

California's Math Pipeline: Success Begins Early

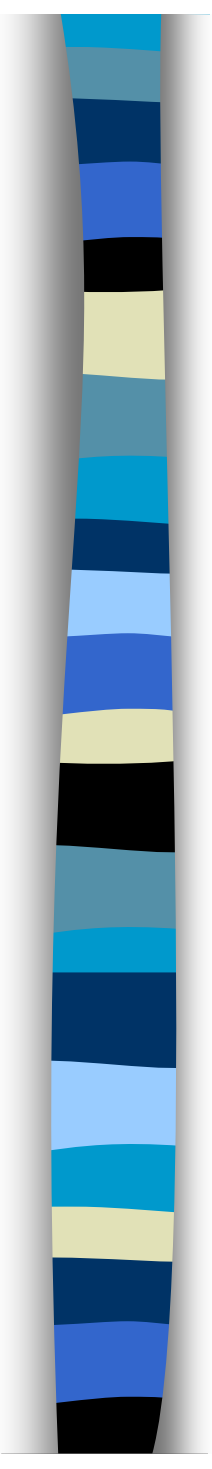
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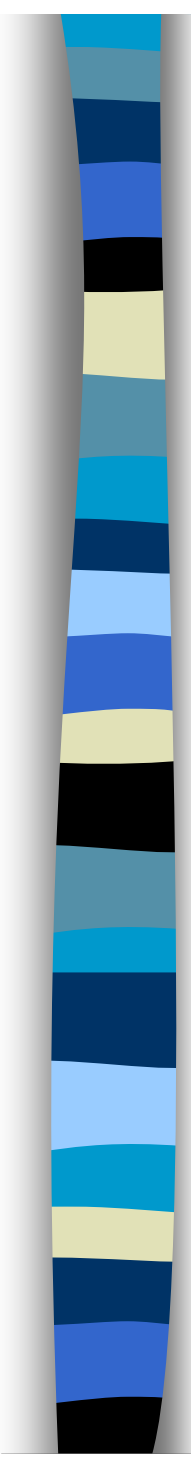
Math success and STEM: what's Pre-K got to do with it?

- Plenty, according to our analysis
- A clear link between students' school readiness and their math mastery
 - Readiness → 2nd grade success
 - 2nd grade success → a strong foundation by 7th grade
 - Strong 7th grade math → mastery of algebra and more



7th grade: a pivot point for success in math and STEM

- About half of California 7th graders were on target in 2010 - based on state tests
 - Score proficient/advanced or took Algebra I
- Student groups differed dramatically:
 - 81% of Asian 7th graders (22% took Algebra)
 - 66% of white students (9% took Algebra)
 - 42% of Latinos (4% took Algebra)
 - 34% of African Americans (3% took Algebra)
- How early did these gaps show up?



How did the same students do on math tests in 2nd grade?

- Same general patterns in 2nd grade related to performance on state math tests
- Students scoring proficient/advanced:
 - 78% of Asian 2nd graders
 - 73% of white students
 - 44% of Latinos
 - 42% of African Americans



Do gaps get better or worse as kids go through school?

- Data are not clear enough to answer the question definitively, but...
...holistic observations are:
 - Student groups that were most successful in 7th grade were same in 2nd grade
 - Asian students started ahead and accelerated their advantage.
- The same gaps among groups can be seen in the available school readiness data



K-12 education alone can't close the gap

- If Californians are serious about improving students' interest in STEM education and careers, they need to be serious about school readiness.
- “Success begins early”
- Additional copies of brief available at www.edsource.org