Math 2017-2018: Vision and Support

Supervisor Collaboration

January, 2017

Agenda

- Vision
- Current Challenges
- Strategic Approach
- Next Steps

Vision

Goal: All students access quality math courses with appropriate content, every year K-12

- Students in grades K-9 have appropriate and timely opportunities for remediation when needed
- All students master Algebra I standards in early high school
- All students have access to quality course curriculum during the last 2 years of high school that provides strong preparation for college and/or career

Agenda

- Vision
- Current Challenges
- Strategic Approach
- Next Steps

Current Challenges in the System

1. Students are not meeting proficiencies in K-8
2. Students who get behind in the early grades stay behind
3. Students arrive to high school not prepared for Algebra I
4. Too many graduates are missing basic math skills and quantitative reasoning skills
5. Too many students are leaving high school not prepared for their future

The following slides detail these challenges.

Current Challenges in the System

K-8

1. Nationally, nearly two-thirds of fourth and eighth grade students are not proficient in math. In Louisiana, even though we have made great improvements, our students still rank only 45th (4th grade) and 49th (8th grade) among states in math performance.

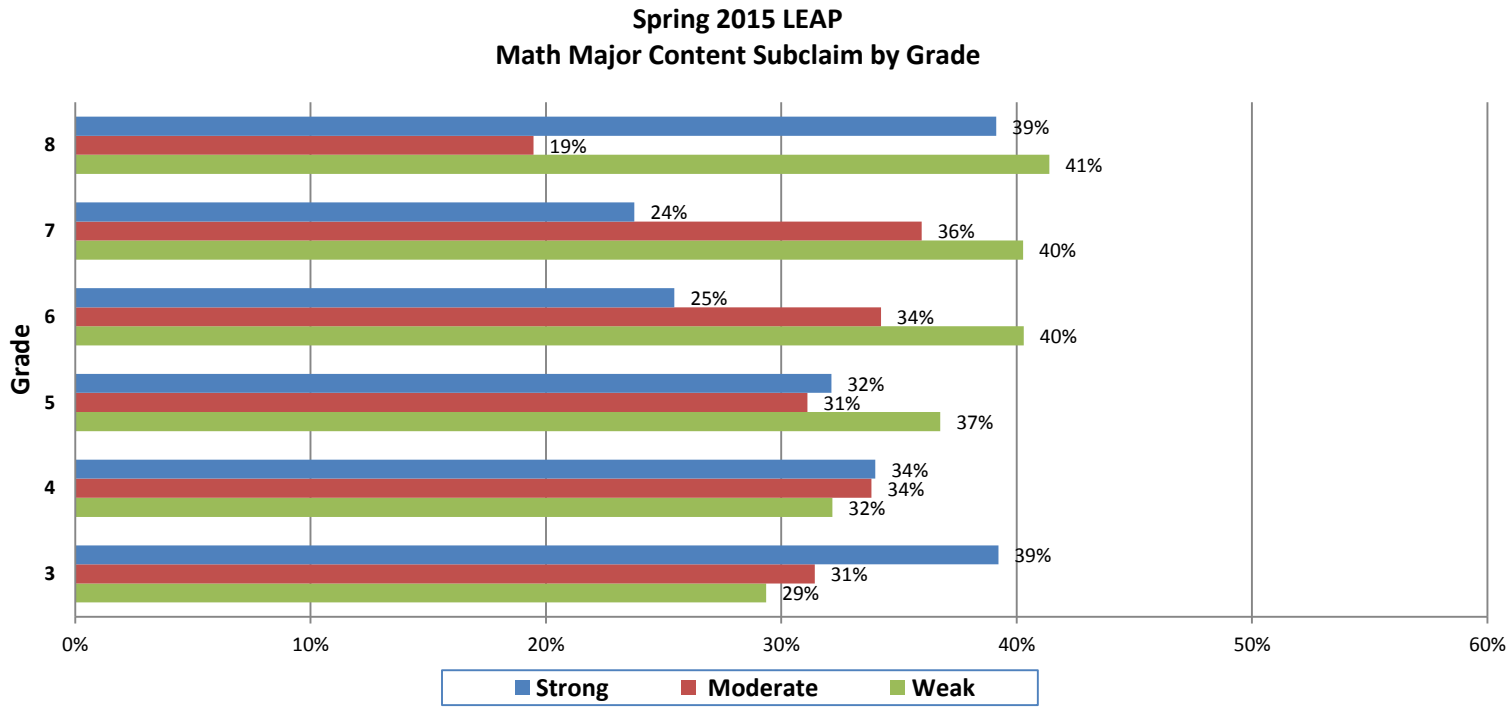
Louisiana's Math Compared to National Performance: 2015

	Louisiana's Results (Proficient and Advanced)	**National Results** (Proficient and Advanced)
4th grade NAEP	30% of students	40% of students
8th grade NAEP	18% of students	33% of students

Current Challenges in the System

2. Students who get behind in the early grades stay behind

The gap in achievement levels widens from 3rd – 8th grade. This is clearly illustrated in the LEAP mastery of major content data.

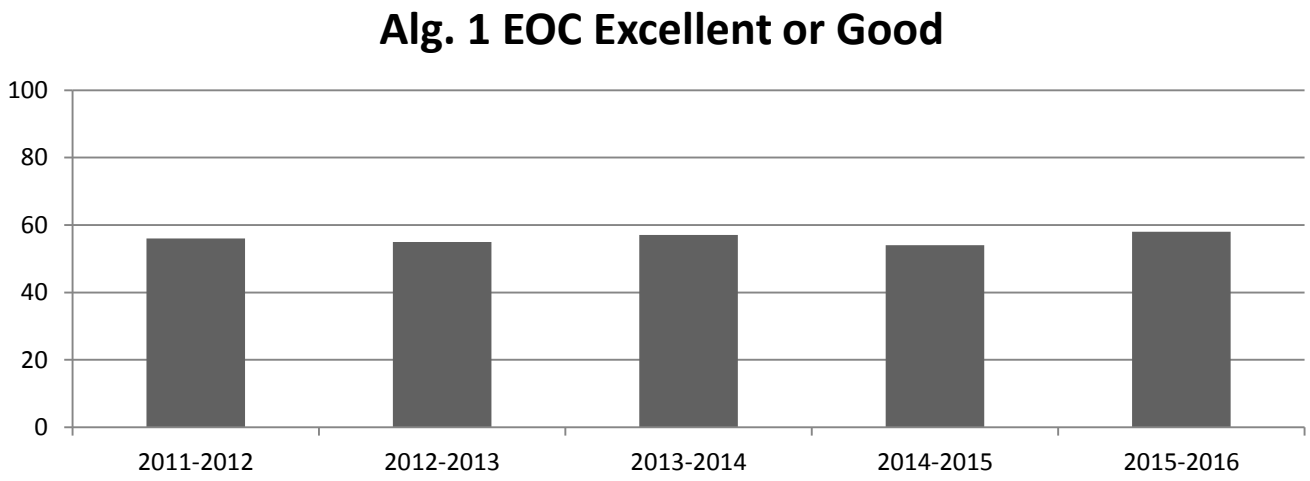


Current Challenges in the System

Early High School

3. Students arrive to high school not prepared for Algebra I

- More than 5500 freshmen were enrolled in Math Essentials in 2015-2016. Statewide, 14% of 9th graders were not enrolled in Algebra I or Geometry. In some schools and districts, this statistic was over 50%.
- Less than 60% of students score Excellent or Good on the Algebra I EOC.

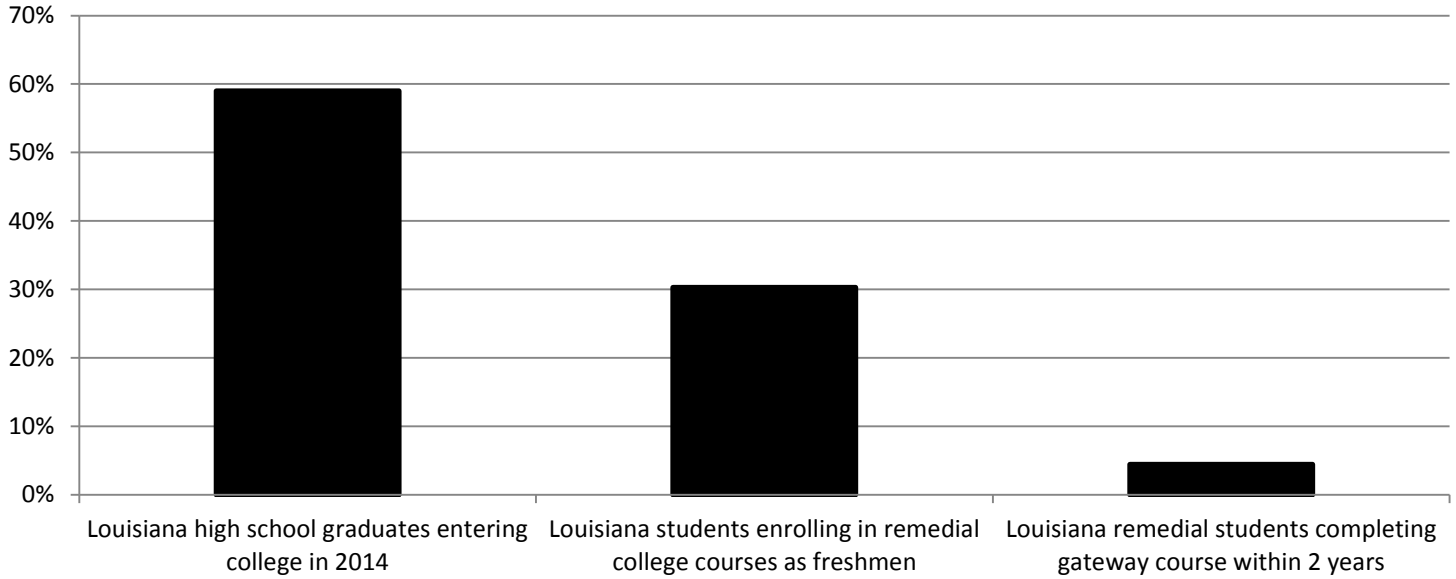


Current Challenges in the System

Late High School

4. In our conversations with many Louisiana industries, industry most often reports that new employees are missing skills around basic math and quantitative reasoning; quantitative reasoning is largely ignored in the current high school course options.

5. Students are leaving high school not prepared for their future: college, industry or other workforce.



Agenda

- Vision
- Current Challenges
- Strategic Approach
- Next Steps

Strategic Approach

K-8

Build Targeted Remediation Tools

Early High School

Build curriculum to help all students master Algebra I content

Late High School

Build Statistical Reasoning Course

Build Quantitative Reasoning Course

Build STEM path with courses targeting computer science & engineering

K-8 Approach

Build K-8 remediation tools that:

1. Help teachers effectively diagnose gaps in pre-requisite skills or knowledge
2. Point teachers towards quality instructional materials to address gaps

Analyze the prototype Eureka Remediation Tool.

- Will this alter how teachers approach remediation in your school/district? If yes, how specifically?
- What do you think will be the most difficult part of implementing?
- What type and how much training would you like teachers to receive?

Timeline: 65 unique tools will be created by early fall 2017

- Algebra I – target 14 Topics
- Grades 6-8 – target 10-11 Topics in each grade
- Grades 4-5 – target 5-6 Topics in each grade

Early High School Approach

Algebra I mastery: Build course curriculum for deeper instruction to prepare struggling students to master Algebra I content.

Analyze the Springboard course guidance.

- What students would most benefit from this type of course?
- How would this change the approach currently being used in the district?

Timeline:

February 24	Applications for pilot due
March 9	Identify pilot districts and teachers
March collaboration	Meet with pilot districts
June TL Summit	Training of piloting teachers
August	Pilot curriculum & continued teacher support

Late High School Approach

Quantitative Reasoning: Build courses that build quantitative reasoning skills in students who are not on the traditional Algebra II pathway.

Analyze the Statistical Reasoning course description.

- What students would most benefit from this type of courses?
- What impact would this have on the current math offerings in the district?

Timeline:

February 24	Applications for pilot due
March 9	Identify pilot districts and teachers
March collaboration	Pilot districts meet
Summer	Curriculum development & teacher training Course code submitted to BESE for approval
August	Pilot curriculum & continued teacher support

Late High School Approach

Quantitative Reasoning: Build courses that build quantitative reasoning skills in students who are not on the traditional Algebra II pathway.

Analyze the Advanced Quantitative Reasoning course description.

- What students would most benefit from this type of courses?
- What impact would this have on the current math offerings in the district?

Timeline:

Spring	Secure vendor
Summer	Course code submitted to BESE for approval
2017-2018	Curriculum development
Summer 2018	Training
2018-2019	Implementation

Late High School Approach

STEM: Build a series of courses that build both quantitative reasoning and STEM skills for students on either the Tops Tech Diploma or the University Diploma path.

Analyze the Pre-Engineering Pathway course descriptions.

- What students would most benefit from these different types of courses?
- What impact would this have on the current math offerings in the district?

Timeline:

Spring	Identify schools and teacher candidates
Summer	Graduate program for teachers (cohort 1) Curriculum development
2017-2018	Pilot
Summer 2018	Graduate program (cohort 1 finishes, cohort 2 begins)

Agenda

- Vision
- Current Challenges
- Strategic Approach
- Next Steps

Next Steps

Determine:

1. Apply to pilot the Springboard curriculum if applicable.
2. Apply to pilot the Statistical Reasoning curriculum if applicable.

For more information, email:
Jill.cowart@la.gov
Kyle.falting@la.gov