Practitioner Brief for CAFÉCS Research-Practice Partnership and Chicago Public Schools

SUPPORTING ALL IN AP COMPUTER SCIENCE PRINCIPLES

How can CPS support all students in AP CSP like students with IEPs, students with 504 plans?

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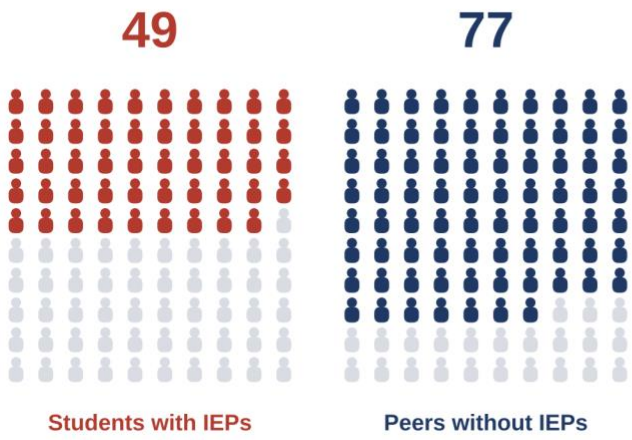
9,294	46	337	762
AP CSP students, 2016–2023	CPS schools	students with IEPs	students with 504 plans

Students with IEPs took the AP CSP exam less often and scored lower, when compared with similar peers to them without IEPs.

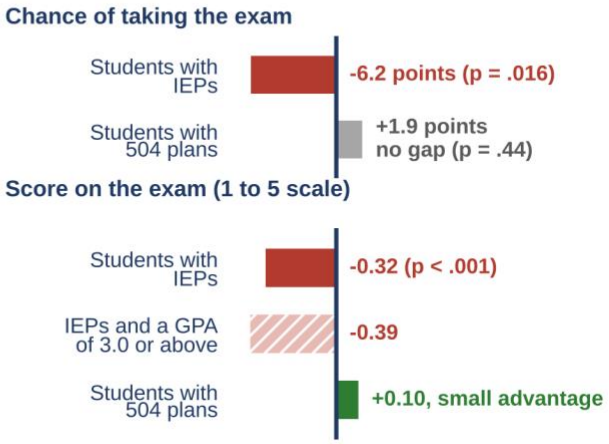
Students with 504 plans showed no penalty on either outcome. The gap is specific to the resources of the IEP system.

8 of 21 measurable schools closed the gap. The fix runs through routines schools already staff.

Out of 100 students, how many took the AP exam?

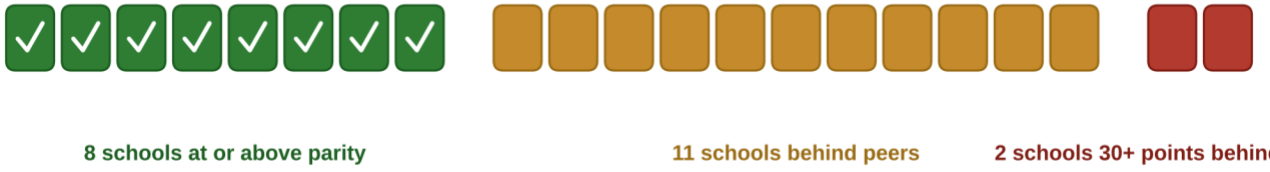


Compared with similar students without these plans



Same district, very different results

Each square is one CPS school with at least 5 AP CSP students with IEPs. Raw gaps ran from 18 points ahead of peers to 30 or more points behind; the district mean was 9 points behind.



Where the gap is largest

Grades 11–12	GPA < 3.0	Took ECS first	GPA > 3.0
Larger exam-taking gap	Larger exam-taking gap	Large exam-taking gap, though ECS reduces the score gap	Largest score gap (0.39 lower)

Closing the exam-taking gap district-wide would take 3 more students with IEPs sitting for the exam each year.

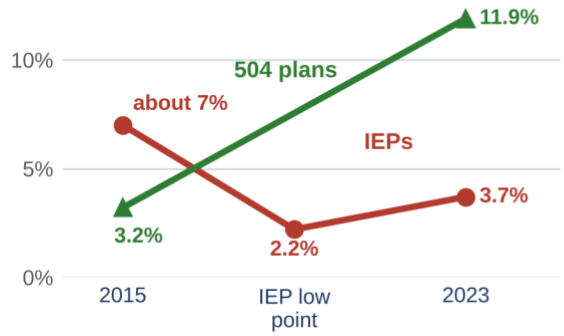
OVER TIME: WHAT NINE YEARS OF CPS RECORDS SHOW

AP CSP enrollments, 2014–15 to 2022–23: 11,406 student-years in 47 high schools, covering all AP exams. AP CSP grew from 1 Chicago high school to 38 between 2015 and 2023.

Students with 504 plans became a larger share of the course. Students with IEPs did not, and their gap in taking the AP CSP exam did not close.

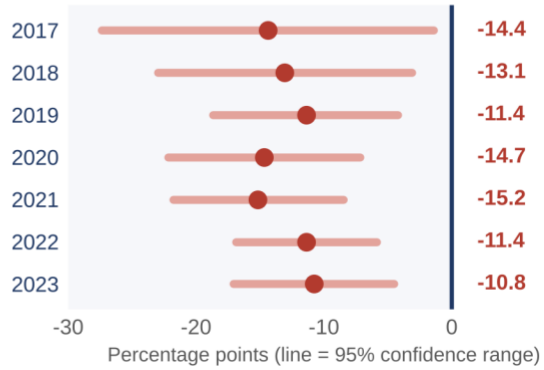
Share of AP CSP enrollees

IEP and 504 groups, 2015 to 2023



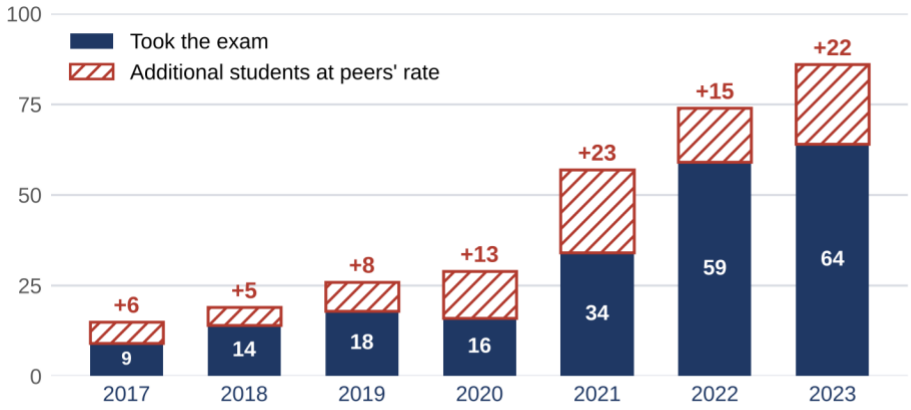
Gap in taking the exam, by year

Students with IEPs vs. matched peers



Across all years, students with IEPs were **13.9 percentage points less likely to take the exam** (95% range 9 to 19) and **15.5 points less likely to score 3 or higher** (95% range 9 to 22) than closely matched peers. Reporting students with IEPs + 504 plans would hide this decline.

What parity would have meant: 92 more students with IEPs at the exam.



Across 2017 to 2023

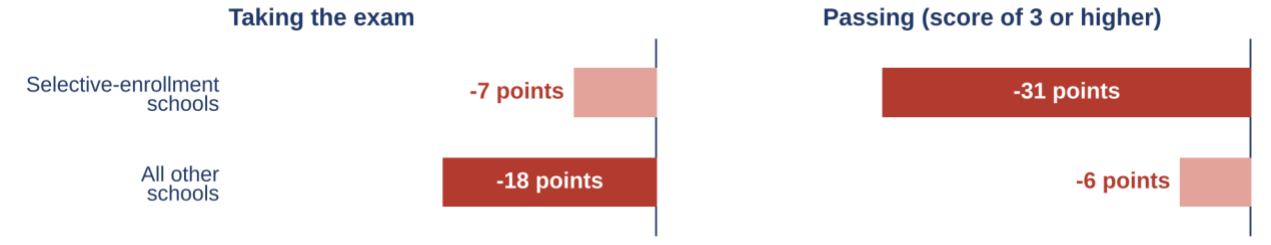
214 took the exam + **92** more at peers' rate

a 43% increase

Enrollment is held fixed, so 92 is a conservative floor. It leaves out students with IEPs who were never counseled into the course.

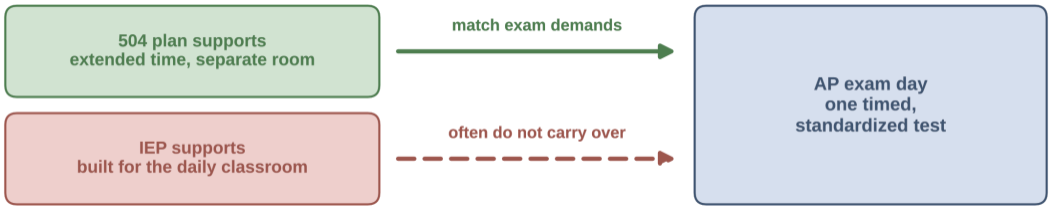
Different schools, different gaps

Outside selective-enrollment schools, the IEP gap is mostly sitting for the exam. Inside them, students with IEPs sit at rates closer to peers but pass far less often. Selective-school counts are small, so treat those sizes with caution.



Why this happens: it's the fit, not the disability

IEP supports are designed for the daily classroom and often may not transfer to exam day. Strong grades can hide this: students with IEPs and GPAs of 3.0 or above scored lower than their own records would predict, a pattern consistent with classroom strategies that do not carry over to one timed, standardized test.



What each role can do

PRINCIPALS

- **Track one number every year:** your school's IEP exam-taking rate vs. their peers, reported separately from 504 plans, never aggregate.
- **Routine the calendar** with an owner for each step and review course rigor progression for students with IEPs.
- **Logistics:** exam fees, testing rooms, and proctor staffing. Add registration help and accommodation coordination.
- **Compare notes** with other principals and AP CSP teachers to learn why the gap is there.

COUNSELORS

- **Reach out first:** contact enrolled students with IEPs before the registration deadline.
- **Look past GPA:** high-GPA students with IEPs show the largest score gap. Review prior course rigor.
- **Own the checkpoint:** every student with an IEP is registered, or the reason is documented in a formal conversation.

CS TEACHERS

- **Know each student's accommodations** and what is allowed on exam day. Consult SPED teachers and prior teachers.
- **Build timed, exam-condition practice;** the score gap reflects format transfer, not ability.
- **Talk with juniors, seniors, and former ECS students,** there are the most likely to enroll but not sit for the AP CSP exam.
- **Co-plan with SPED teachers,** especially in selective-enrollment schools, where passing gaps are largest.

SPED TEACHERS

- **Write the exam into IEPs:** registration supports, College Board accommodations, and exam-condition practice, with student and parent consent for requests.
- **File College Board (SSD) requests early** and check which classroom supports survive AP testing conditions.
- **Audit delivery:** confirm the approved accommodations provided on exam day.

A year-long routine

September	Sept-Oct	Fall deadline	Winter	Jan-April	May-June
Cross-check the roster against IEP and 504 lists. Name one point person per student with an IEP. Review testing accommodations and amend IEPs if needed.	Submit College Board (SSD) requests. Confirm which IEP supports are allowed on exam day.	Registration and fee checkpoint: every student with an IEP is registered, or the reason is documented and revisited.	At IEP meetings, add exam registration, accommodations, and practice as team items.	Run timed practice under approved accommodations. Adjust supports where it breaks down.	Debrief on one metric: who sat, how they scored, the gap vs. peers. Feed it into next September.
Lead **Principal** with all	Lead **Special education teacher** with CS teacher	Lead **Counselor** with principal	Lead **Special education teacher** with counselor, CS teacher	Lead **CS teacher** with special education teacher	Lead **Principal** with all

About this brief. *Page 1 reports a causal analysis of CPS administrative records, 2016–2023 (9,294 AP CSP enrollees, 46 schools, 90 teachers, 337 students with IEPs, 762 with 504 plans), comparing students alike on measured records who differ in accommodation status. Page 2 reports a longitudinal analysis of all AP CSP enrollments, 2014–15 to 2022–23 (11,406 student-years, 11,334 students, 47 high schools), comparing students matched on race/ethnicity, gender, family income, English-learner status, grade level, prior computer science coursework, teacher training, school type, and year. The two analyses use different samples and matching, so the size of gaps differs; both find that students with IEPs sit for the exam less often and do less well on it. Both rely on a yes/no special education indicator, draw on one district, and are observational, so the patterns warrant testing in other systems. Estimates held under extensive robustness checks.* *Supported by NSF grants CNS-2219491 and CNS-2219492; opinions are the authors' and do not necessarily reflect the views of the NSF.*