

ANNUAL INDIANA ADVANCED PLACEMENT PERFORMANCE REPORT 2018

Indiana Department of Education

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OVERVIEW OF AP IN INDIANA, 2018

Participation and Success

Advanced Placement (AP) is a research-based method to facilitate student participation and success through delivery of college-level courses and corresponding exams in the high school setting to qualified high school students. Students who demonstrate success in AP courses are predicted to outperform their peers who do not take or have not had success in these courses. The current research suggests passing/qualifying on an exam (scoring a 3, 4, or 5 on a scale of 1-5) is predictive of greater college success.¹ The Indiana Department of Education (IDOE) has committed to expanding **access and success** on AP exams in order to have the highest percent of college-educated citizens in the United States.

The College Board collects individual student-level AP performance data throughout each student's secondary school experience. Using that data, the College Board publishes an annual "AP Report to the Nation" that provides individual state performance levels which may serve as comparative data. Associated with the research, the most important data presented is the number of graduates for the published year who passed an AP exam at some point during their high school career; IDOE refers to this as the College Board Metric (CBM).

The formula for improving outcomes in Indiana on AP coursework must include an increase in both **access and success** – more students, in all demographics, participating in AP coursework and the corresponding exam, and a greater percentage of those students passing the AP exam.

The following pages include:

1. Statewide AP Participation and Performance Data
2. Data Evidence and Policy Implications
3. State Funding
4. Teacher Training
5. Recent Trends
6. Changes to AP in 2019-2020


¹ Hargrove, L., Godin, D., & Dodd, B. (2008) *College Outcomes Comparisons by AP and Non-AP High School Experiences*. New York: The College Board.

AP®									
Indiana - All					Total Group - All Schools				
	# Exam Takers	% of Total	Exams Taken	# Score 3-5	# Exam Takers	% of Total	Exams Taken	# Score 3-5	
Total	51,814	100.0%	88,225	45,944	2,808,990	100.0%	5,090,324	3,002,628	
Gender	Female	29,432	56.8%	48,840	23,768	1,583,954	56.0%	2,797,290	1,576,389
	Male	22,382	43.2%	39,385	22,176	1,225,036	44.0%	2,293,034	1,426,239
Race/Ethnicity	American Indian	111	0.2%	154	45	8,366	0.3%	12,636	4,586
	Asian	2,789	5.4%	6,471	4,486	378,055	13.5%	843,827	606,357
	Black	2,698	5.2%	4,126	1,112	197,533	7.0%	311,824	97,897
	Hispanic or Latino	4,747	9.2%	7,777	3,082	653,771	23.3%	1,105,514	488,119
	Pacific Islander	30	0.1%	52	30	4,820	0.2%	7,920	3,238
	White	38,480	74.3%	64,738	34,715	1,375,832	49.0%	2,475,690	1,604,703
	Two or more races	2,158	4.2%	3,702	1,886	124,710	4.4%	228,095	139,770
	Other	0	0.0%	0	0	48	0.0%	98	66
	No Response	801	1.5%	1,205	586	65,855	2.3%	104,720	57,892



AP: Participation and Performance Overview

2018 AP Participation and Performance



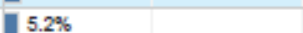
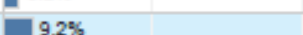
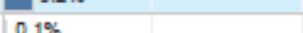



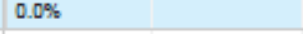
Overall Participation

Total	Student Ct	% Change	
Total	51,814	3.3%	 100.0%


Participation By Gender

Gender	Student Ct	% Change	
Female	29,432	3.1%	 56.8%
Male	22,382	3.6%	 43.2%

Participation by Race/Ethnicity

Race/Ethnicity	Student Ct	% Change	
American Indian	111	-2.6%	 0.2%
Asian	2,769	2.6%	 5.4%
Black	2,698	2.5%	 5.2%
Hispanic or Latino	4,747	9.3%	 9.2%
Pacific Islander	30	15.4%	 0.1%
White	38,480	2.3%	 74.3%
Two or more races	2,158	3.7%	 4.2%
Other	0	-100.0%	 0.0%
No Response	801	28.6%	 1.5%

Fee Reduction Usage

Students receiving Fee Reductions	6,060	 11.7%
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Overall Performance

Total	Exams Taken	% Change	Exams With score of 3, 4 or 5	% Change
Total	88,225	4.5%	45,944	3.8%

Performance by Gender

Gender	Exams Taken	% Change	Exams With score of 3, 4 or 5	% Change
Female	48,840	4.4%	23,768	3.3%
Male	39,385	4.6%	22,176	4.4%

Performance by Race/Ethnicity

Race/Ethnicity	Exams Taken	% Change	Exams With score of 3, 4 or 5	% Change
American Indian	154	-8.9%	45	-31.8%
Asian	6,471	3.5%	4,486	2.9%
Black	4,126	4.7%	1,112	8.7%
Hispanic or Latino	7,777	12.1%	3,082	11.8%
Pacific Islander	52	26.8%	30	87.5%
White	64,738	3.5%	34,715	2.9%
Two or more races	3,702	4.4%	1,886	0.5%
Other	0	-100.0%		
No Response	1,205	26.2%	588	44.1%

AP: Exam Participation and Performance (Part 1 of 3)

		# of Exams	% of Total	# Score of 1	# Score of 2	# Score of 3	# Score of 4	# Score of 5	% Score of 1	% Score of 2	% Score of 3	% Score of 4	% Score of 5
Total # of Exams	2017	84,425	100%	16,951	23,221	21,133	14,522	8,598	20%	28%	25%	17%	10%
	2018	88,225	100%	18,065	24,216	21,727	15,013	9,204	20%	27%	25%	17%	10%
Art History	2017	298	0%	35	79	77	74	33	12%	27%	26%	25%	11%
	2018	404	0%	63	120	106	76	39	16%	30%	26%	19%	10%
Biology	2017	4,956	6%	446	1,543	1,833	896	238	9%	31%	37%	18%	5%
	2018	5,192	6%	677	1,672	1,619	932	292	13%	32%	31%	18%	6%
Calculus AB	2017	7,369	9%	1,787	1,899	1,497	1,120	1,066	24%	26%	20%	15%	14%
	2018	7,422	8%	1,807	1,917	1,520	1,127	1,051	24%	26%	20%	15%	14%
Calculus BC	2017	1,709	2%	142	241	352	296	678	8%	14%	21%	17%	40%
	2018	1,853	2%	145	273	427	314	694	8%	15%	23%	17%	37%
Chemistry	2017	3,591	4%	1,071	1,089	822	415	194	30%	30%	23%	12%	5%
	2018	3,955	4%	1,180	1,068	890	493	324	30%	27%	23%	12%	8%
Chinese Language and Culture	2017	53	0%	4	9	12	4	24	8%	17%	23%	8%	45%
	2018	79	0%	9	8	8	10	44	11%	10%	10%	13%	56%
Comparative Government and Politics	2017	125	0%	14	19	35	37	20	11%	15%	28%	30%	16%
	2018	215	0%	32	60	39	49	35	15%	26%	18%	23%	16%
Computer Science A	2017	789	1%	276	103	165	140	105	35%	13%	21%	18%	13%
	2018	823	1%	243	117	185	149	129	30%	14%	22%	18%	16%
Computer Science Principles	2017	554	1%	30	85	226	147	66	5%	15%	41%	27%	12%
	2018	920	1%	53	140	354	219	154	6%	15%	38%	24%	17%
English Language and Composition	2017	11,381	13%	1,546	3,969	3,126	1,886	854	14%	35%	27%	17%	8%
	2018	11,721	13%	1,739	3,973	3,313	1,794	902	15%	34%	28%	15%	8%
English Literature and Composition	2017	8,727	10%	1,058	3,588	2,547	1,135	399	12%	41%	29%	13%	5%
	2018	9,042	10%	1,377	3,850	2,427	1,022	366	15%	43%	27%	11%	4%
Environmental Science	2017	3,632	4%	1,044	994	593	761	240	29%	27%	16%	21%	7%
	2018	3,682	4%	1,180	1,079	498	702	223	32%	29%	14%	19%	6%
European History	2017	1,366	2%	117	418	367	293	171	9%	31%	27%	21%	13%
	2018	1,328	2%	114	381	350	294	189	9%	29%	26%	22%	14%
French Language and Culture	2017	296	0%	9	62	114	70	41	3%	21%	39%	24%	14%
	2018	290	0%	22	49	97	70	52	8%	17%	33%	24%	18%

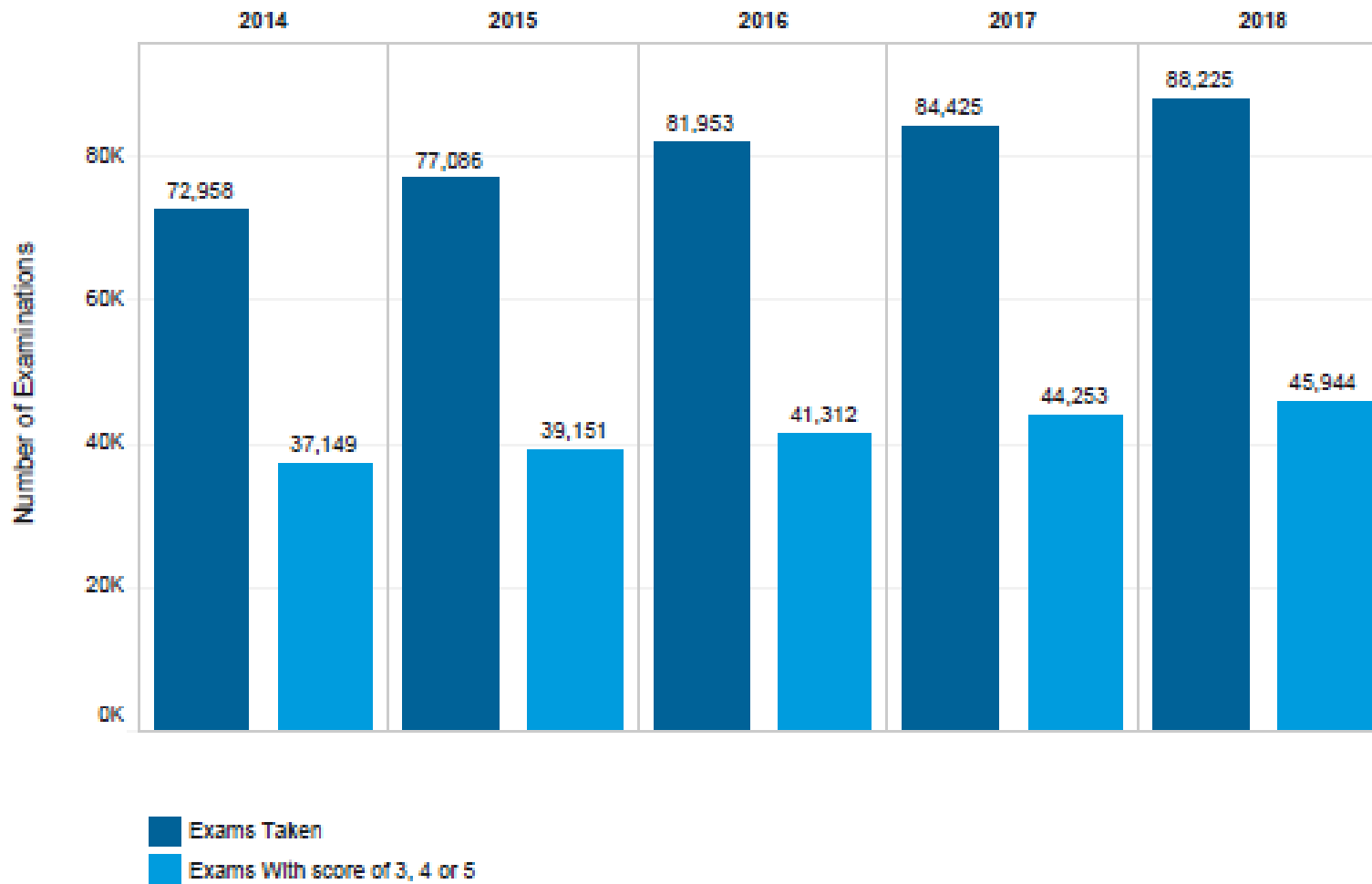
AP: Exam Participation and Performance (Part 2 of 3)

		# of Exams	% of Total	# Score of 1	# Score of 2	# Score of 3	# Score of 4	# Score of 5	% Score of 1	% Score of 2	% Score of 3	% Score of 4	% Score of 5
German Language and Culture	2017	122	0%	26	24	24	31	17	21%	20%	20%	25%	14%
	2018	130	0%	20	27	36	27	20	15%	21%	28%	21%	15%
Human Geography	2017	2,383	3%	792	465	521	375	230	33%	20%	22%	16%	10%
	2018	2,219	3%	536	357	534	480	312	24%	16%	24%	22%	14%
Italian Language and Culture	2017	3	0%										
	2018	4	0%										
Japanese Language and Culture	2017	21	0%	5	1	8	3	4	24%	5%	38%	14%	19%
	2018	19	0%	2	1	3	5	8	11%	5%	16%	26%	42%
Latin	2017	81	0%	5	26	29	16	5	6%	32%	36%	20%	6%
	2018	92	0%	7	31	36	11	7	8%	34%	39%	12%	8%
Macroeconomics	2017	1,592	2%	435	261	274	371	251	27%	16%	17%	23%	16%
	2018	1,708	2%	451	312	291	363	291	26%	18%	17%	21%	17%
Microeconomics	2017	1,819	2%	461	252	342	474	290	25%	14%	19%	26%	16%
	2018	1,908	2%	407	405	407	478	211	21%	21%	21%	25%	11%
Music Theory	2017	384	0%	60	104	87	53	80	16%	27%	23%	14%	21%
	2018	437	0%	55	99	120	71	92	13%	23%	27%	16%	21%
Physics 1	2017	2,943	3%	896	980	531	422	114	30%	33%	18%	14%	4%
	2018	3,122	4%	1,012	935	602	456	117	32%	30%	19%	15%	4%
Physics 2	2017	436	1%	65	165	129	49	28	15%	36%	30%	11%	6%
	2018	391	0%	58	185	96	28	24	15%	47%	25%	7%	6%
Physics C: Electricity and Magnetism	2017	379	0%	49	86	68	102	74	13%	23%	18%	27%	20%
	2018	401	0%	61	99	56	80	105	15%	25%	14%	20%	26%
Physics C: Mechanics	2017	981	1%	119	158	211	249	244	12%	16%	22%	25%	25%
	2018	1,026	1%	149	165	216	261	235	15%	16%	21%	25%	23%
Psychology	2017	5,199	6%	1,218	858	1,114	1,244	765	23%	17%	21%	24%	15%
	2018	5,589	6%	1,293	992	1,100	1,354	850	23%	18%	20%	24%	15%
Research	2017	212	0%	0	27	69	54	62	0%	13%	33%	25%	29%
	2018	271	0%	8	43	108	68	44	3%	16%	40%	25%	16%
Seminar	2017	531	1%	2	15	314	126	74	0%	3%	59%	24%	14%
	2018	547	1%	1	32	262	149	103	0%	6%	48%	27%	19%

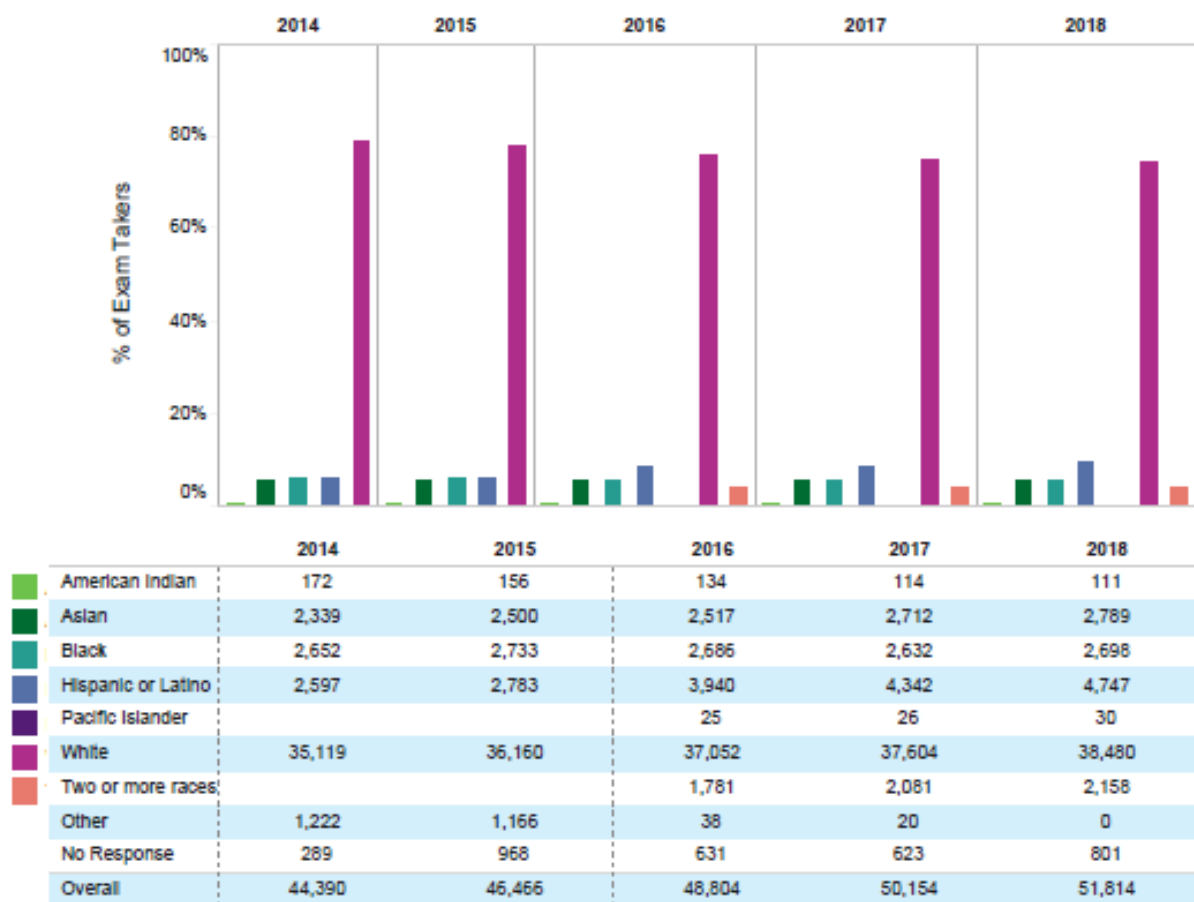
AP: Exam Participation and Performance (Part 3 of 3)

		# of Exams	% of Total	# Score of 1	# Score of 2	# Score of 3	# Score of 4	# Score of 5	% Score of 1	% Score of 2	% Score of 3	% Score of 4	% Score of 5
Spanish Language and Culture	2017	1,186	1%	56	197	403	335	195	5%	17%	34%	28%	16%
	2018	1,242	1%	57	208	402	362	213	5%	17%	32%	29%	17%
Spanish Literature and Culture	2017	83	0%	2	19	38	20	4	2%	23%	46%	24%	5%
	2018	69	0%	5	14	25	24	1	7%	20%	36%	35%	1%
Statistics	2017	3,666	4%	1,007	738	892	548	481	27%	20%	24%	15%	13%
	2018	3,791	4%	907	676	957	730	521	24%	18%	25%	19%	14%
Studio Art: 2-D Design Portfolio	2017	521	1%	8	54	180	164	115	2%	10%	35%	31%	22%
	2018	615	1%	12	66	211	215	111	2%	11%	34%	35%	18%
Studio Art: 3-D Design Portfolio	2017	136	0%	4	27	49	38	18	3%	20%	36%	28%	13%
	2018	166	0%	8	41	65	38	14	5%	25%	39%	23%	8%
Studio Art: Drawing Portfolio	2017	240	0%	0	26	73	75	66	0%	11%	30%	31%	28%
	2018	311	0%	2	26	110	96	77	1%	8%	35%	31%	25%
United States Government and Politics	2017	3,933	5%	1,044	969	1,001	507	412	27%	25%	25%	13%	10%
	2018	4,001	5%	913	1,008	1,105	505	470	23%	25%	28%	13%	12%
United States History	2017	8,249	10%	2,461	2,177	1,785	1,196	630	30%	26%	22%	14%	8%
	2018	8,837	10%	2,856	2,322	1,913	1,190	556	32%	26%	22%	13%	6%
World History	2017	4,479	5%	657	1,494	1,225	796	307	15%	33%	27%	18%	7%
	2018	4,403	5%	604	1,465	1,238	769	327	14%	33%	28%	17%	7%

AP: Number of Exams and Number of Exams with Scores of 3, 4 or 5



AP: Participation by Race/Ethnicity - Students Taking One or More Exam



Note: Beginning with the 2015-16 school year, the collection and reporting of race/ethnicity was updated. Please use caution when making comparisons between these new race/ethnicity data and data from prior years. See notes page for details.

DATA EVIDENCE AND IMPLICATIONS:

The Data Shows:

- Total number of unique students participating (51,814) increased 3.3% in the last year.
- Total number of exams taken (88,225) boasts an increase of 4.5%.
- Passing scores of a 3, 4, or 5 have increased 3.8%.
- Exams taken have increased and exams scores of 3, 4, or 5 have increased every year over the past 6 years. However, the gap between exams taken and exams passed has remained relatively consistent, ranging from 50 – 52%.
- Hispanic or Latino student participation has increased 9.3%. The number of exams taken Hispanic or Latino students has increased 12.1%, with passing exams scores of 3, 4, or 5 increasing by 11.8% in the same population.
- Black student participation increased by 2.5%. The number of exams taken by Black students increased 4.7%, with passing scores of 3, 4, or 5 increasing by 8.7%.
- While these increases in participation of underrepresented populations are positive, the participation numbers are still not reflective of state percentages. Hispanic or Latino students comprise 12% of the state population, but only 9% of the AP participants in the state. Black students also comprise 12% of the state population, but only 6.5% of the AP participants in the state.

Policy Implications:

Indiana is slowly improving the number of students participating in AP exams while also striving to keep pace with the qualification rate. Yet, a wide gap between participation and performance continues to persist. Only 52% of exams taken earned a passing score of 3, 4, or 5 in 2018. While participation and exposure to rigorous curriculum does benefit students, strategies should be developed to help local educational agencies also improve summative student performance. Additionally, intentionality must be given to improving access and equity for underrepresented populations, particularly Black and Hispanic or Latino populations. If Indiana wishes to become one of the top performing AP states in the nation Indiana must:

1. Develop a strategic plan to improve access and equity to high quality AP courses for underrepresented populations.
2. Provide more rigorous math, English, science, and social studies classes to students before they enter AP courses, aligning curriculum in prerequisite courses for optimal AP course preparation.
3. Provide ongoing professional development for current AP math, English, science, and social studies teachers.

4. Recruit and train more quality AP math, English, science, and social studies teachers.
5. Encourage schools to align early high ability programs to AP course prerequisites.

CURRENT STATE FUNDING

ADVANCED PLACEMENT PROGRAM FUNDING

For Fiscal Years 2017-2018 and 2018-2019, the state appropriation is \$5,200,000 per year. This appropriation serves to provide funding for students of accredited public and nonpublic schools to take the College Board Advanced Placement math, English, and science exams and to supplement any federal funds awarded for non-math-and-science and English Advanced Placement exams taken by students qualified for the Free or Reduced-Price Lunch program. Any remaining funds available after exams have been paid shall be prioritized for use by teachers of math and science AP courses to attend professional development training for those courses. There are no more federal funds earmarked specifically for Advanced Placement testing.

TEACHER TRAINING

The AP Summer Institute was held at Pike High School, June 10 – 13, 2018. There were 275 Indiana AP teachers in attendance.

In addition to this, the AP-TIP IN Program, run by the University of Notre Dame, provides training and incentives to a select cohort of schools around the state. This program represents an important partnership for the state. The report from Karen Morris, Program Director, is provided below.



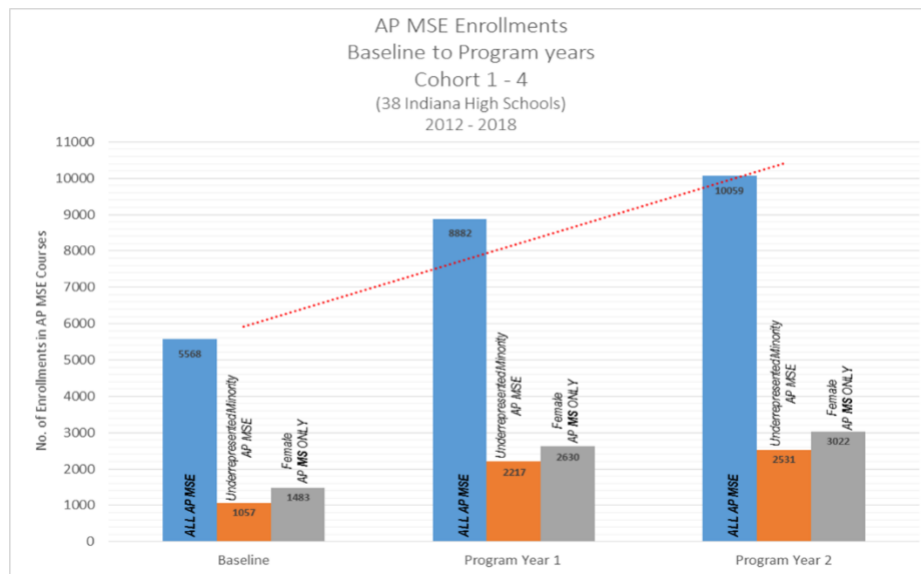
AP-TIP IN Program Update

Karen M. Morris

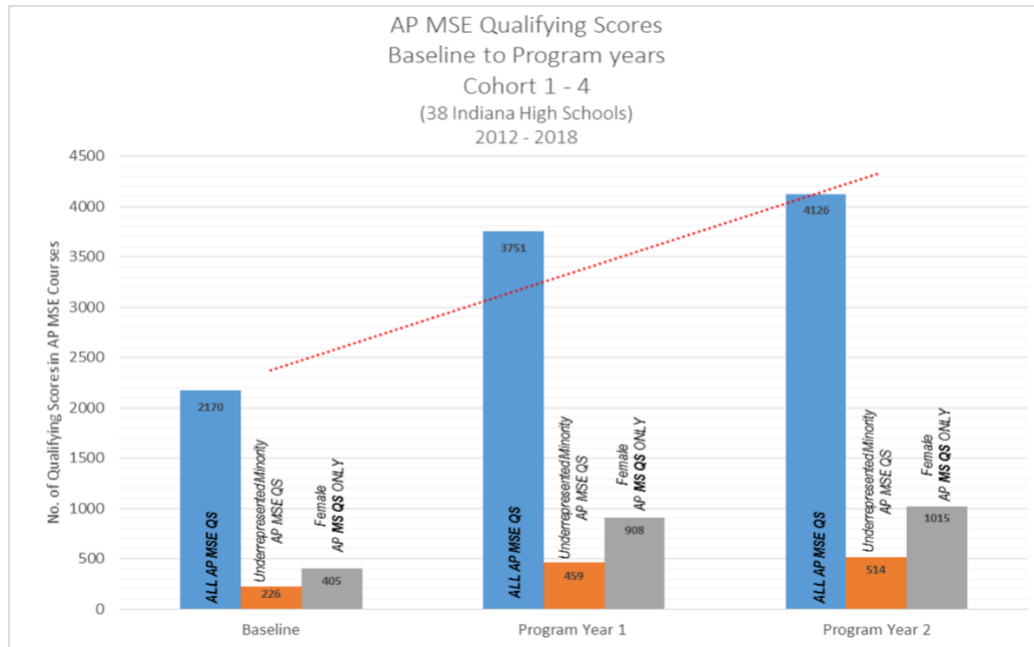
Starting in 2012, the AP-TIP IN program validated the strategies of the National Math and Science Initiative (NMSI) with funding from the U.S. DOE Investing in Innovation (i3) fund grant. The goals of the AP-TIP IN Program are to:

- Increase the number of students taking AP math, science, and English (MSE) courses (ACCESS); and
- Increase the number of AP MSE Qualifying Scores (scores of 3, 4, or 5) at program schools (SUCCESS) compared to baseline year.

From 2012 – 2018, 38 Indiana public high schools participated in the program. Graphs 1 and 2 below show the impact of AP-TIP IN on these schools in terms of participation (Graph 1) and success (Graph 2) in AP math, science, and English courses over two program years.



Graph 1



Graph 2

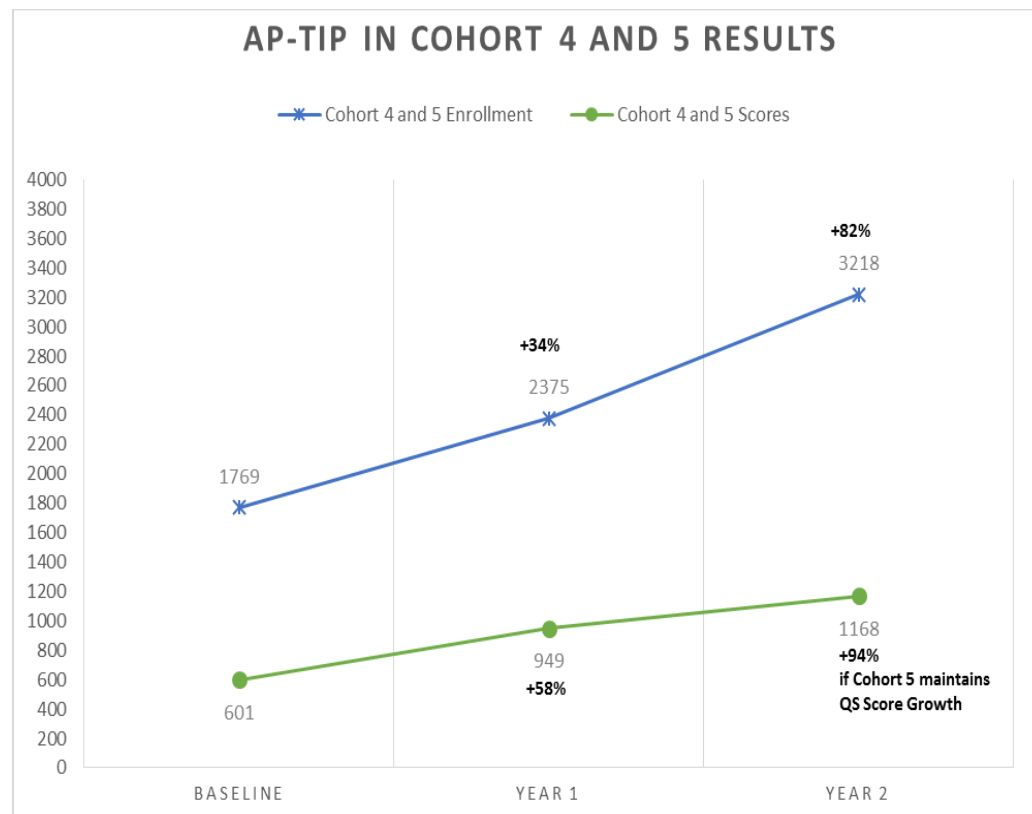
To date, AP-TIP IN has worked with more than 340 AP MSE teachers and more than 21,000 students at 46 Indiana public high schools. These students have taken nearly 30,700 AP math, science, and English courses and earned more than 12,330 qualifying scores (40% success rate!). This translates to approximately \$10,017,000* in college tuition saved for Hoosier families and by the state as students who earn qualifying scores are more likely to have a lower remediation rate and graduate on-time (*based on the average tuition cost for one college-level course at an Indiana public institute of higher education if a student enrolls in 30 credits; maintaining on-time graduation).

For the 2017-18 school year, AP-TIP IN added eight schools as Cohort 5, to join the eight Cohort 4 schools. Participating schools included:

Cohort 4 Schools		Cohort 5 Schools	
Argos	Mooreville	Avon	Michigan City
Griffith	Northwestern	Clay	Muncie Central
Lowell	Twin Lakes	Clinton Central	New Albany
Merrillville	Washington	Marion	Providence Cristo Rey

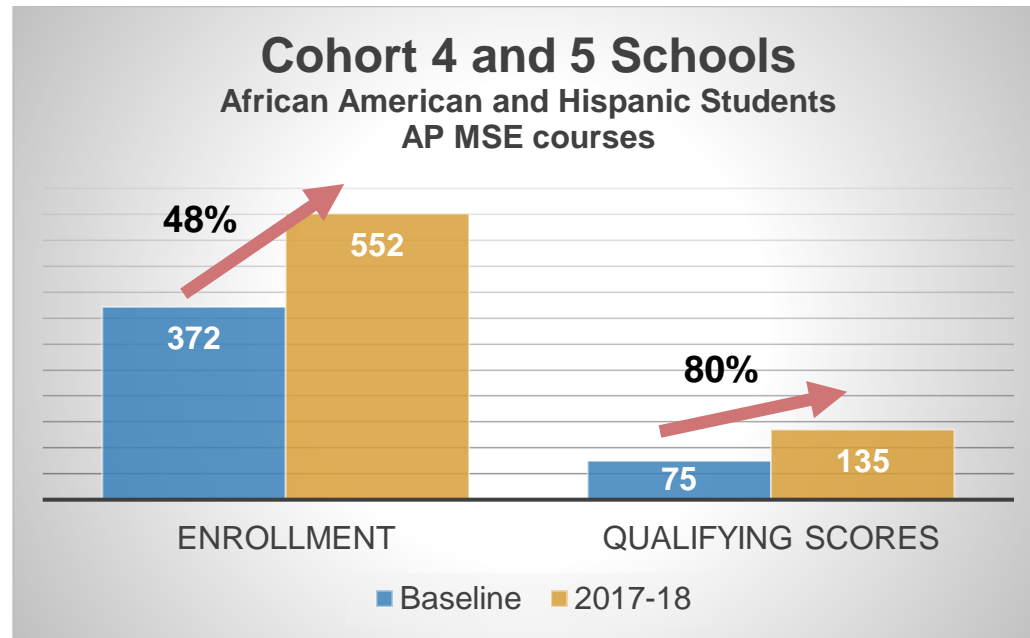
Funding was made available for teacher professional development and support with the continuance of an Improving Teacher Quality Program (ITQP) grant from the Indiana Commission for Higher Education. Additionally, a grant received from the Lilly Endowment aided in supporting student incentives, teacher and student incentives, and program activities during the 2017-2018 school year. This grant award will support schools through the 2019-2020 school year (the first year of Cohort 7).

The infusion of Lilly Endowment funds had the immediate response of increasing AP MSE enrollments by more than double, compared to the 2016-2017 school year (see Graph 3). Additionally, compared to their baselines, success in AP MSE courses continues to climb. The 16 AP-TIP IN Cohort 4 and 5 schools were able to increase their AP MSE qualifying scores from a baseline of 601 to 1168, an increase of 94%.



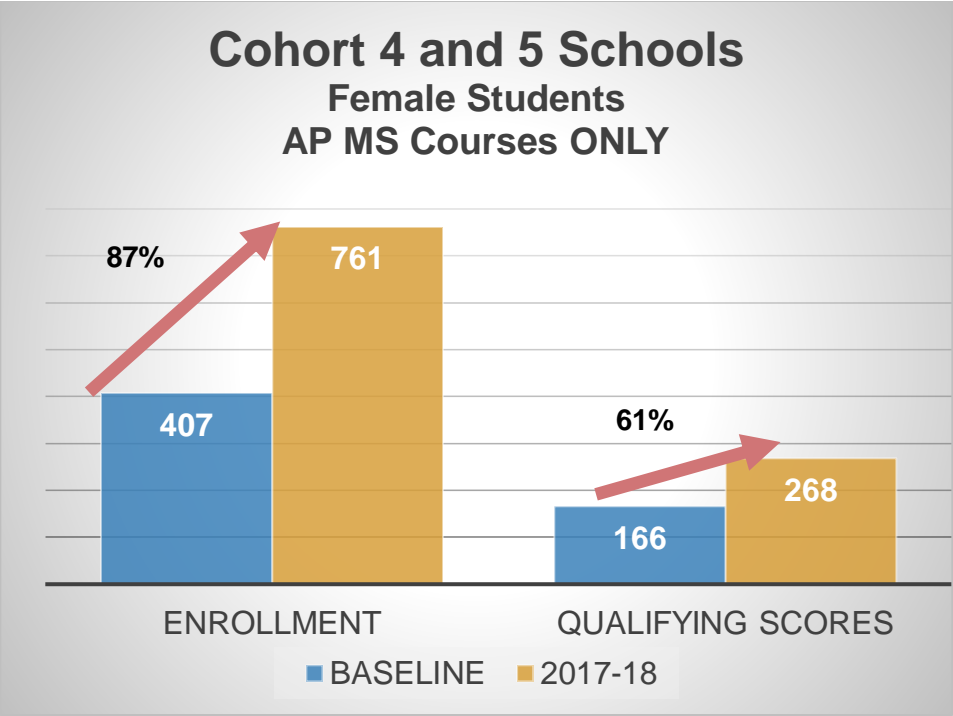
Graph 3

AP-TIP IN also tracks participation and success for historically under-represented minority students in STEM. African American and Hispanic students are particularly recruited to participate in AP MSE courses. Graph 4 demonstrates how AP-TIP IN impacted African American and Hispanic students in terms of AP enrollment and success during the 2017 – 2018 school year. While enrollment increases at Cohort 4 and 5 schools increased by nearly 50% the success these students experienced increased by nearly 80%. This indicates that the AP-TIP IN program, with its combination of teacher and student support, can help schools close the achievement gap.



Graph 4

As an under-represented group in STEM, female student participation in AP-TIP IN math and science courses is carefully tracked (Graph 5). The 87% enrollment growth experienced by female students at Cohort 4 and 5 schools this 2016-2017 school year kept pace with success with a 61% increase in the number of qualifying scores.



Graph 5

For the 2018-2019 school year, AP-TIP IN recruited 11 Indiana high schools to participate in Cohort 6 (see Map). With the support of the Lilly Endowment, these schools are fully funded for a grant period of two years. Schools that wish to continue with the AP-TIP IN program are “Affiliate” schools and these are also indicated on this map. As grant funding ends the 2019-2020 school year, expansion of the AP-TIP IN program beyond Cohort 7 will depend on new funding.

RECENT TRENDS FOR AP

AP Computer Science Principles

AP Computer Science Principles launched nationwide in 2016, with the course being offered in 2,500 schools and over 50,000 students taking the exam. In 2017, the number of schools offering the course increased to 3,700 with over 70,000 students taking the exam. In Indiana, only 33 high schools offered the course in 2017, with 920 students taking the exam. While the participation number is low, 79% of participating students earned a passing score of 3, 4, or 5.

AP Computer Science Principles introduces students to the foundational concepts of the field and challenges them to explore how computing and technology can impact the world. AP Computer Science Principles has had a positive effect on females and underrepresented minorities, providing critical exposure to STEM fields. The number of females enrolled in AP computer science courses more than doubled from 2016 to 2017. The same was true for Hispanic/Latino and Black/African American students. A strategic plan should be created to encourage more schools to offer AP Computer Science Principles. This effort will be led by IDOE's Workforce Alignment and STEM division.

AP with WE Service

College Board has partnered with WE Service, an educational partner that delivers service-based learning. Utilizing resources provided by WE, Advanced Placement teachers can easily situate service-based learning projects within the context of their curriculum. Participation in an AP with WE service-learning project could fulfill the Employability Skills portion of Graduation Pathways.

Expansion of the AP Capstone program

AP Capstone™ is a College Board program that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. It cultivates curious, independent, and collaborative scholars and prepares them to make logical, evidence-based decisions. Participation in AP Capstone fulfills the Employability Skills portion of Graduation Pathways, serving as a Project-Based Learning experience.

CHANGES TO AP IN 2019-20

Resources and Supports for all AP courses

College Board is launching a system of resources and supports for all AP students, teachers, and coordinators in the 2019-20 school year. These resources are designed to motivate students and improve success in AP courses. Through an on-line platform, teachers will have access to unit guides, assessment bank questions, and performance dashboards. Students will be able to answer questions online and have the ability to do their own progress monitoring. These tools should assist teachers, especially new AP teachers, improve AP exam results. Streamlined exam ordering, student registration labels, fall registration, and exam day improvements will help AP coordinators maximize their time.

Fall Registration

Beginning in the fall of 2019, students will have to register for AP exams in the fall, rather than waiting until spring. Late fees will be assessed if students are not registered by November 15. Fees will not be assessed if students transfer schools in the middle of the year. Schools have expressed concern that some students will not choose to take AP courses because of this early deadline. It is important to note this deadline is in the second quarter, giving students and teachers ample time to make the best decision for the student. As has been done historically, students should be encouraged to sign up for exams as the exposure to rigorous curriculum and exam preparation has many benefits.

In response to concerns about the new timeframe, College Board has released information from schools who have piloted early registration. Schools who have piloted the early registration period have shown a 13% increase in exam takers and a 21% increase in underrepresented minority exam takers. Low income exam takers increased 33% in schools that piloted the early registration. Additionally, data shows a 20% increase in low income students earning passing scores on AP exams. Data purports that actually committing to an exam early increases student engagement and commitment to the course.