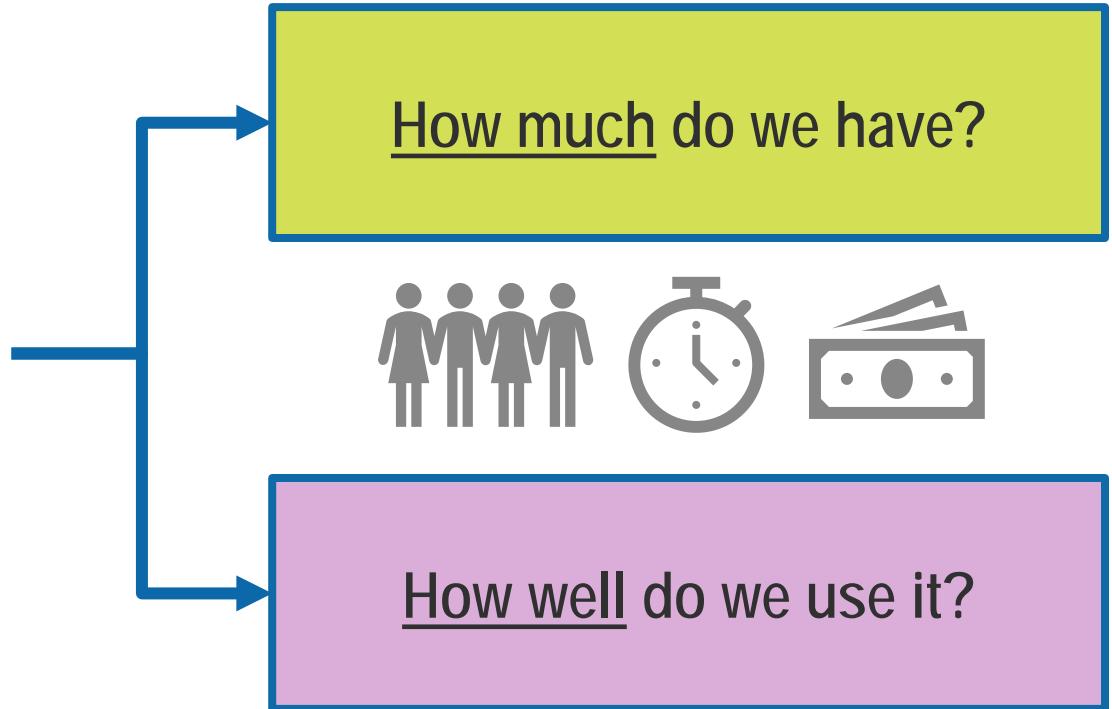
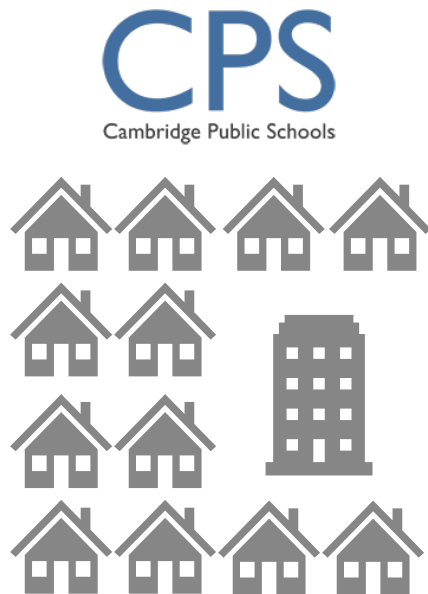
Race of CPS students in grades 3-5



Pct Black or Hispanic: 28% **63%**

*Includes all students with MCAS scores in 2017
Source: Mass DESE; CPS data*

Assessing current resource use



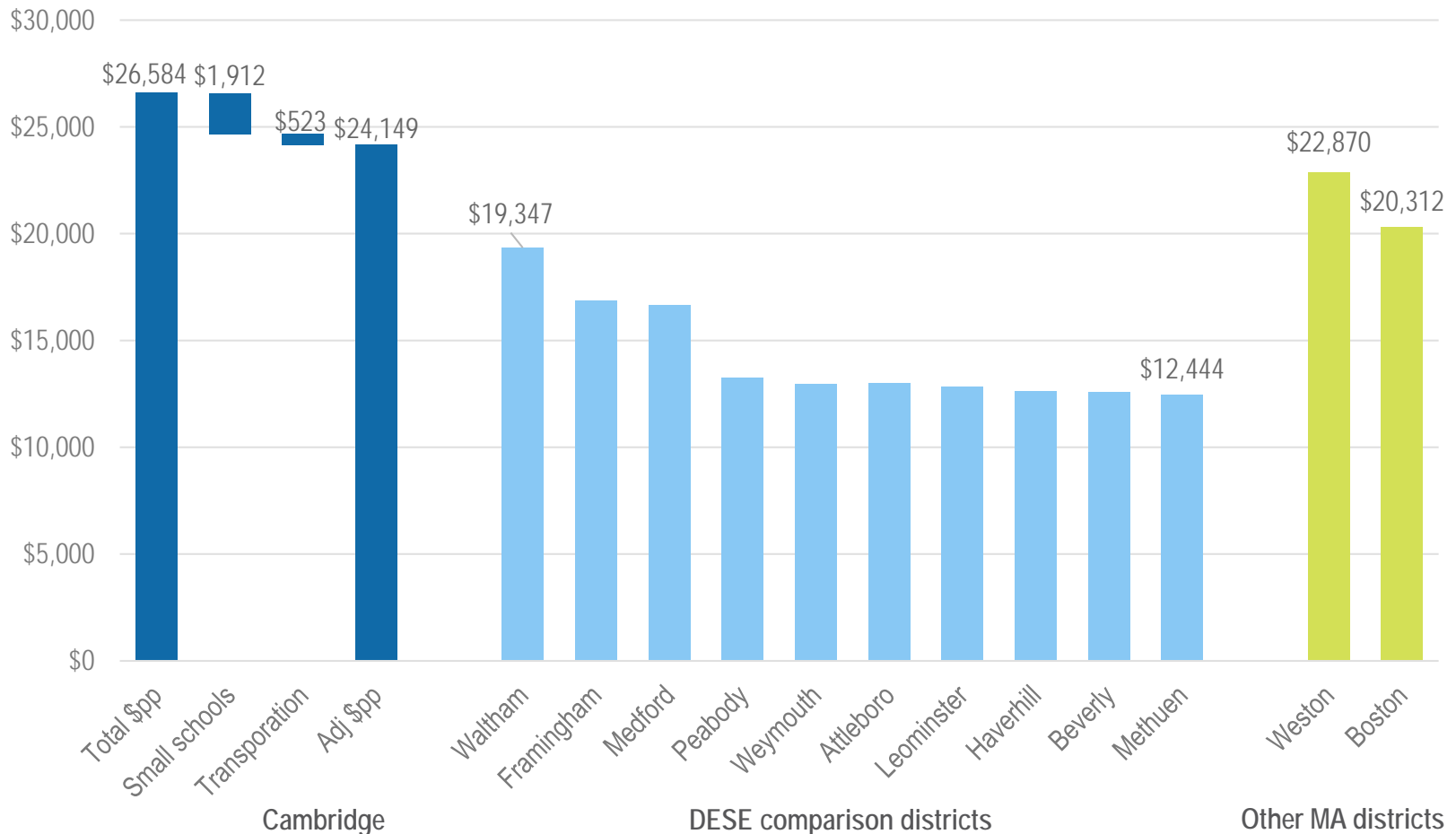
Time is our scarcest resource – but is crucial to improving student performance

Question	Findings from Cambridge
Relative to peers, do we have sufficient financial and talent resources?	Yes. At \$26,600, CPS spends 2x in-state peers. This enables CPS to support richer staffing (lower student:teacher ratios). Principals report they have and can retain high quality teachers.
Do we devote enough to schools vs. central office?	Yes. CPS reports 69% of operating dollars on school budgets, among the highest in ERS' national comparison database.
Do we distribute resources in line with student need?	Yes. Schools with higher need receive more district resources (although flat staffing ratios mean smaller schools often receive marginally more resources on a per-pupil basis).
Do we have enough instructional time?	No. In regular-schedule schools, CPS has less in-school time (1,080 hours/year) than national peer districts.

After controlling for small schools and transportation, CPS still invests more than other MA districts

In-District Expenditures per pupil, 2016

Including adjustments for CPS investments in small schools and transportation



Source: Mass DESE, ERS analysis

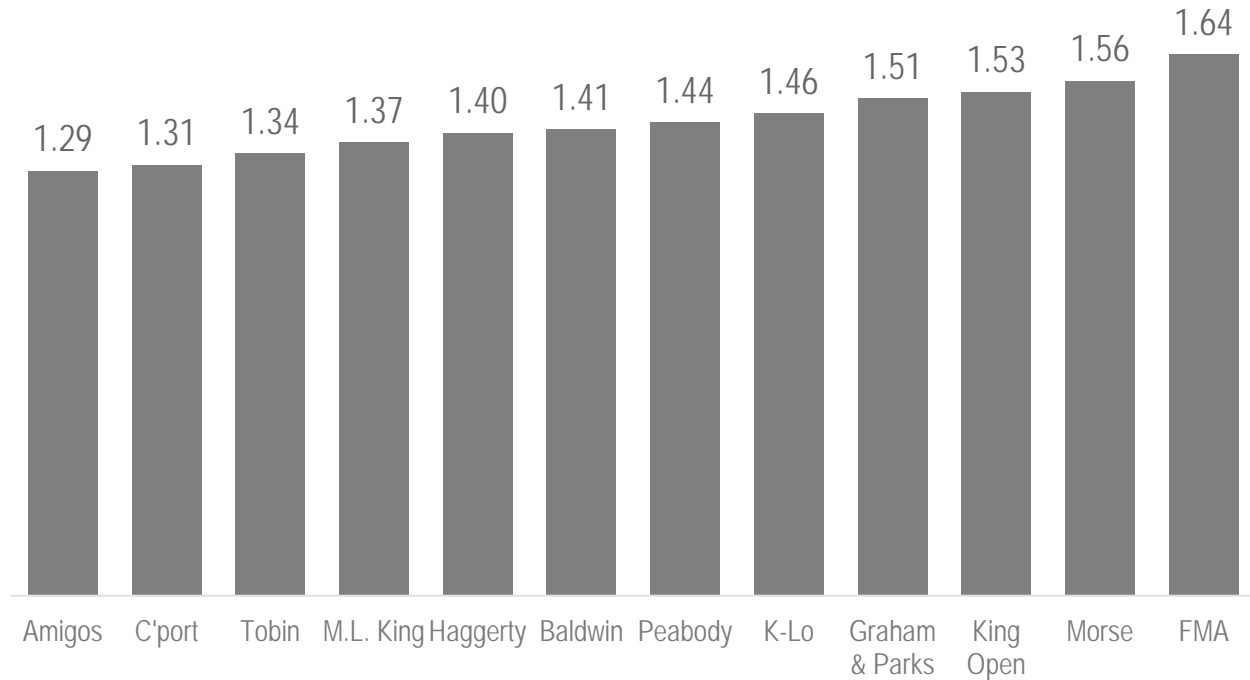
Student need varies significantly across CPS schools

Need Index

Gen ed weight = 1.0

plus:

Research-based adjustments for each student qualifying as FRL (0.3), ELL (0.3) and SWD (student with disabilities, 1.5)



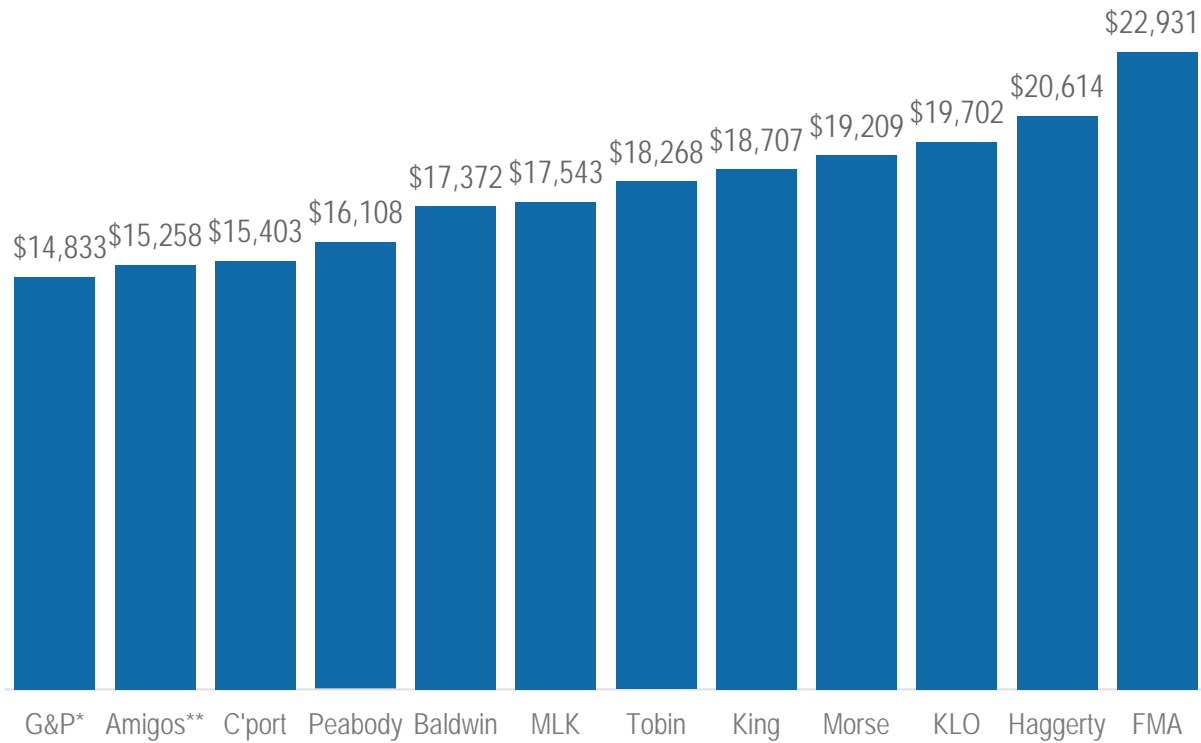
		Amigos	C'port	Tobin	M.L. King	Haggerty	Baldwin	Peabody	K-Lo	Graham & Parks	King Open	Morse	FMA
Lowest quartile need	FRL	30.9%	40.1%	37.1%	42.6%	36.4%	34.8%	38.6%	58.1%	45.9%	44.8%	45.0%	66.2%
	ELL	5.8%	5.6%	2.9%	6.6%	7.5%	4.8%	4.4%	26.9%	37.7%	6.0%	7.4%	11.2%
Highest quartile need	SWD	11.9%	11.3%	14.7%	15.1%	18.2%	19.7%	20.5%	13.8%	17.2%	25.1%	27.0%	27.3%

Excludes students in Special Start Pre-School program.

Source: CPS FY17 data; ERS Analysis

After adjusting for need, smaller schools and schools with greater need receive more funds per pupil

School-reported budget, \$ per weighted pupil



What drives variation?

- ✓ Student need
- ✓ Investments in special populations and programs
- ✓ Differences in school size
- ✓ Fixed staffing ratios
- ✗ Differences in teacher salaries
- ✗ Accuracy of enrollment projections
- ✗ Centrally controlled resources

	G&P*	Amigos**	C'port	Peabody	Baldwin	MLK	Tobin	King Open	Morse	KLO	Haggerty	FMA
Need index	1.51	1.29	1.31	1.44	1.41	1.37	1.34	1.53	1.56	1.46	1.40	1.64
Students	379	379	284	298	330	317	278	319	282	253	253	260

Quartile	
Lowest need	Greatest need
Largest	Smallest

*Graham & Parks \$pwp is low due to one-time enrollment issue.

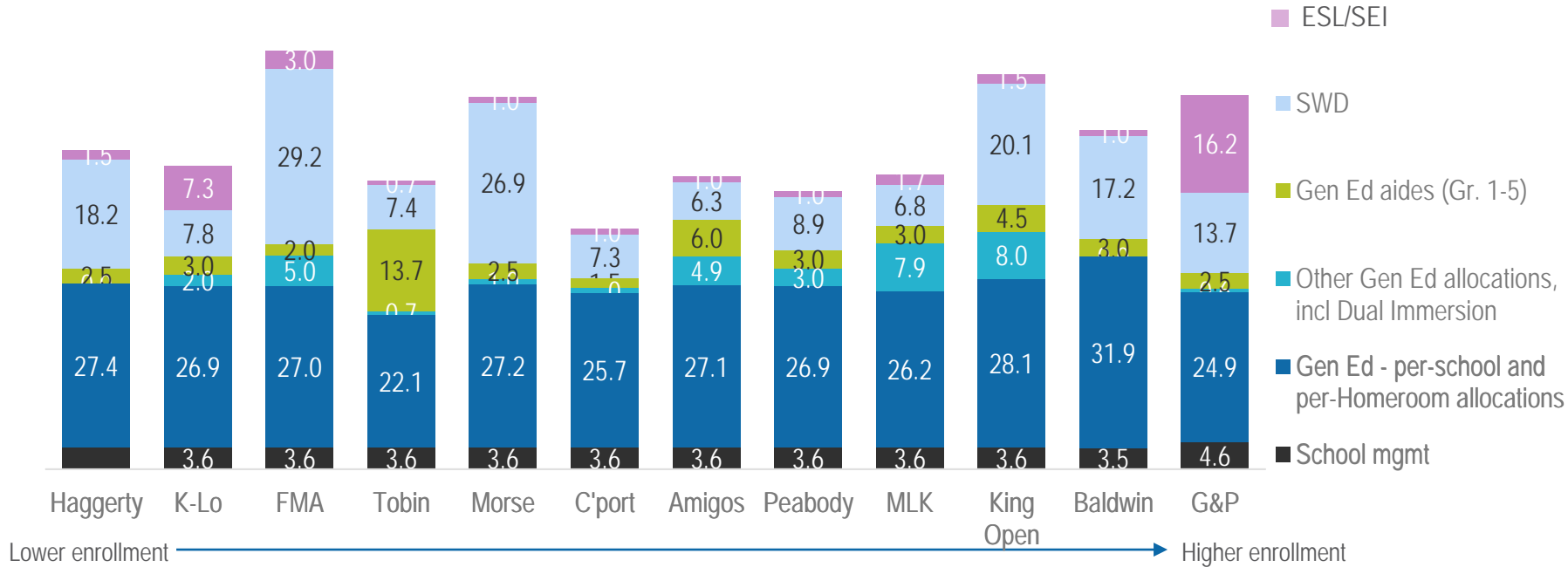
** Amigos enrollment includes middle grades students

All data exclude Special Start Pre-School program.

Source: CPS FY17 data; ERS Analysis

SWD and ESL/SEI staffing levels vary across schools, while fixed ratios drive most other staffing levels

School-based instructional and management staff FTEs



	Haggerty	K-Lo	FMA	Tobin	Morse	C'port	Amigos	Peabody	MLK	King Open	Baldwin	G&P
Students	253	253	260	278	282	284	292*	298	317	319	330	379
Homerooms												
SEI		3	1									8
Self-Cont			6		4					3	2	2
Gen Ed	15	13	14	13	14	14	14	14	19	20	17	13

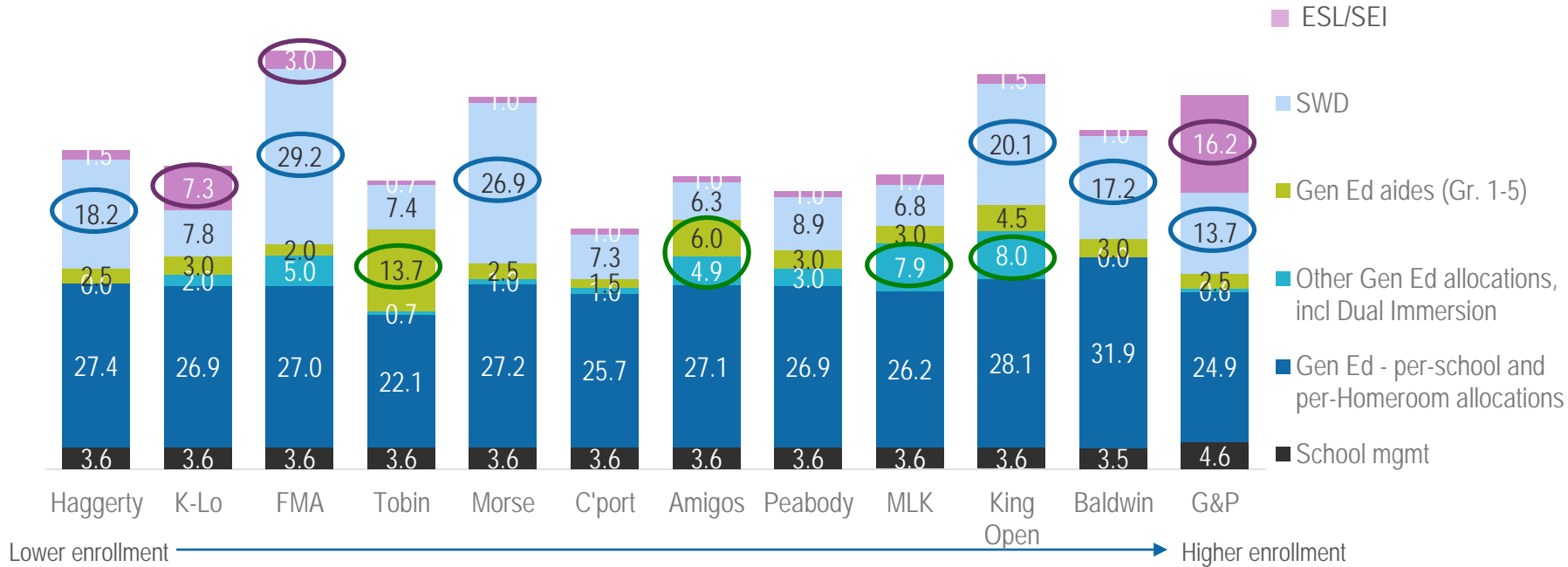
* JK-5 students only

See Appendix for full breakdown of assignment of positions types to categories

Source: CPS FY17 data; ERS Analysis

Schools with specific needs and histories account for most variation

School-based instructional and management staff FTEs



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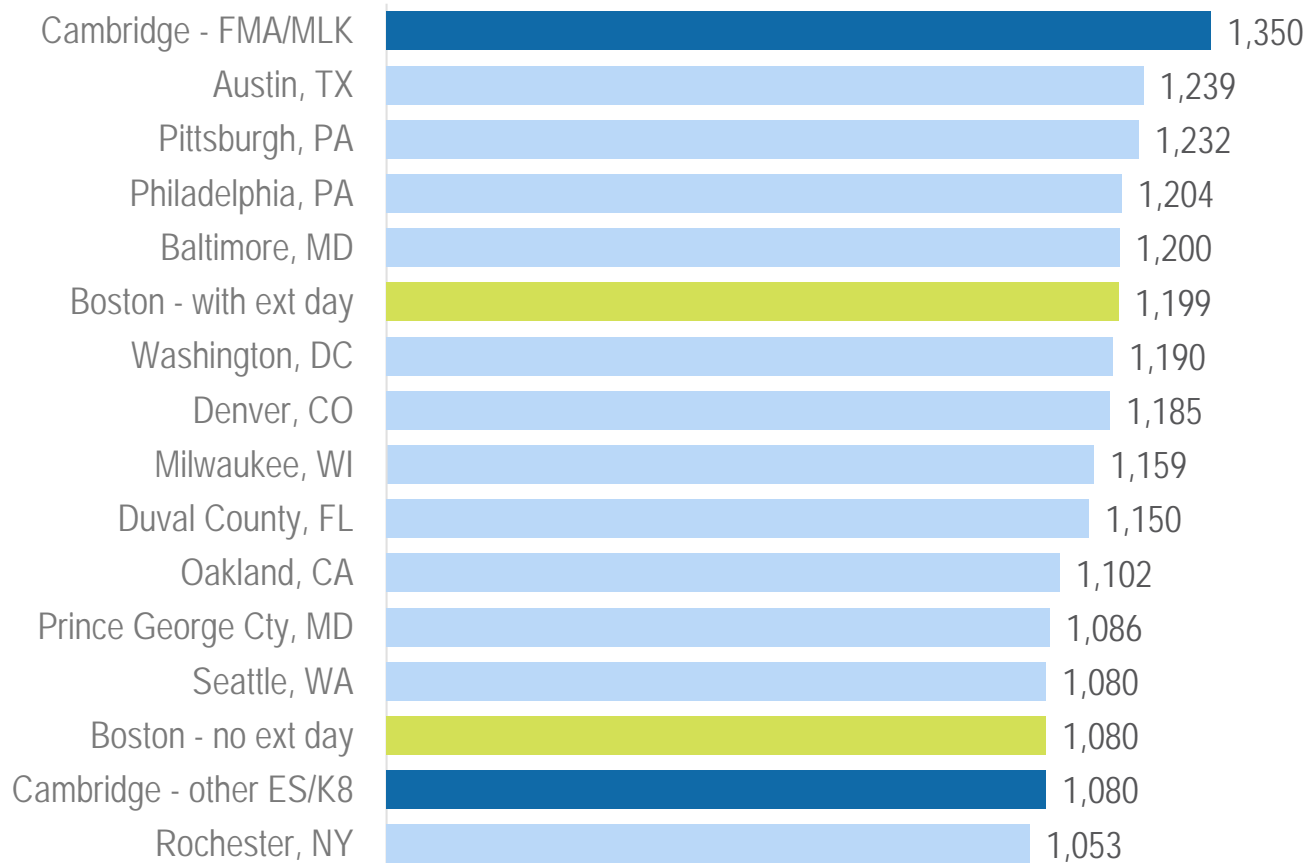
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See Appendix for full breakdown of assignment of positions types to categories

Source: CPS FY17 data; ERS Analysis

In most CPS schools, student time is among the lowest in the country

Estimated annual elementary school student hours



"The one thing we do not have is time... Even if we got 45 more minutes a day it would change the experience for so many kids"

- CPS School Principal

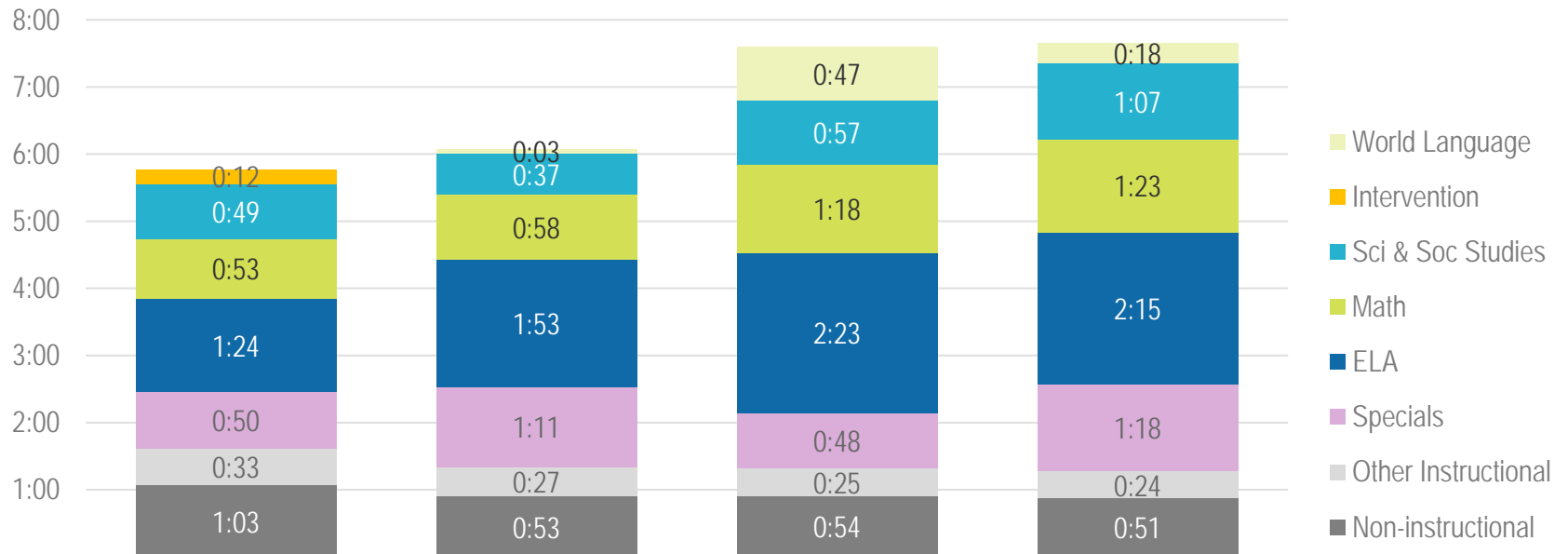
Note: Annual student hours represent the total length of the student day multiplied by the number of school days per year (includes lunch and passing time).

Does not include early release days and schools with expanded learning time unless explicitly named.

Sources: ERS comparison database; CPS CBA; NCTQ TR3 database; Principal focus groups

Extended day schools spread added time across core subjects and foreign language

Average daily time spent by subject, grades 1-5



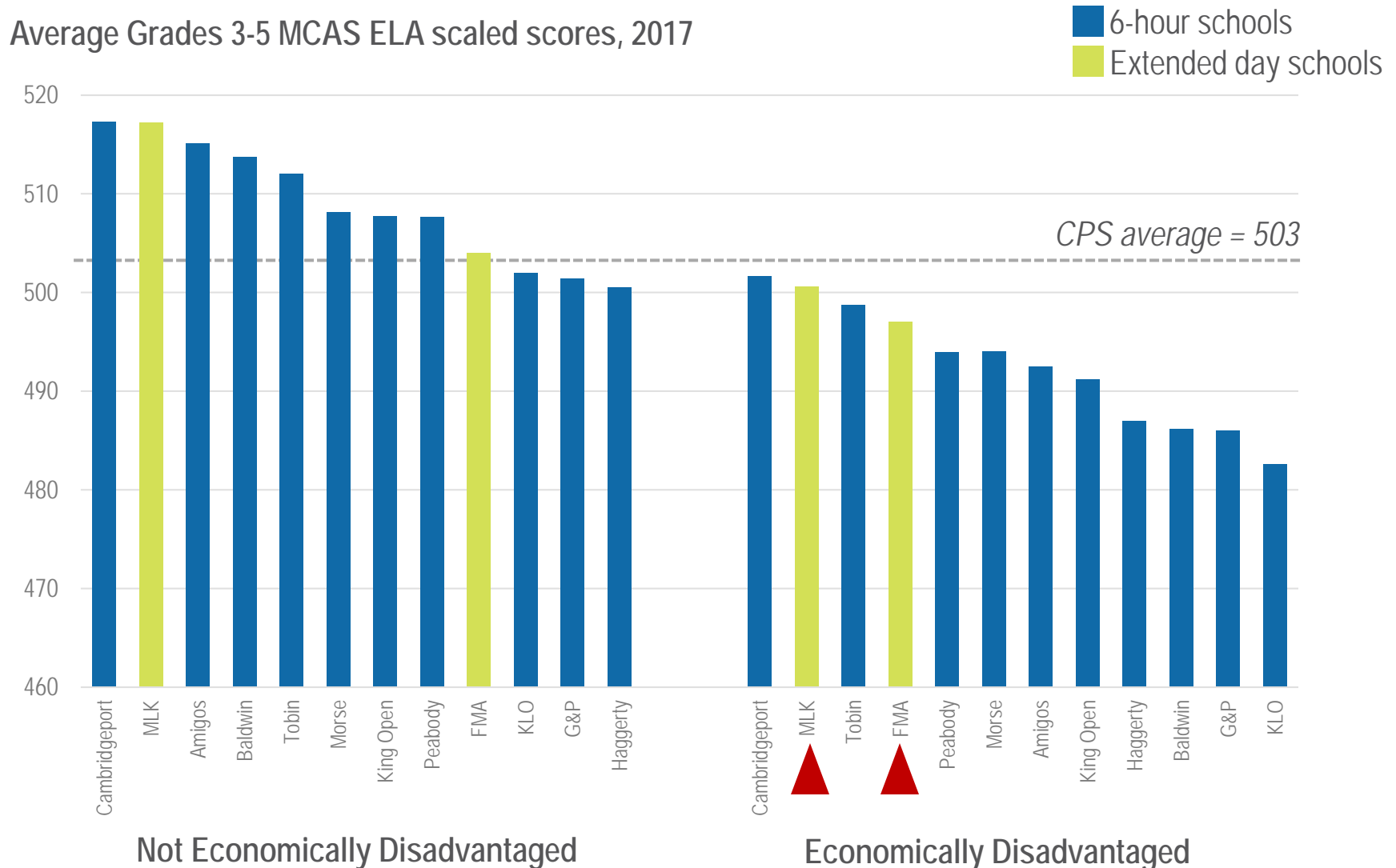
	King Open	Peabody	King	FMA
World Language			+ 0:45	+ 0:16
Science/Social Studies			+ 0:15	+ 0:25
Math			+ 0:23	+ 0:28
ELA			+ 0:45	+ 0:37

Note: Based on available master schedules that may not reflect actual practices. King Open includes grades 3-5 and one grade 2 homeroom only.

Excludes dual immersion and SEI classrooms.

Source: CPS Master Schedules; ERS analysis

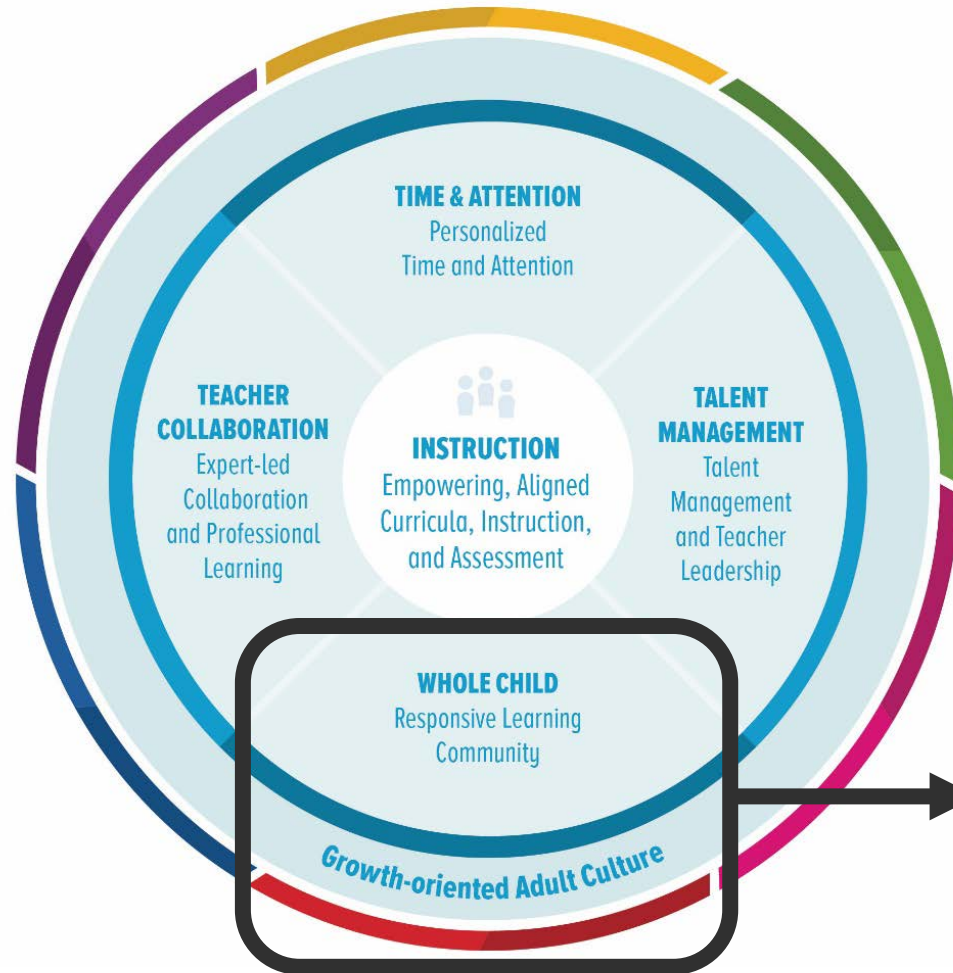
More ELA time may be helping improve performance of economically disadvantaged students



Source: Mass DESE; CPS data

High-performing systems and schools organize school-level resources strategically

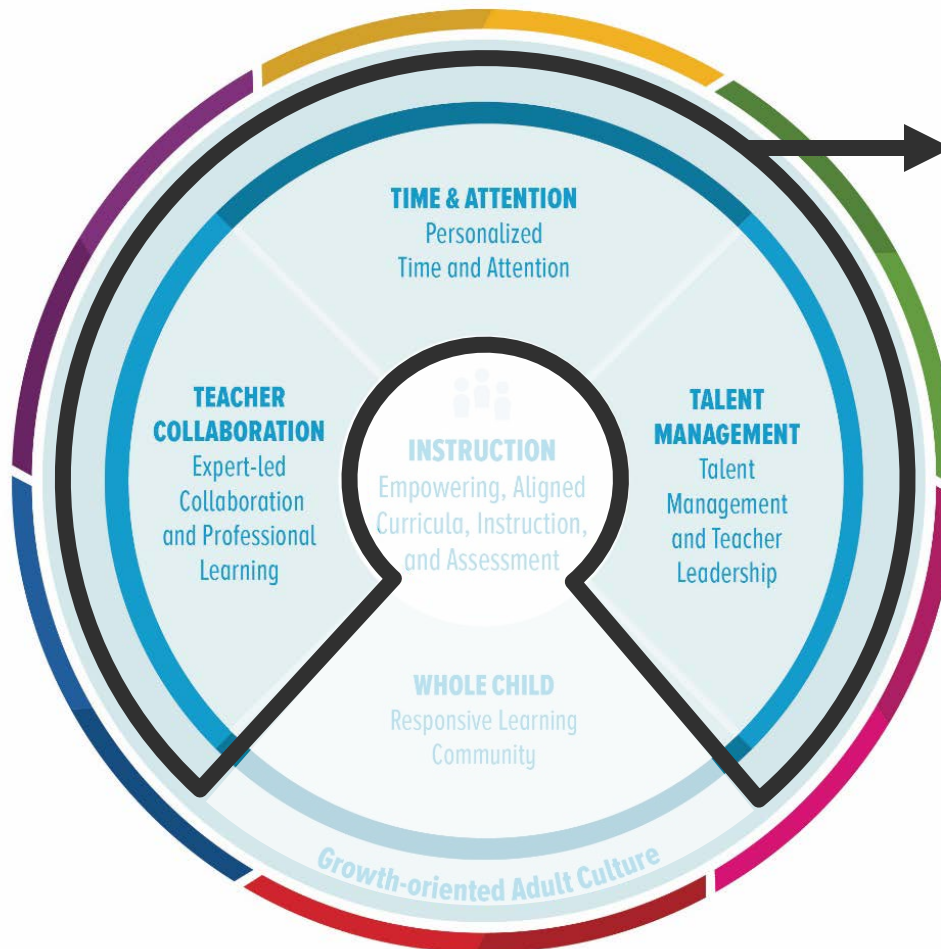
Strategic School Design



Strong and consistent focus for CPS

High-performing systems and schools organize school-level resources strategically

Strategic School Design



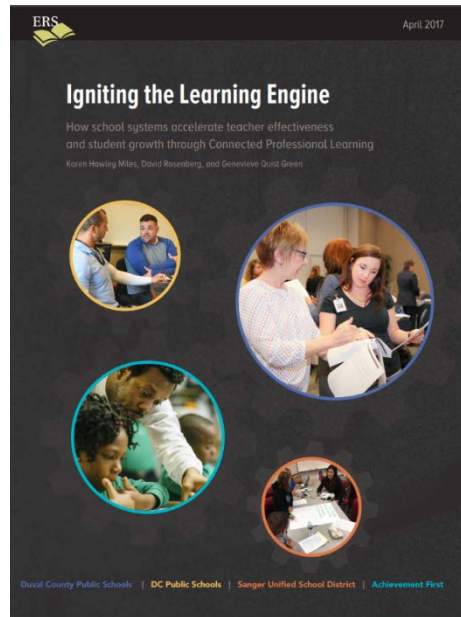
Assets

- Coaches focused on helping teachers improve instruction
- Multiple structures for teacher collaboration

Opportunities

- Expand instructional time for students who are farthest behind
- Create more fluid structures for teacher teaming and small group instruction
- Leverage other teachers – students with disabilities, instructional coaches, librarians, and specials – to reduce group size
- Schedule longer blocks of collaboration time among shared-content teachers

CPS has many foundations for Connected Professional Learning – how can we build on these?



Rigorous,
Comprehensive
Curricula and
Assessments



Ensure that all schools have access to rigorous and coherent curricula, assessments, and other instructional resources aligned to College-and-Career-Ready Standards.

Content-focused, Expert-
Led Collaboration



Organize teachers into teams, led by content experts, that have the time, support, and culture of trust and learning to collaborate on instruction.

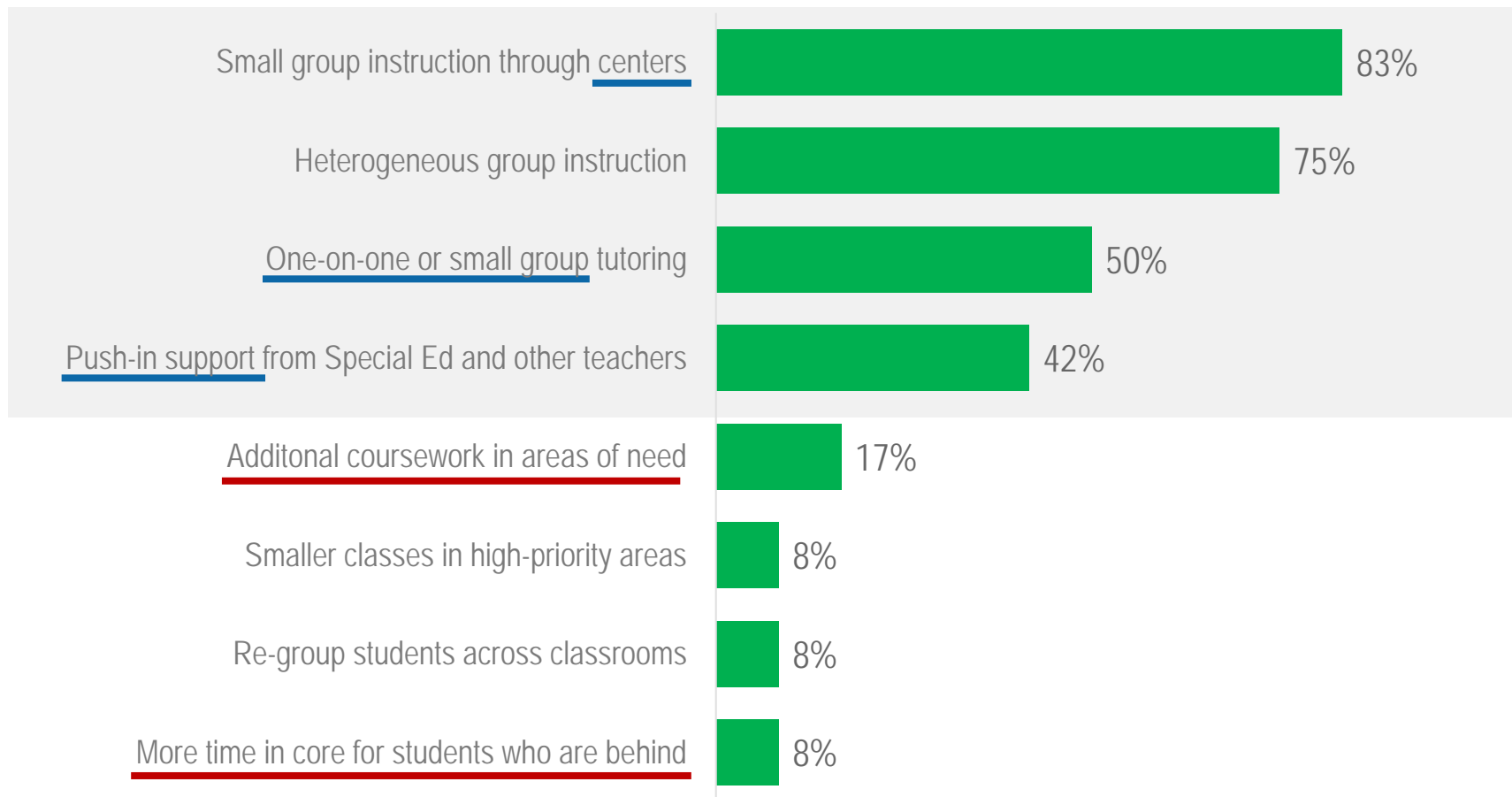
Frequent, Growth-
Oriented
Feedback



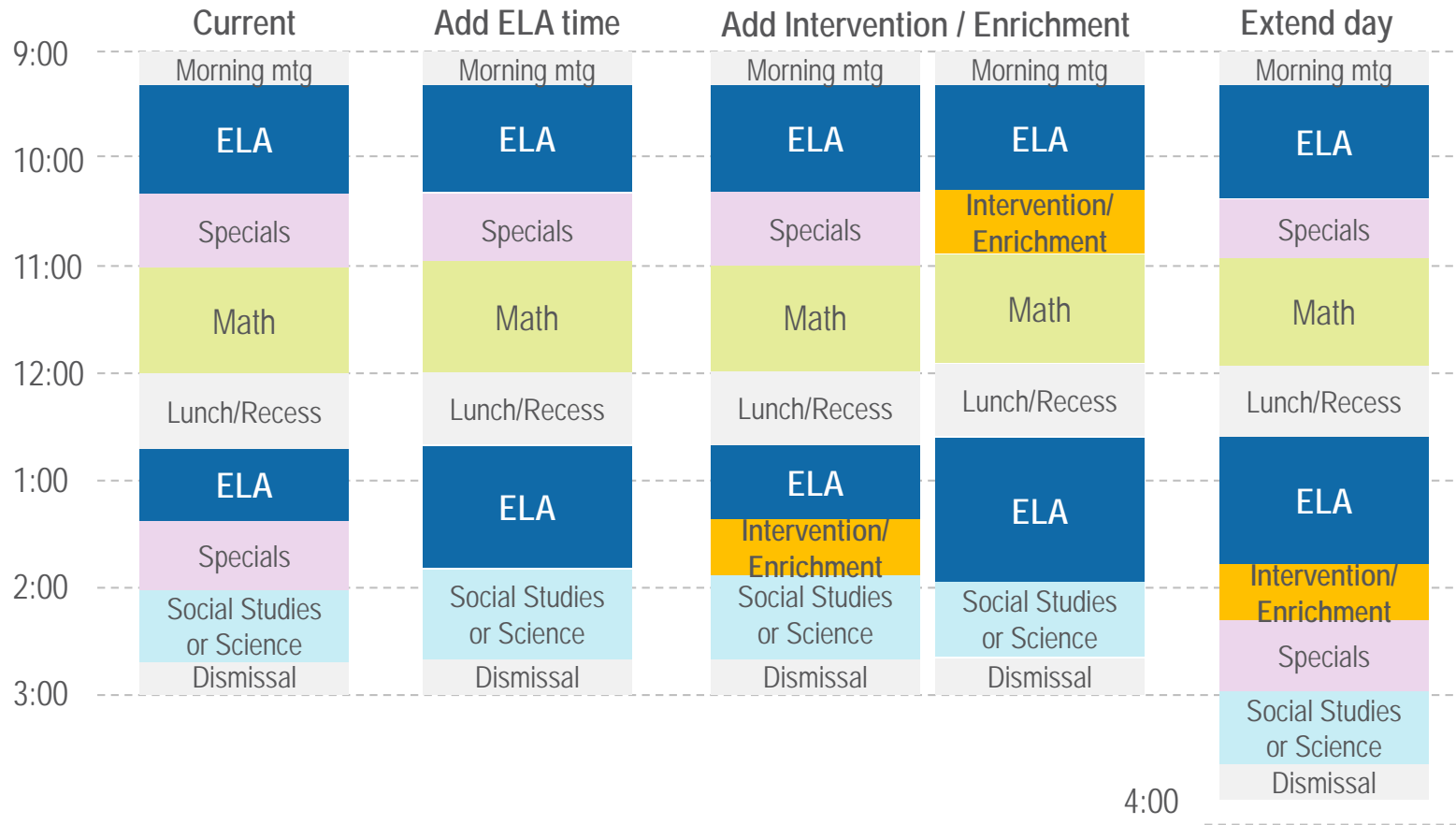
Provide regular feedback from content experts that is focused on helping teachers improve instructional practice.

Practices that provide additional attention for students are most prevalent

Percent of principals reporting practices happen “Mostly” or “Always” in their schools



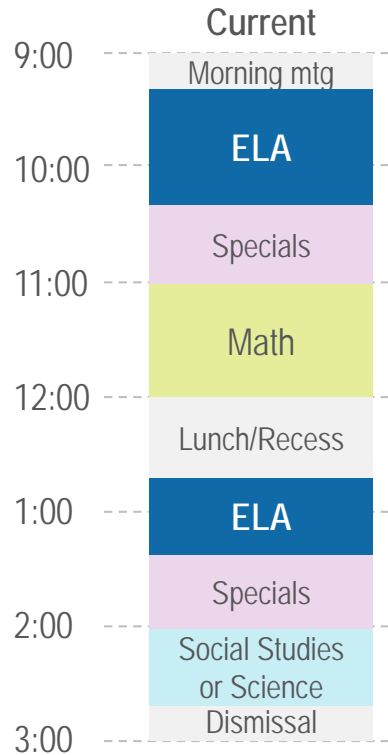
Extending and differentiating ELA instructional time within current structures implies tradeoffs



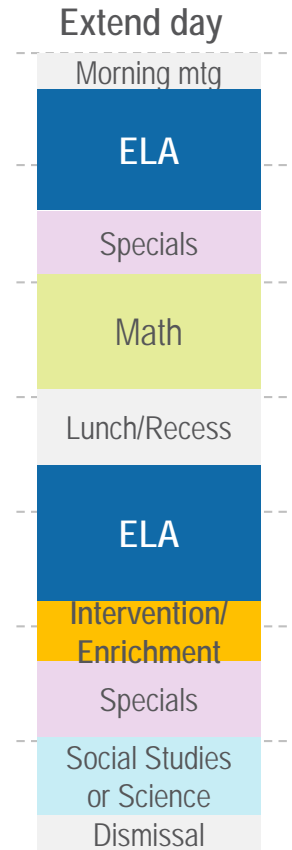
ELA for all	1:40	2:10	1:40	2:10	2:10
Intervention time	--	--	0:30	0:30	0:30
Specials	1:20	0:40	0:40	--	1:20

Source: CPS master schedules, ERS analysis

Extending and differentiating ELA instructional time within current structures implies tradeoffs



- A longer school day could enable:
- Sufficient time for rich core and non-core course offerings **and**
 - Intervention periods for students who are off-track **and**
 - Flexibility for longer, content-focused collaborative planning blocks

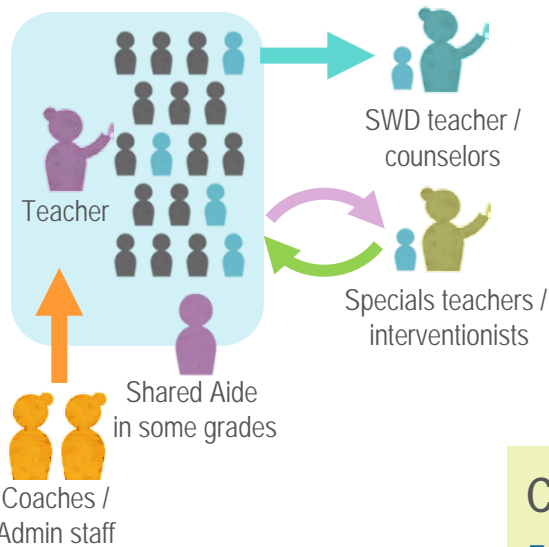


ELA for all	1:40
Intervention time	--
Specials	1:20

2:10
0:30
1:20

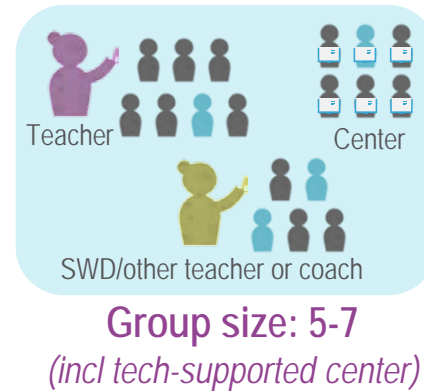
Schools can leverage existing staff to provide small group instruction during intervention blocks

Typical classroom structure



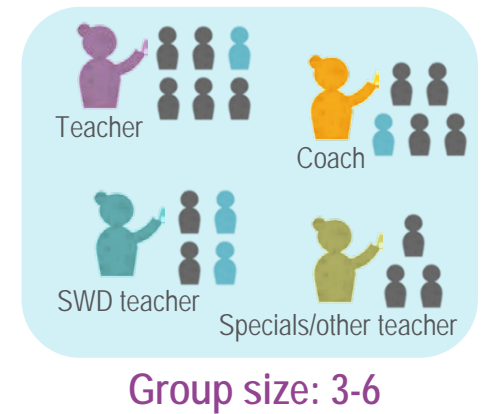
Group size: 9-18

Push-in other staff during ELA / intervention blocks + Centers



Group size: 5-7
(incl tech-supported center)

Concentrate supports in one classroom at a time



Group size: 3-6

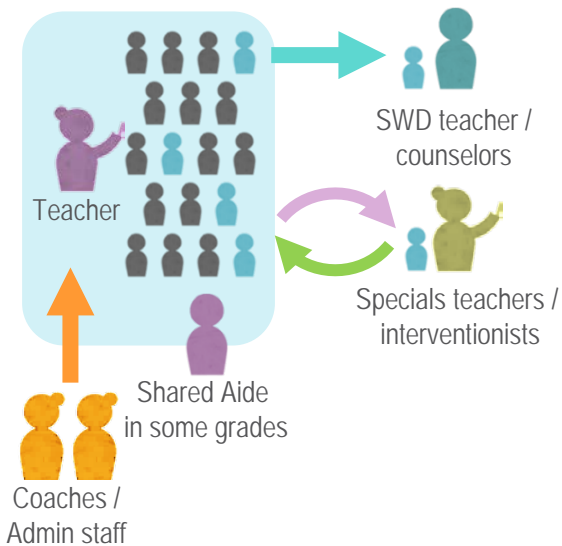
Considerations

- Requires all teachers to be prepared to provide high-quality instruction (e.g., "everyone is a literacy teacher")
- More complex scheduling
- Puts premium on deep, content-driven collaborative planning
- Requires tight coordination of special and general education teams

= SWD

Schools could also re-structure existing staff to differentiate time and attention throughout the school day

Typical classroom structure



Co-teaching, with one dual-certified teacher




Grade-level lead teacher



Family model



 = SWD

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Family model



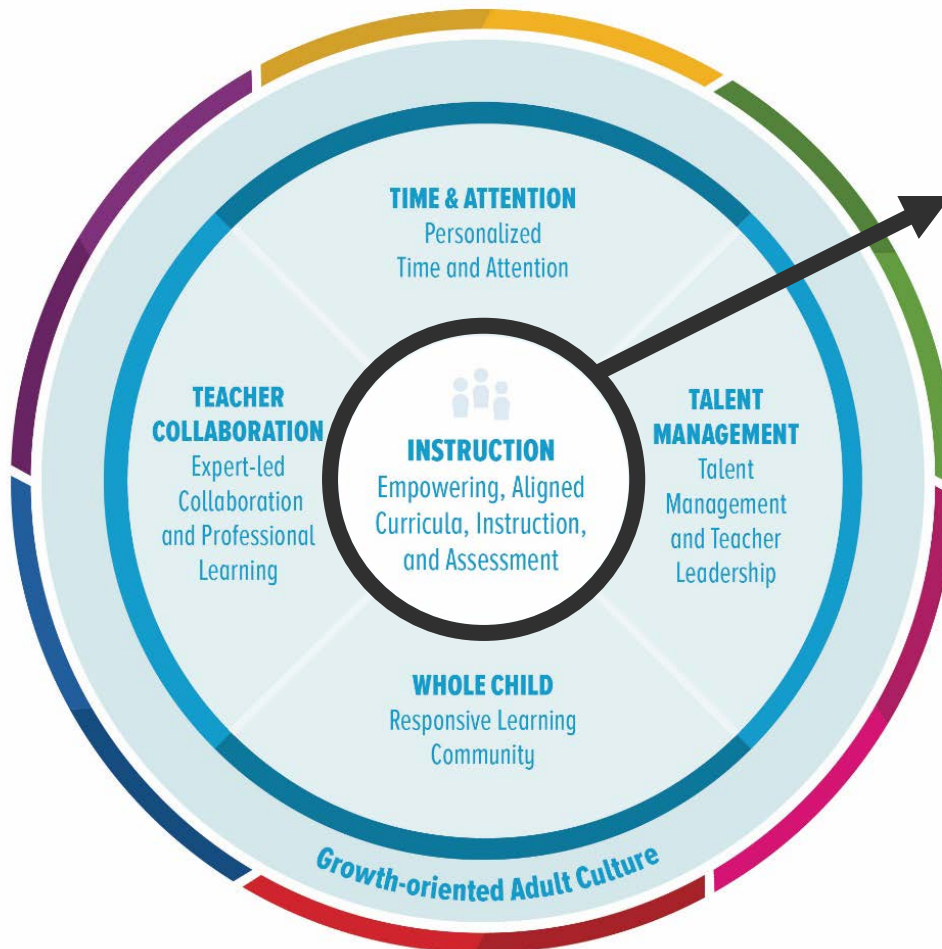
Additional considerations

- Potential creation of new dual-certified and teacher leadership roles
- Greater need for expert support, access to data, and time for effective collaboration
- Requires growth-oriented adult culture committed to continuous improvement to find solutions that are right to address the needs of each school's students

= SWD

High-performing systems and schools organize school-level resources strategically

Strategic School Design



Areas for further exploration

- Curricular rigor and consistency
- Coordination among curriculum groups at the district level
- Effectiveness of / opportunities to improve impact of supports for Students With Disabilities

Summary of findings

While CPS elementary students outperform peers in other Massachusetts districts with similar populations, this gap is driven almost entirely by performance of students who are not economically disadvantaged; students who are economically disadvantaged perform roughly on par with their peers in other similar Massachusetts districts. **To realize our goal of ensuring that all students can read by third grade, CPS must improve reading proficiency among economically disadvantaged students, the majority of whom are Black or Latino.**

Even after controlling for deliberate investments in small schools and citywide transportation, **CPS benefits from significantly higher resource levels than other districts.** These resources are largely devoted to increased staffing levels, including of teachers and other instructors.

The one asset where CPS lacks sufficient volume is time. Students in most CPS schools attend school for less time than their peers in virtually every other district in the U.S. More time with high-quality instruction is especially crucial for accelerating learning of students who are farthest behind. Providing this additional time in the context of a six-hour school day implies reducing time for highly valued instruction in Science or Social Studies, and/or reducing access to Specials like art, music and phys ed. Alternatively, CPS could create more time for differentiated instruction (e.g. intervention time) for students with the greatest academic needs with a longer school day.

CPS also could pilot structures that break down the traditional “one teacher-one classroom” model by more aggressively integrating existing instructional staff into core instruction. These models, which require deliberate planning, system-level support and a focus on continuous improvement, could radically reduce group size to enable a deeper focus on supporting students who are farthest behind. **Because these models leverage existing staff, they could be implemented at no additional cost to the district.**

Bright spots from which CPS can build

1. Cambridge has **significant resources relative to other districts**, even after controlling for deliberate investments in small schools and district-wide transportation
2. CPS allocates **additional need-based resources to schools** based on the presence of English Language Learners and students with special needs in those schools
3. Teachers and principals report **strong, supportive adult culture** in schools including many venues for **meaningful collaboration** among teachers
4. The district has made a deliberate investment in **coaches** who have become **integral to their schools' instructional model**, based on principal feedback
5. Principals report that **teachers commonly provide differentiated attention** and small-group instruction targeting students who are farthest behind
6. Educators have shown a **willingness to pilot different models for organizing classrooms** in pursuit of more learning for all students

Implications and potential next steps

1. **Build on bright spots** in early elementary models and actively share across schools for continuous improvement
2. **Consider extending the school day** to create more time for core literacy instruction and additional time for students who are behind
3. **Pilot and assess impact of more fluid structures for teacher collaboration and small group instruction that:**
 - Integrate SWD and specials teachers, librarians, and coaches into instruction
 - Support structured collaboration across classrooms that create scale for flexible student grouping and leverage teacher expertise
 - Are budget-neutral due to shifting use of existing instructional resources
4. **Develop school prototypes, including schedules and staffing models**, that would enable principals and teachers to accelerate learning for students who are farthest behind
5. **Assess rigor, consistency, and coordination of curriculum efforts** at the district level
6. **Assess investments to support Students With Disabilities** for effectiveness and opportunities to improve impact of these supports

Questions or discussion