



MASSCORE: CURRENT STATUS AND NEXT STEPS

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Presentation to Opportunity and Achievement Gaps Task Force
December 15, 2016

Presentation Overview

- Understanding MassCore
- The 100 Day Plan MassCore Project
- BPS MassCore Completion Data
- Barriers and Proposed Solutions to MassCore Access
- Additional Recommendations
- Questions/Discussion

MassCore

Massachusetts High School Program of Studies

English/Language Arts	4 Units*
Mathematics	4 Units Including the completion of Algebra II or completion of the Integrated Math equivalent. All students are recommended to take a math course during their senior year.
Science	3 Units of lab-based science Coursework taken in technology/engineering may count for MassCore science credit. Note: In June 2012, the Massachusetts Board of Higher Education (BHE) revised its admission standards to count technology/engineering coursework based on academic standards and taken for science credit as meeting the science admissions requirement.
History/Social Science	3 Units Including US History and World History.
Foreign Language**	2 Units Of the same language.
Physical Education	As required by law State law (M.G.L. c. 71,s. 3) states: "Physical education shall be taught as a required subject in all grades for all students." Health can be integrated into Physical Education, science, or taught as a stand-alone course.
The Arts**	1 Unit
Additional Core Courses	5 Units Business Education, Career and Technical Education (CTE), Health, Technology or any of the subjects above. Note: Most students majoring in CTE will take more than 5 units in a CTE program of study.
	22 Units - Is a minimum that students should take in high school

Additional Learning Opportunities	Complete as many of the following as possible: Advanced Placement (AP); Capstone or Senior Project; Dual Enrollment courses taken for both high school and college credit; Online courses; Service Learning; and Work-based Learning.
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*A unit represents a full academic year of study or its equivalent in a subject that covers all the standards contained in a specific Curriculum Framework.

** Students enrolled in a state-approved Career and Technical Education program of studies have the option of opting out of Foreign Language and Art and still fulfill MassCore.

MassCore is the recommended program of study that Massachusetts high school students need in order to be better prepared for college and a career. Developed by a statewide advisory group from the K-12, higher education and business sectors, MassCore maintains flexibility for students and high schools while allowing districts to set additional graduation requirements. Courses included in MassCore should be rigorous, engaging, and based on appropriate Massachusetts Curriculum Frameworks high school level standards.

MassCore Context

- There are no incentives or consequences for students, schools, or districts based on MassCore completion.
- BPS makes local decisions about which courses meet MassCore requirements. In the last 12 months BPS has determined which courses meet MassCore requirements. Not all academic courses meet this threshold.
- All statistics about MassCore completion in this presentation are based on students who graduated. MassCore completion rates do not account for students who do not make it to graduation. Rather, it is a gauge of the rigor, number, and curricular diversity of courses taken by BPS high school graduates.

The Research Behind MassCore

- In two longitudinal studies, each tracking a national sample of over 12,000 high school students for nearly a decade, the **rigor of high school curriculum** (as measured by course units earned) **was the strongest influence on bachelor's degree completion**
 - 71% of students in the top 2 rigor quintiles completed degrees, while the same is true of only 16% of the bottom 2 rigor quintiles
- The highest level of math taken is especially determinative, with the tipping point of momentum toward degree completion occurring above Algebra II
- But counting course units is not enough – monitoring content standards matters

The Role of Rigor in Reducing Gaps

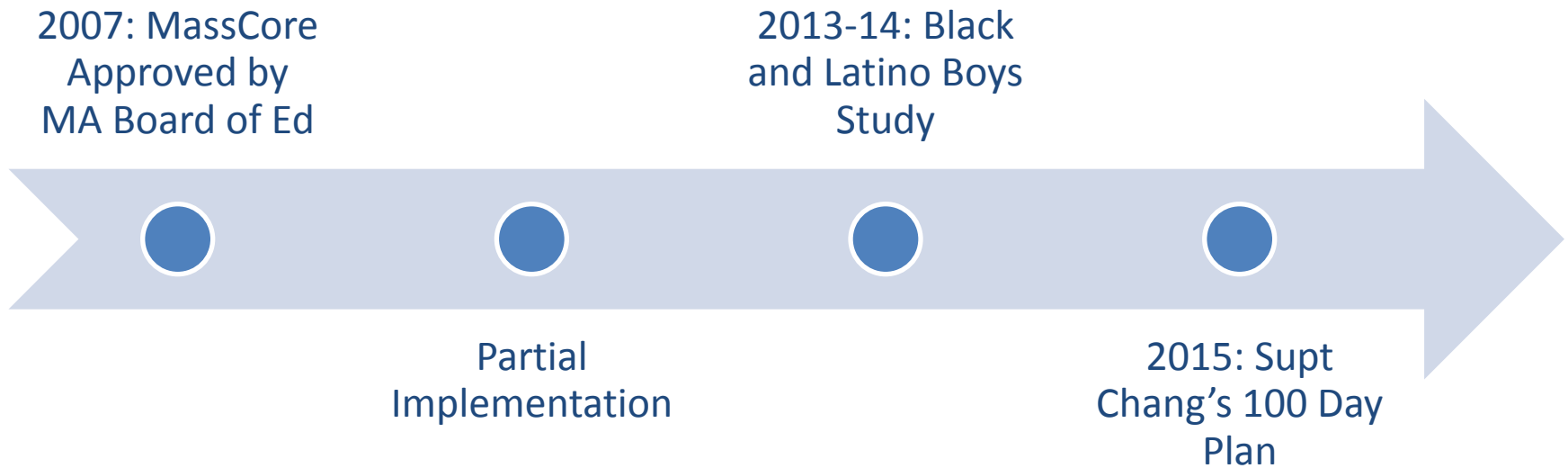
Factors that may close the degree completion gap include:

- A. Moving into the top 40% of rigor (by course units earned)**
- B. Beginning college immediately after high school
- C. Earning credits during college summer terms

- For students in the **lowest SES quintile**, **A+B** improves degree completion from 36 to 59 percent.
- For **Latino students**, **A+B** improves degree completion from 45 to 69 percent
- For **African-American students**, **A+C** reduces the degree completion gap with white and Asian students from 15 to 6 percent.

MassCore Background and Timeline

The Massachusetts Department of Ed & Board of Higher Ed, in collaboration with the Governor's Office, developed the recommended course of study for college and career readiness known as MassCore.



Charge

Dr. Chang's 100 Day Plan: Complete an audit of all high schools to identify (i) which offer the necessary coursework to complete MassCore curriculum, and (ii) what is needed to ensure that all schools offer a complete MassCore program. Present the preliminary findings to the Opportunity and Achievement Gap Task Force for their review.

Our Process

Convening of MassCore Project Team

- Jonathan Landman, Principal Leader for High Schools
- Doannie Tran, Assistant Superintendent of Professional Learning
- Anthony Pope, Principal Leader for High Schools
- Sam DePina, Administrator of Operations
- Monica Roberts, Assistant Superintendent for Family & Community Engagement
- Catherine Chiu, Director of Guidance
- Rudy Weekes, Headmaster, West Roxbury Academy
- Alison Hramiec, Headmaster, Boston Day and Evening Academy
- Jean-Dominique Anoh, Headmaster, Mary Lyon Pilot High School
- Jacob Stern, Office of Data & Accountability
- Elena Lanin, Office of Data & Accountability
- Apryl Clarkson, Office of Data & Accountability

Our Process

- Review of MassCore Completion Data
- Identification of 5 Questions for the Field
 - What are the barriers to MassCore completion?
 - What opportunities exist to expand MassCore access?
 - Should BPS implement a system-wide graduation requirement?
 - Should that requirement be MassCore?
 - If yes, should there be an opt-out to a lower standard?

Our Process

Presentation of MassCore Completion Data and Discussion of the Questions with

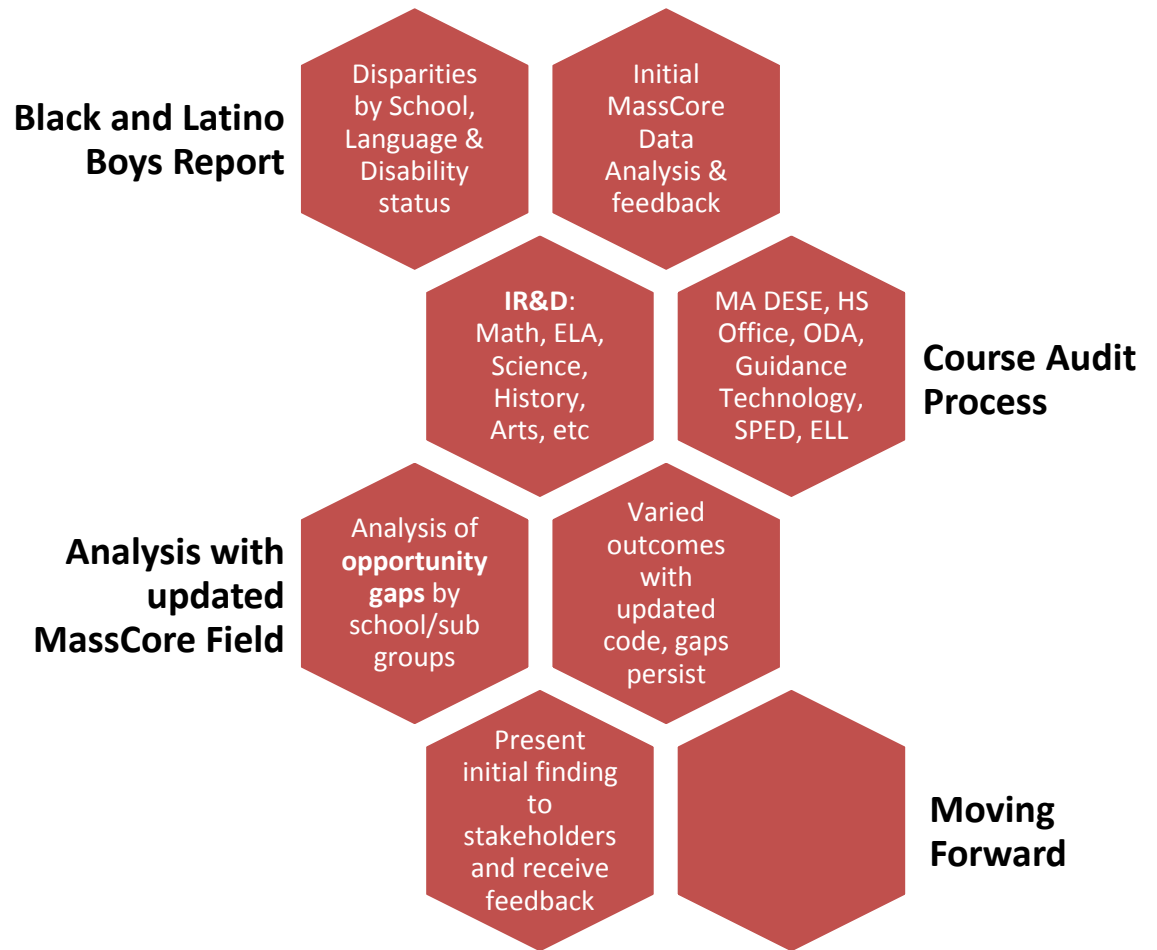
- Headmasters of Traditional, Autonomous & Alternative High Schools
- Citywide Parent Council (CPC)
- SPED PAC
- External Partner Organizations
- Guidance Counselors
- BSAC
- Parent & Family Survey at Parent University

MassCore Audit and Analysis Process

i. Investigation

i. Consultation

ii. Implementation



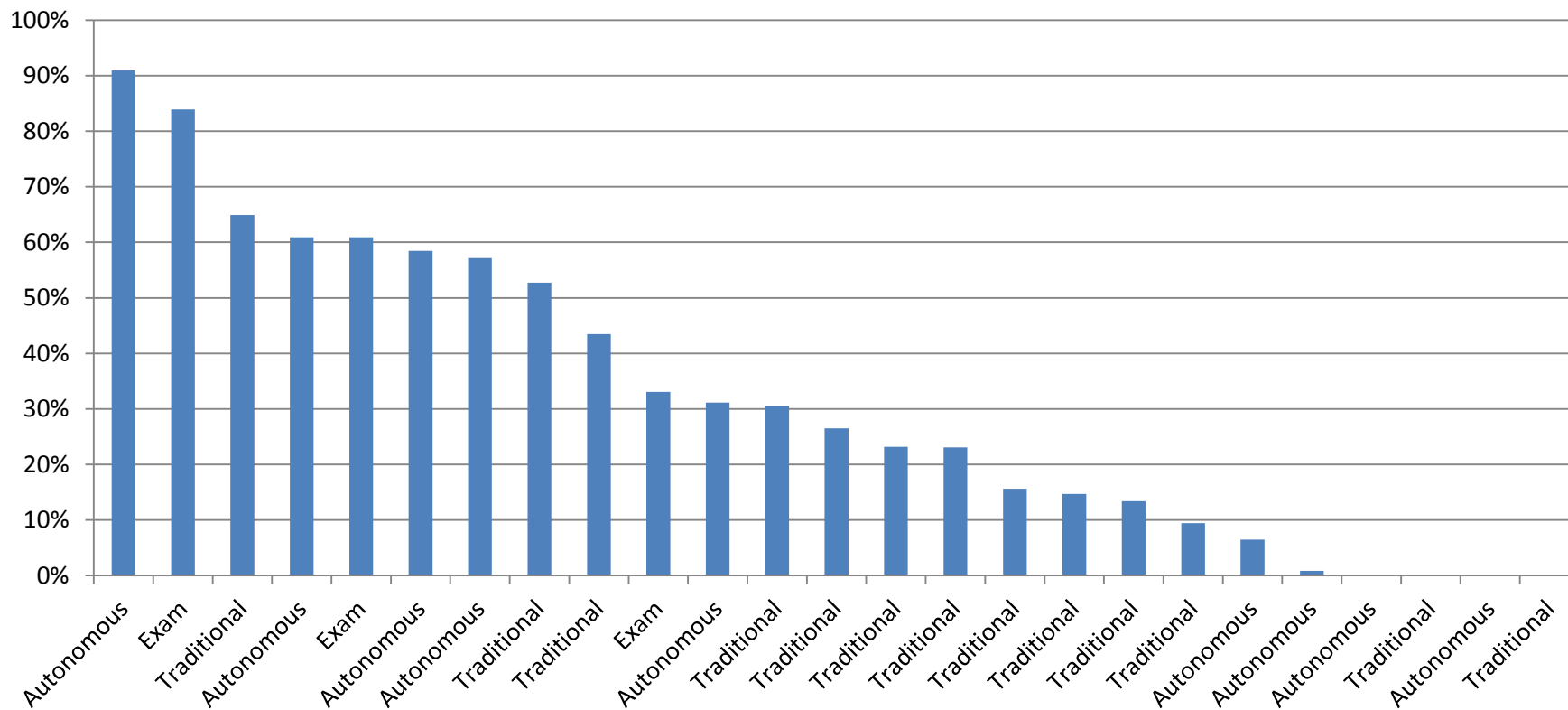


Math Courses: Selection

MassCore	Year	Course No	Title	Description
NO	2015	45C	Discrete Math	Discrete Mathematics
NO	2015	45E	Sr Math Seminar	Senior Math Seminar
NO	2015	45F	OffCmp/OnInMath	OffCmp/OnInMath
NO	2015	45G	Adv Algebra 1A	Advanced Algebra 1
YES	2015	460	Advncd Geometry	Advanced Geometry
YES	2015	461	Algebra Honors	Algebra Honors
YES	2015	45D	Statistics	Statistics
YES	2015	462	Geom Honors	Geometry Honors



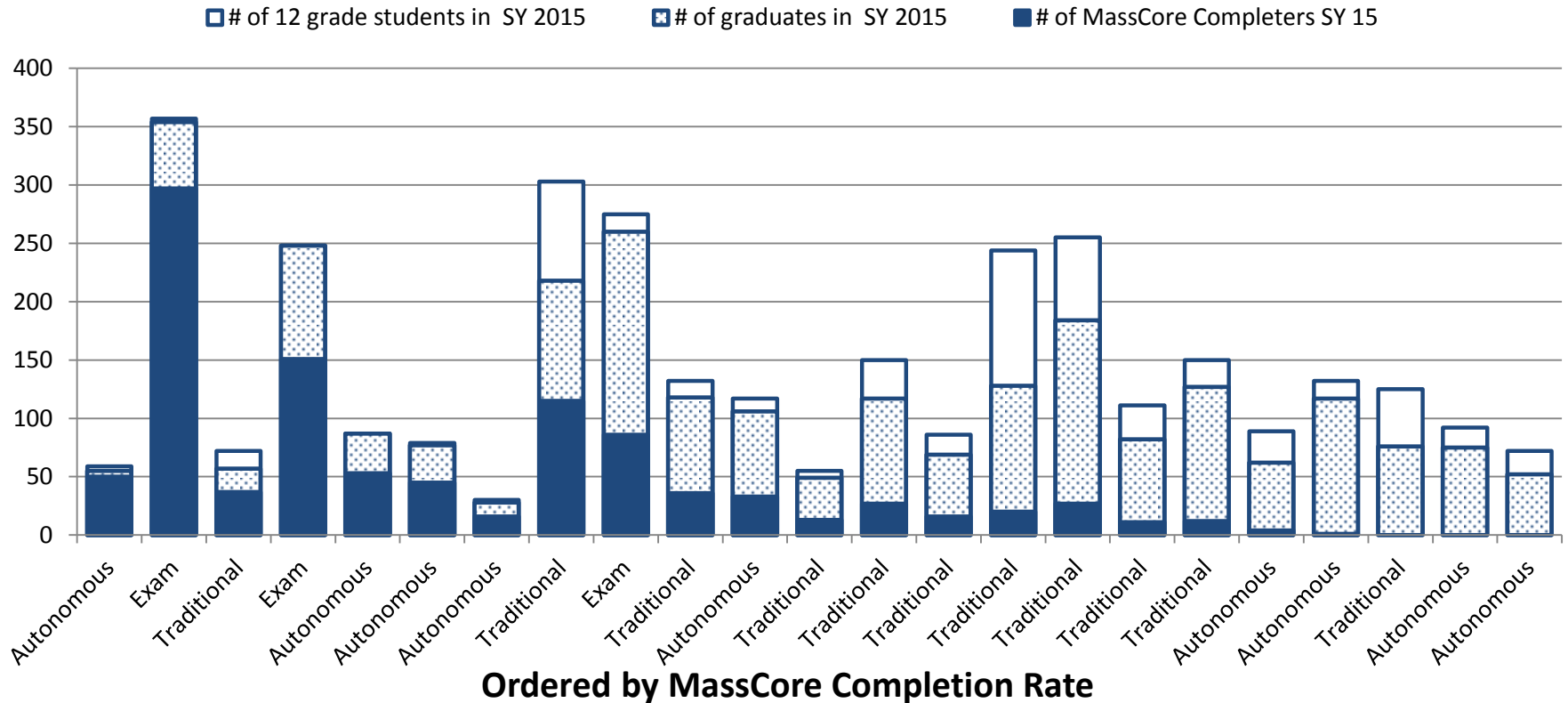
2015 MassCore Completion Rate by School (Excluding Alternative Schools)



Excluding alternative schools, 38% of BPS graduates met MassCore requirements. Some schools have higher rates of MassCore completion; many of these are exam or small autonomous schools.

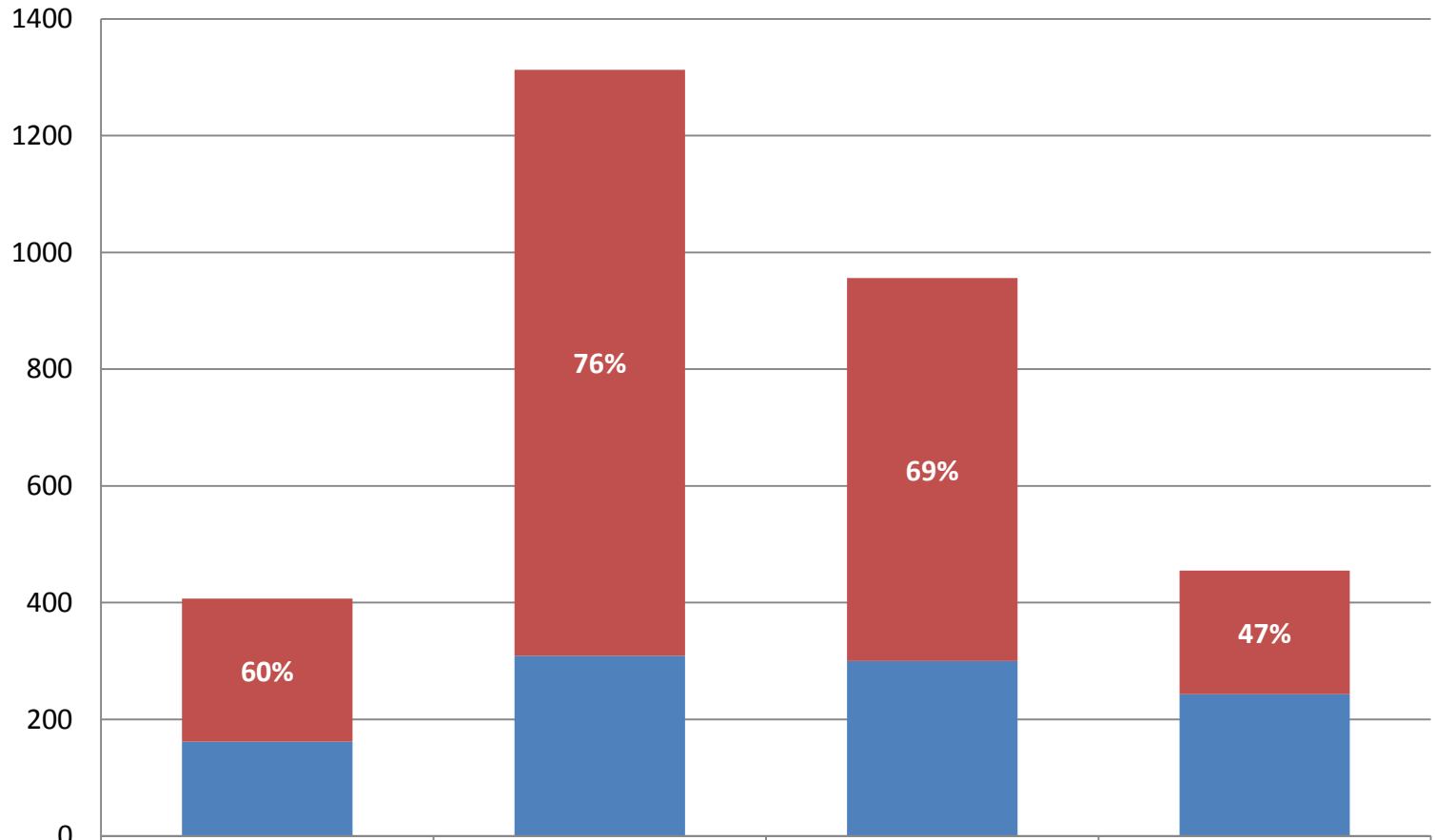


2015 MassCore Completion Rate by School (Excluding Alternative Schools)



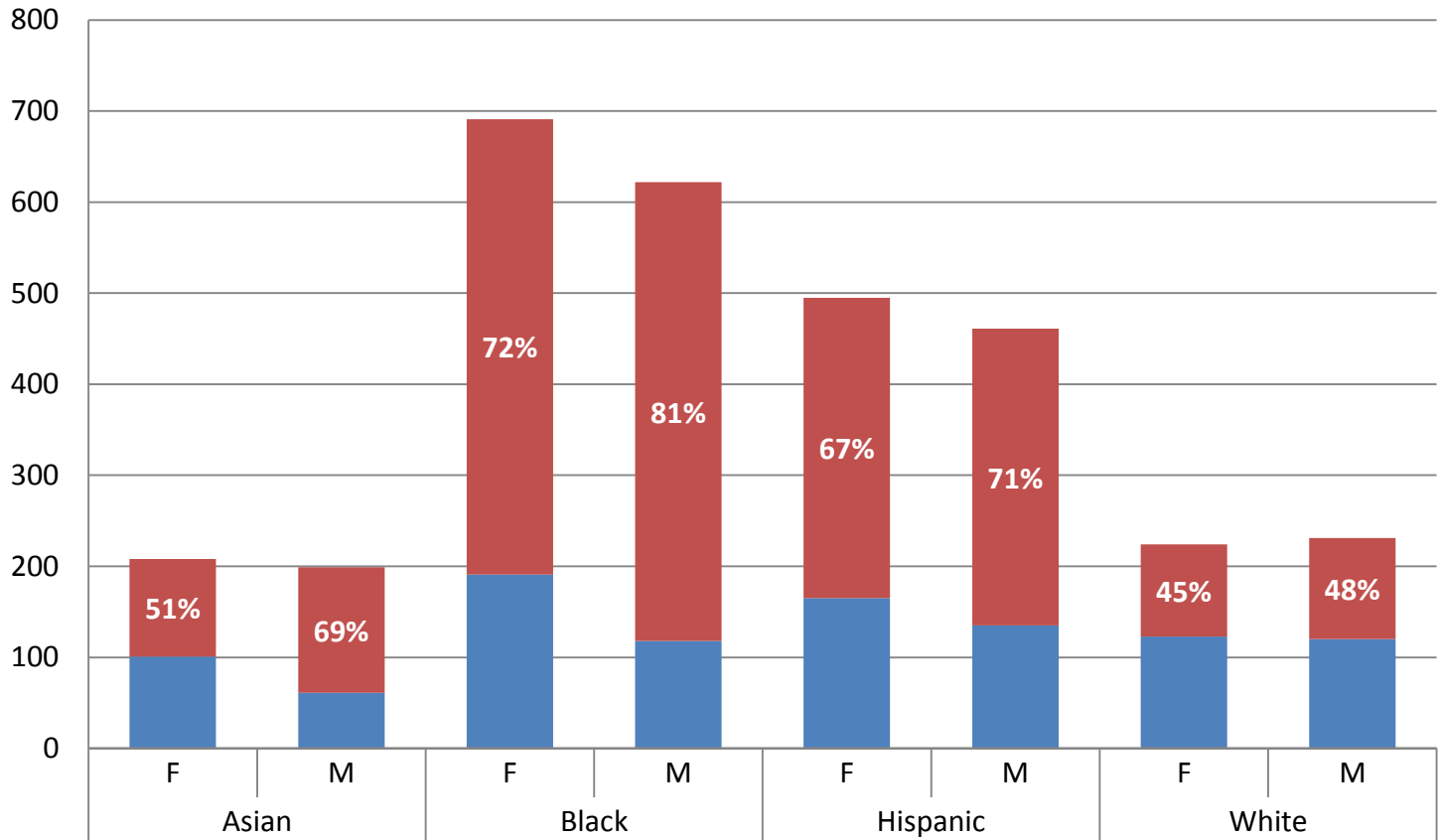
When school size and graduation rates are overlaid it is clear that the schools with high MassCore completion rates do not serve the majority of BPS students. In large traditional high schools, fewer students graduate, and fewer graduates complete MassCore.

2015 Graduates: MassCore Completion by Race



■ Not Met Mass Core	245	1004	656	212
■ Met Mass Core	162	309	300	243

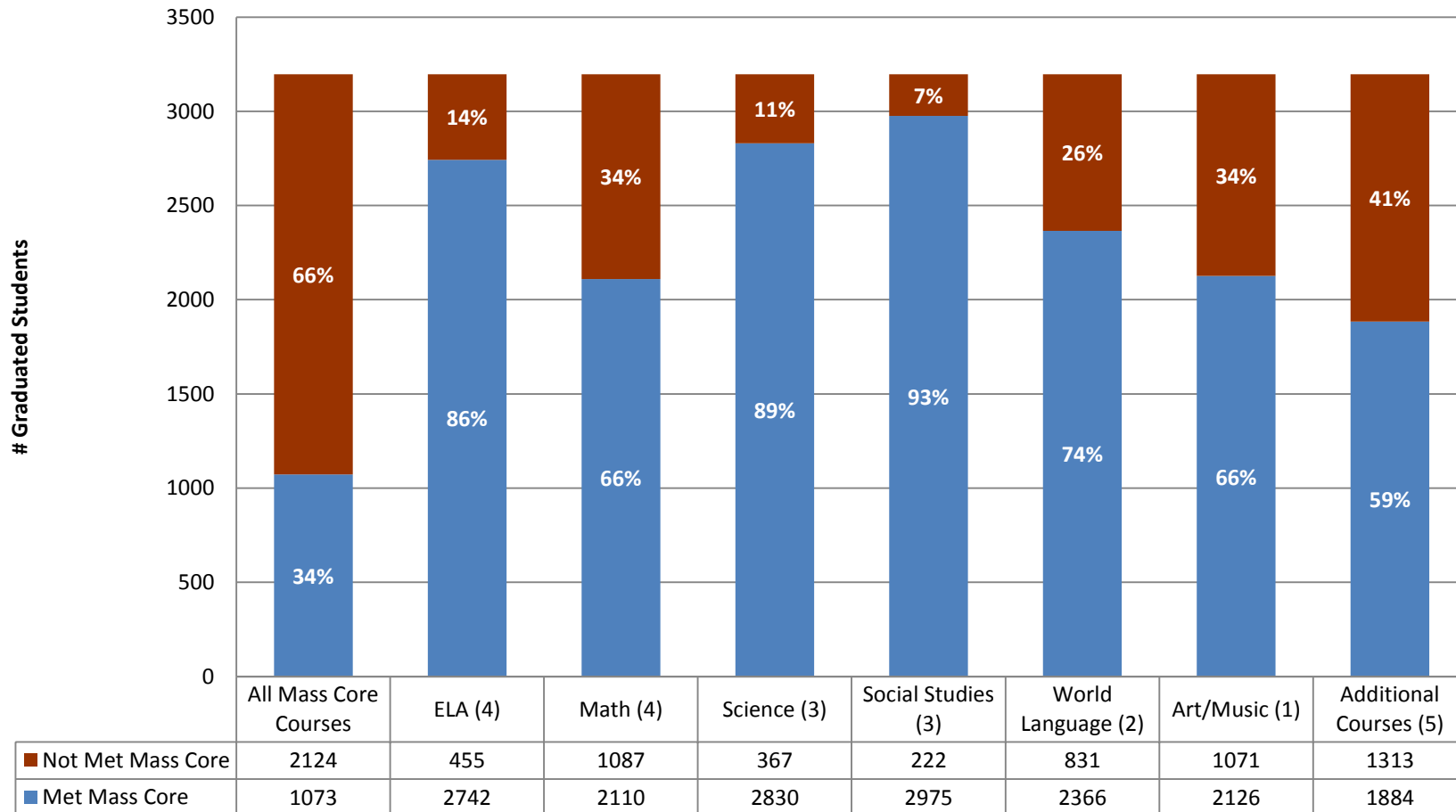
2015 Graduates: MassCore Completion by Race & Gender



■ Not Met Mass Core	107	138	500	504	330	326	101	111
■ Met Mass Core	101	61	191	118	165	135	123	120



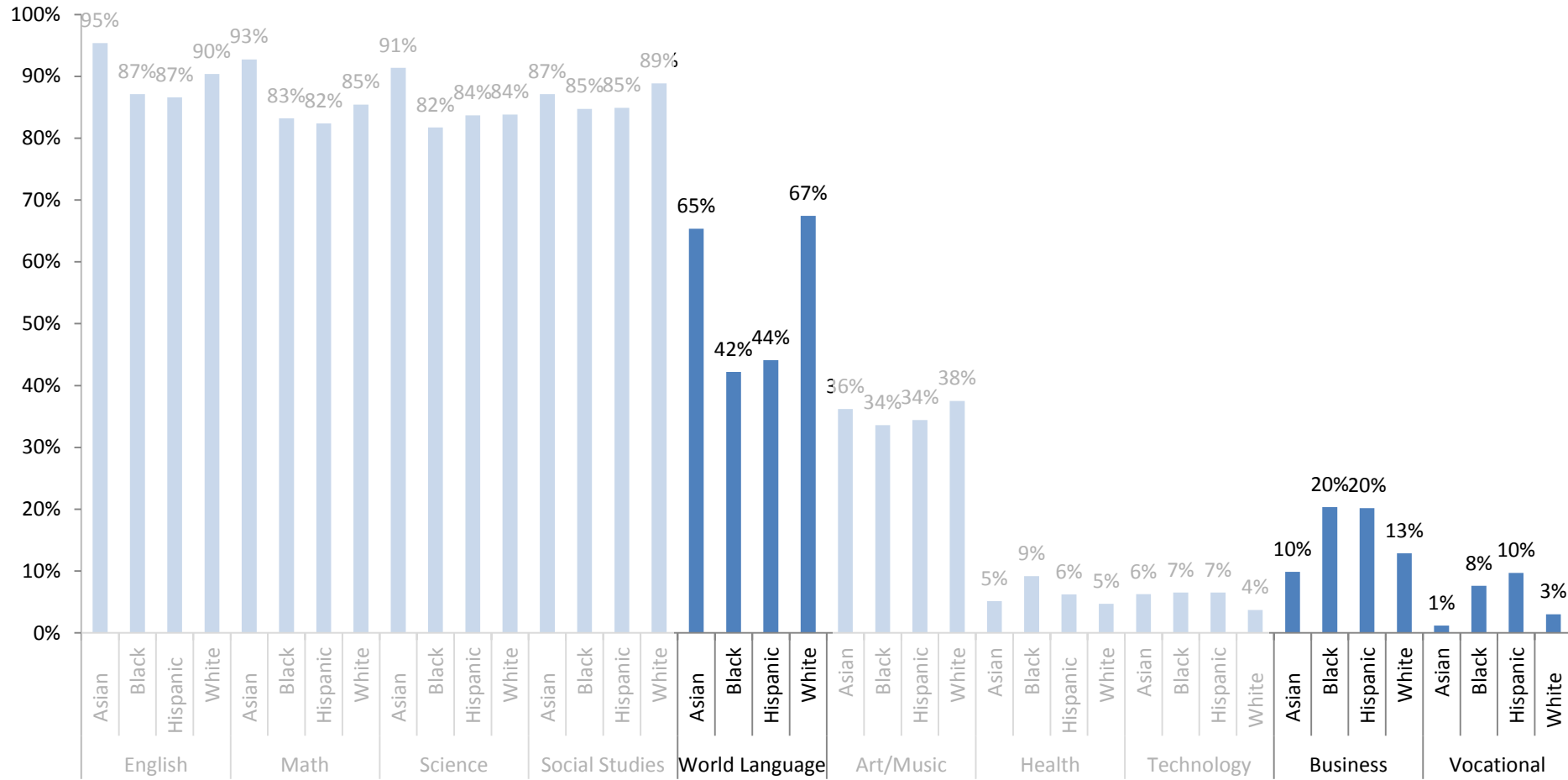
2015 Grads: Subject Area Requirements Not Met



The additional 5 course requirement remains the greatest obstacle to MassCore completion for BPS graduates. However, with updated list of MassCore courses, the availability of senior level Math course offerings is also a challenge.



MassCore Course Enrollment by Race: 2015





MassCore World Language & Arts Capacity Challenges 2014-15

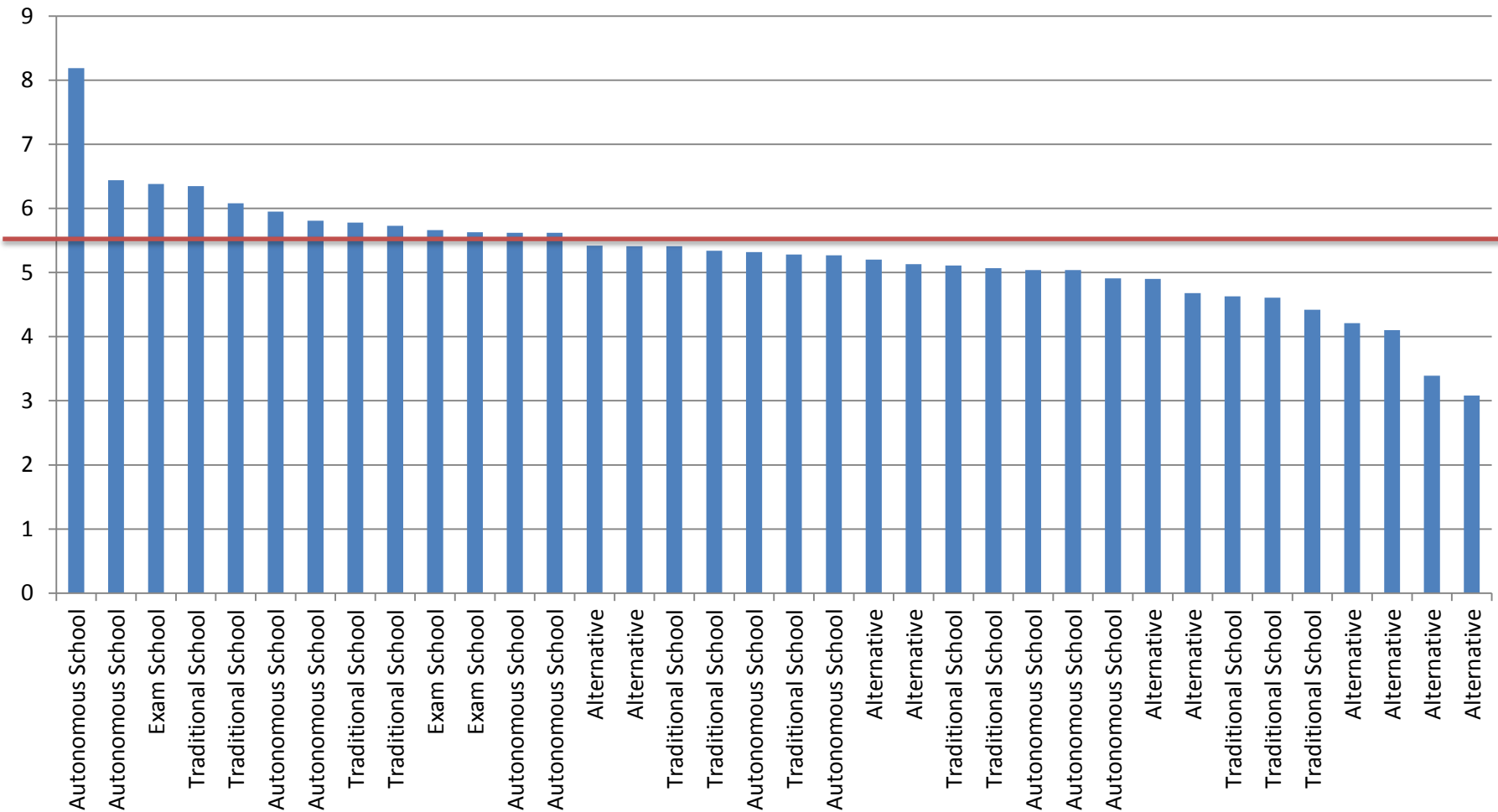
	School A		School B		School C		School D		School E		School F	
Total Enrollment	926		527		965		221		307		1167	
	Capacity	Enrolled	Capacity	Enrolled	Capacity	Enrolled	Capacity	Enrolled	Capacity	Enrolled	Capacity	Enrolled
English (4)	1384	967	820	690	1468	1226	160	51	334	220	1488	1379
Math (4)	902	656	638	456	932	719	116	24	381	275	1488	1338
Science (3)	944	743	458	323	968	727	85	36	481	329	1259	1102
Social Studies (3)	1150	812	464	399	1136	843	45	16	0	0	1550	1345
World Language (2)	248	192	224	161	386	255	56	30	224	170	2725	2284
Health *	3	0	172	160	30	69	0	0	0	0	0	0
Arts (1)	278	242	358	293	225	154	0	0	74	65	183	150
Technology*	31	9	160	115	20	20	30	18	0	0	32	24
Vocational*	0	0	26	18	0	0	0	0	0	0	0	0
Business*	248	163	183	108	229	128	60	39	56	108	0	0

*Part of Additional 5 Credit MassCore Requirement



Opportunity Gap: Enrollment in MassCore Courses

Average Number of MassCore Credits (March 2015)



Barriers and Proposed Solutions

	Barriers	Solutions
Knowledge	All stakeholders lack understanding of what MC is and why it's important	Central Office and Schools partner to develop a communications strategy for all stakeholders
Systems	Central office has not created a coherent system to support course design, creation and implementation at the school level	Central departments will collaborate to design systems to provide consistent guidance around design, approval, and implementation of courses.
Capacity	Schools have inconsistent capacity to provide necessary remediation and access to the complete range of diverse and rigorous coursework for all students required for MassCore.	Central Office collaboratively with schools will: ensure rigorous preparation K-8, for example by integrating with the work of AWC expansion; share capacity between schools; support high schools to build master schedules allowing for increased MassCore access

Additional Findings

- Develop a centralized review process to provide consistency around district-wide expectations:
 - Course rigor
 - GPA calculation
 - Graduation Requirements
- Align our requirements to markers of college and career readiness
 - Ensure that district requirements align to state-university entrance requirements
 - Effectively communicate these graduation requirements to stakeholders
- MassCore is not the only path to college and career readiness. While expanding MassCore access the district must also support other successful pathways

Questions/Comments