



# RESEARCH BRIEF

## Research Services

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### **Miami-Dade County Public Schools: 2017-2018 Student Performance in the Cambridge Advanced International Certificate of Education Program**

#### **Results at a Glance**

This Research Brief summarizes the performance of Miami-Dade County Public Schools (M-DCPS) students participating in the Cambridge Advanced International Certificate of Education (AICE) Program. Cambridge courses and examinations were offered at 14 M-DCPS high schools in 2017-2018. Over 10,500 examinations were taken by M-DCPS students in 28 subject areas in 2017-2018. The number of AICE examinations taken in M-DCPS increased by 12% from 2016-2017 to 2017-2018. The District's Hispanic students took 79% of all AICE examinations in 2017-2018. Overall, the percentage of AICE examinations receiving passing scores increased by four percentage points, from 67% in 2016-2017 to 71% in 2017-2018. From 2016-2017 to 2017-2018, the percentage of AICE examinations receiving passing scores increased for all groups of students: by 7 percentage points for White students, by 4 percentage points for Hispanic students and students classified as "Other," and by 2 percentage points for Black students. At the conclusion of the 2017-2018 school year, 76% of eligible M-DCPS students received AICE diplomas, a two percentage point decrease from 2016-2017.

The Cambridge Advanced International Certificate of Education (AICE) diploma program is an international curriculum and examination system that emphasizes the value of broad and balanced study. Along with in-depth understanding of a variety of subjects, students are also required to master a broad range of skills critical for success in university study and employment. The program emphasizes the development of higher order thinking skills, oral skills, writing skills, problem solving, real world applications, independent investigative skills, teamwork, and international understanding.

The AICE program provides students with flexibility in class selection, allowing them to tailor their studies to their individual interests, abilities, and future plans. Students are required to complete courses from three different subject groups, plus the core compulsory subject Global Perspectives and Research. This skills-based course challenges students to think critically, analyze evidence,

and compare perspectives. Learning is assessed through a written examination as well as a team project and presentation. The program is made up of Advanced Subsidiary (AS) Level and Advanced (A) Level courses. Cambridge AS Level courses cover the first year of the two-year A Level curriculum and count as a single credit. A Level courses cover approximately two years of college-level curriculum and count as double credit toward the AICE diploma. There are 55 Cambridge AS and A Level subjects to choose from across four subject groups: Group 1: Mathematics and Sciences; Group 2: Languages; Group 3: Arts and Humanities; and Group 4: Interdisciplinary Subjects (optional). Students must earn at least one credit from each of Groups 1, 2, and 3. A maximum of two credits can count from Group 4.

Students must earn a minimum of seven credits (including the Global Perspectives and Research course) from subject groups 1, 2, and 3 (and optionally group 4) to be awarded the AICE diploma. Students must earn at least one credit from each of Groups 1, 2, and 3. The AICE program uses a point system to award diplomas at three levels - Distinction, Merit, and Pass - based on students' coursework performance and examination scores. Students are required to demonstrate knowledge, understanding, and application. They must also show that they have acquired the skills of analysis, synthesis, and evaluation. Examinations receive passing letter grades ranging from A to E, with A being the highest. The lowest passing grade of E (or a score of 3) is equivalent to a U.S. grade of C or a 3 on an Advanced Placement examination. Performance below a grade of E receives a grade of U, ungraded, which is not considered passing. Students must receive a score of E or higher on all of their examinations in order to receive an AICE diploma.

The following 14 Miami-Dade County Public Schools (M-DCPS) high schools offered Cambridge courses and examinations in 2017-2018:

- American Senior
- G. Holmes Braddock Senior
- Center for International Education: A Cambridge Associate School
- Cutler Bay Senior
- Hialeah Gardens Senior
- Keys Gate Charter High School
- Maritime & Science Technology (MAST) Academy
- Miami Edison Senior
- Miami Killian Senior
- Miami Lakes Educational Center
- Miami Norland Senior
- Miami Springs Senior
- Ronald W. Reagan/Doral Senior
- South Miami Senior

Some M-DCPS students are not on a Cambridge diploma track but are earning college credit by taking Cambridge courses and examinations. Thirteen of the 14 M-DCPS high schools that offered Cambridge courses and examinations in 2017-2018 offered a full diploma track program and had students who were eligible for AICE diplomas. Only Miami Edison Senior, offering the Cambridge program for the first time in 2017-2018, did not offer a full diploma track program.

This Research Brief includes 2016-2017 and 2017-2018 data on the 14 M-DCPS schools that offered Cambridge courses and examinations. Tables included in this report provide data on the number of AICE examinations taken and the percentage of examinations receiving passing scores by subject area across all 14 M-DCPS Cambridge schools, by school across all subject areas, and by school and ethnicity across all subject areas. The number and percentage of M-DCPS students receiving AICE diplomas in the District and at each Cambridge school are also provided.

The reader should note that the tables in this report include only the subject area examinations taken by students at M-DCPS schools. Results are not reported if fewer than 10 examinations were taken. Similarly, diploma data are only reported when 10 or more students at a school were eligible for the AICE diploma.

### **Participation in Cambridge AICE Examinations**

- Fourteen M-DCPS schools offered Cambridge courses and examinations in 2017-2018.
- Across all M-DCPS Cambridge schools, the number of AICE examinations taken by M-DCPS students in grades 9-12 increased by 12% (from 9,383 in 2016-2017 to 10,512 in 2017-2018).
- In 2017-2018, AICE examinations were taken in 28 different subject areas. The subject areas in which the largest numbers of M-DCPS students took examinations were English Language, General Paper, and History. (General Paper is multi-disciplinary subject matter drawn from across the curriculum. The syllabus encourages candidates to make cross-curricular links; develop a maturity of thought; and achieve an understanding and usage of the English language that enables them to express arguments, ideas, and opinions in a reflective and academic manner.)
- The greatest number of AICE examinations were taken at G. Holmes Braddock Senior in 2017-2018 (2,059 examinations).
- The number of AICE examinations taken increased at nine of the 13 M-DCPS schools that offered Cambridge courses in both 2016-2017 and 2017-2018. The largest increases in the number of examinations taken were at American Senior (from 59 examinations taken in 2016-2017 to 262 examinations taken in 2017-2018, a 344% increase), South Miami Senior (from 256 examinations taken in 2016-2017 to 544 examinations taken in 2017-2018, a 113% increase), and the Center for International Education (from 515 examinations taken in 2016-2017 to 958 examinations taken in 2017-2018, an 86% increase).
- The District's Hispanic students took 79% of all AICE examinations in 2017-2018. Black and White students each took 9% of AICE examinations, and students classified as "Other" (Alaskan Native, American Indian, Asian, Pacific Islander, and Multiracial categories) took 3% of examinations.

- From 2016-2017 to 2017-2018, the percentage of AICE examinations taken by Black students increased by one percentage point, the percentage of examinations taken by both Hispanic students and White students decreased by one percentage point, and the percentage of examinations taken by students classified as “Other” remained stable.

### **Examination Results**

- Across all M-DCPS Cambridge schools, the percentage of AICE examinations receiving passing scores increased by four percentage points, from 67% in 2016-2017 to 71% in 2017-2018.
- The 2017-2018 subject areas in which the highest percentages of AICE examinations received passing scores were French, Portuguese, and Spanish. The subject areas in which the lowest percentages of examinations received passing scores were Art and Design, Biology, Business, Economics, and Information Technology.
- Miami Springs Senior and Ronald W. Reagan/Doral Senior had the highest percentages of AICE examinations receiving passing scores (85% at each school) in 2017-2018.
- From 2016-2017 to 2017-2018, the percentage of AICE examinations receiving passing scores increased at 10 M-DCPS Cambridge schools, remained stable at one school, and decreased at two schools. (Miami Edison Senior offered Cambridge courses and examinations for the first time in 2017-2018.) The largest increases in the percentage of examinations receiving passing scores were at Miami Springs Senior and South Miami Senior (each with an 11 percentage point increase in the percentage of examinations receiving passing scores) and at Hialeah Gardens and Miami Lakes Educational Center (each with a 10 percentage point increase in the percentage of examinations receiving passing scores). American Senior had the largest decrease in the percentage of examinations receiving passing scores (a 32 percentage point decrease in the percentage of examinations receiving passing scores).
- In 2017-2018, 76% of AICE examinations taken by White students, 73% of examinations taken by Hispanic students, 44% of examinations taken by Black students, and 78% of examinations taken by students classified as “Other” received passing scores.
- From 2016-2017 to 2017-2018, the percentage of AICE examinations receiving passing scores increased for all groups of students: by 7 percentage points for White students, by 4 percentage points for Hispanic students and students classified as “Other,” and by 2 percentage points for Black students.

### **Diploma Results**

- Grades 11 and 12 students who were enrolled in the Cambridge full diploma track program, met all program requirements, and took the required examinations were eligible to receive AICE diplomas. Districtwide, the number of students eligible to receive AICE diplomas increased by 36% (from 429 students in 2016-2017 to 585 students in 2017-2018).

- A total of 443 M-DCPS students, or 76% of the 585 eligible M-DCPS students, received AICE diplomas at the conclusion of the 2017-2018 school year. From 2016-2017 to 2017-2018, the percentage of M-DCPS students receiving AICE diplomas decreased by two percentage points (from 78% to 76%). However, the actual number of students receiving AICE diplomas increased by 33%, from 333 students in 2016-2017 to 443 students in 2017-2018.
- Of the 13 M-DCPS schools offering full diploma track programs, the following three schools had the highest percentages of eligible students receiving AICE diplomas: Ronald W. Reagan/Doral Senior (98%), G. Holmes Braddock Senior (94%), and Miami Springs Senior (92%).
- Among the 10 M-DCPS schools with full AICE diploma track programs in both 2016-2017 and 2017-2018, the percentage of students receiving diplomas increased at seven schools and decreased at two schools. (A year-to-year comparison is not provided for Miami Norland Senior because fewer than 10 students at the school were eligible for the AICE diploma.)

Table 1. Number of Cambridge AICE Examinations Taken and Percent of Examinations Passed, by Subject Area, 2016-2017 and 2017-2018, M-DCPS, All Cambridge AICE Schools Combined

Subject Area	# of Exams Taken		% of Exams Passed	
	2016-2017	2017-2018	2016-2017	2017-2018
Art and Design	53	29	38%	28%
Biology	270	260	24%	25%
Business	128	121	23%	27%
Chemistry	179	224	58%	34%
Economics	189	233	11%	22%
English Language	1054	1229	80%	78%
English Literature	554	765	74%	76%
Environmental Management	548	576	73%	72%
French (A Level)	12	15	100%	100%
French Language (AS Level)	20	10	100%	100%
Further Mathematics	1	0	N/A	N/A
General Paper	1121	1450	93%	93%
Geography	7	0	N/A	N/A
Global Perspectives & Research	751	817	94%	94%
History	1094	1303	48%	53%
Information Technology	41	48	20%	6%
Marine Science	761	688	56%	62%
Mathematics	239	289	59%	60%
Media Studies	61	66	92%	92%
Music	14	36	71%	83%
Physics	144	134	38%	57%
Portuguese (A Level)	9	5	N/A	N/A
Portuguese Language (AS Level)	13	21	92%	100%
Psychology	764	663	45%	57%
Sociology	125	135	45%	44%
Spanish (A Level)	158	134	100%	100%
Spanish Language (AS Level)	406	507	100%	99%
Spanish Literature	0	15	N/A	100%
Thinking Skills	476	523	69%	68%
Travel/Tourism	191	216	68%	70%
<b>Total, All Subjects</b>	<b>9,383</b>	<b>10,512</b>	<b>67%</b>	<b>71%</b>

Table 2. Number of Cambridge AICE Examinations Taken and Percent of Examinations Passed, by School, 2016-2017 and 2017-2018

School	# of Exams Taken		% of Exams Passed	
	2016-2017	2017-2018	2016-2017	2017-2018
American Senior	59	262	95%	63%
G. Holmes Braddock Senior	1833	2059	74%	74%
Center for International Education	515	958	52%	61%
Cutler Bay Senior	399	499	74%	66%
Hialeah Gardens Senior	1736	1505	57%	67%
Keys Gate Charter High School	467	500	55%	63%
MAST Academy	1395	1463	72%	77%
Miami Edison Senior	0	33	N/A	9%
Miami Killian Senior	836	770	71%	76%
Miami Lakes Educational Center	237	249	74%	84%
Miami Norland Senior	294	397	18%	23%
Miami Springs Senior	163	135	74%	85%
Ronald W. Reagan/Doral Senior	1193	1138	84%	85%
South Miami Senior	256	544	61%	72%

Table 3. Number of Cambridge AICE Examinations Taken and Percent of Examinations Passed, By Ethnicity, 2016-2017 and 2017-2018

		White		Black		Hispanic		Other	
		# Taken	% Passed	# Taken	% Passed	# Taken	% Passed	# Taken	% Passed
American Senior	2018	7	N/A	92	51%	159	69%	4	N/A
	2017	1	N/A	23	87%	35	100%	0	N/A
G. Holmes Braddock Senior	2018	128	66%	16	75%	1870	75%	45	58%
	2017	78	71%	12	75%	1710	74%	33	82%
Center for International Education	2018	77	56%	110	50%	742	62%	29	86%
	2017	46	48%	67	31%	388	56%	14	57%
Cutler Bay Senior	2018	84	68%	45	64%	353	65%	17	82%
	2017	73	68%	42	71%	266	75%	18	83%
Hialeah Gardens Senior	2018	21	90%	14	71%	1454	67%	16	81%
	2017	17	47%	8	N/A	1688	57%	23	52%
Keys Gate Charter High School	2018	39	69%	100	58%	351	64%	10	60%
	2017	63	54%	86	45%	299	59%	19	37%
MAST Academy	2018	351	78%	29	76%	1027	76%	56	75%
	2017	334	68%	60	57%	954	74%	47	77%
Miami Edison Senior	2018	0	N/A	29	7%	4	N/A	0	N/A
	2017	0	N/A	0	N/A	0	N/A	0	N/A
Miami Killian Senior	2018	119	85%	92	58%	527	76%	32	88%
	2017	145	72%	82	59%	566	72%	43	84%
Miami Lakes Educational Center	2018	16	88%	60	77%	162	85%	11	100%
	2017	12	83%	53	72%	162	73%	10	90%
Miami Norland Senior	2018	1	N/A	373	23%	23	39%	0	N/A
	2017	1	N/A	274	18%	16	25%	3	N/A
Miami Springs Senior	2018	11	91%	2	N/A	114	85%	8	N/A
	2017	14	64%	4	N/A	131	76%	14	79%
Ronald W. Reagan/Doral Senior	2018	112	89%	16	81%	971	84%	39	87%
	2017	120	83%	14	79%	1018	84%	41	80%
South Miami Senior	2018	19	63%	12	33%	511	73%	2	N/A
	2017	11	64%	3	N/A	239	61%	3	N/A
<b>Total, All Schools</b>	<b>2018</b>	<b>985</b>	<b>76%</b>	<b>990</b>	<b>44%</b>	<b>8268</b>	<b>73%</b>	<b>269</b>	<b>78%</b>
	<b>2017</b>	<b>915</b>	<b>69%</b>	<b>728</b>	<b>42%</b>	<b>7472</b>	<b>69%</b>	<b>268</b>	<b>74%</b>



Table 4. Number and Percent of Students Receiving Cambridge AICE Diplomas, by School and M-DCPS Overall, 2016-2017 and 2017-2018

School	Number of Students Eligible for AICE Diplomas		Number of Students Receiving AICE Diplomas		Percent of Students Receiving AICE Diplomas	
	2016-2017	2017-2018	2016-2017	2017-2018	2016-2017	2017-2018
American Senior	0	26	N/A	2	N/A	8%
G. Holmes Braddock Senior	96	85	91	80	95%	94%
Center for International Education	0	35	N/A	23	N/A	66%
Cutler Bay Senior	11	23	7	11	64%	48%
Hialeah Gardens	83	92	56	68	68%	74%
Keys Gate Charter	23	34	9	15	39%	44%
MAST Academy	54	99	42	83	78%	84%
Miami Killian Senior	28	35	20	28	71%	80%
Miami Norland Senior	1	4	N/A	N/A	N/A	N/A
Miami Lakes Educational Center	30	35	16	24	53%	69%
Miami Springs Senior	12	12	6	11	50%	92%
Ronald W. Reagan/Doral Senior	91	85	85	83	93%	98%
South Miami Senior	0	20	N/A	13	N/A	65%
<b>Total, All Cambridge AICE Schools</b>	<b>429</b>	<b>585</b>	<b>333</b>	<b>443</b>	<b>78%</b>	<b>76%</b>

Note: The number of students receiving AICE diplomas does not add up to the total because results are not reported when fewer than 10 students were eligible for the diploma.

## Summary

This Research Brief summarized the performance of M-DCPS students participating in the Cambridge AICE program. Cambridge courses and examinations were available at a total of 14 M-DCPS schools in 2017-2018. Over 10,500 AICE examinations were taken by M-DCPS students in 28 subject areas in 2017-2018. The number of AICE examinations taken in M-DCPS increased by 12% from 2016-2017 to 2017-2018. The greatest number of AICE examinations was taken at G. Holmes Braddock Senior in 2017-2018. The District's Hispanic students took 79% of all AICE examinations in 2017-2018; Black and Hispanic students each took 9% of AICE examinations; and students classified as "Other" took 3% of examinations.

The percentage of M-DCPS AICE examinations receiving passing scores increased by four percentage points, from 67% in 2016-2017 to 71% in 2017-2018. Miami Springs Senior and Ronald W. Reagan/Doral Senior had the highest percentages of AICE examinations receiving passing scores. Students classified as "Other" had the highest percentage of AICE examinations receiving passing scores in 2017-2018, followed by White students, Hispanic students, and Black students. From 2016-2017 to 2017-2018, the percentage of examinations receiving passing

scores increased by seven percentage points for White students, by four percentage points for Hispanic students and students classified as “Other,” and by two percentage points for Black students.

Overall, 76% of M-DCPS’ eligible students received an AICE diploma at the conclusion of the 2017-2018 school year. The percentage of eligible students earning an AICE diploma decreased by two percentage points from 2016-2017 to 2017-2018. Of the 13 M-DCPS schools offering full AICE diploma track programs, Ronald W. Reagan/Doral Senior, G. Holmes Braddock Senior, and Miami Springs Senior had the highest percentages of eligible students receiving AICE diplomas in 2017-2018.