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Miami-Dade County Public Schools: 2016-2017 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 13 M-DCPS high schools in 2016-2017. The number of Cambridge AICE examinations taken by M-DCPS students increased by 27%, from 7,385 in 2015-2016 to 9,383 in 2016-2017. Enrollment in the Cambridge AICE program also increased by 19%, from 3,518 students in 2015-2016 to 4,186 students in 2016-2017. The percentage of AICE examinations receiving passing scores decreased by one percentage point, from 68% in 2015-2016 to 67% in 2016-2017. At the conclusion of the 2016-2017 school year, 78% of eligible Cambridge students received AICE diplomas, a seven percentage point decrease from 2015-2016; however, the number of students eligible to receive an AICE diploma increased by 60%, from 268 students in 2015-2016 to 429 students in 2016-2017. The decrease in the percentage of eligible students receiving a diploma may be due to the fact that the eligibility requirements for the AICE diploma increased, affecting students enrolled in the program during the 2016-2017 school year.

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 approximately 50 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, which is optional.

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 13 Miami-Dade County Public Schools (M-DCPS) high schools offered Cambridge courses and examinations in 2016-2017:

- 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 Killian Senior*
- Miami Lakes Educational Center*
- Miami Norland Senior*
- Miami Springs Senior*
- Ronald W. Reagan/Doral Senior*
- South Miami Senior

There are many M-DCPS students who are not on a Cambridge diploma track, but are earning college credit by taking Cambridge courses and examinations. Of the 13 M-DCPS high schools that offered Cambridge courses and examinations in 2016-2017, 10 schools offered a full diploma track program and had students who were eligible for AICE diplomas. These schools are marked with an asterisk above.

This Research Brief includes data on the 13 M-DCPS schools that offered Cambridge courses and examinations in 2016-2017. The number of AICE examinations taken and the percentage of examinations receiving passing scores by subject area are provided for 2015-2016 and 2016-2017, across all M-DCPS Cambridge AICE schools. The number of examinations taken and the percentage of examinations receiving passing scores are also provided for each M-DCPS Cambridge school across all subject areas combined. The number and percentage of M-DCPS students receiving AICE diplomas are provided for 2015-2016 and 2016-2017 by school and across all Cambridge AICE schools.

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

- Thirteen M-DCPS schools offered Cambridge courses and examinations in 2016-2017.
- Across all M-DCPS Cambridge schools, the number of AICE examinations taken by M-DCPS students in grades 9-12 increased by 27% (from 7,385 in 2015-2016 to 9,383 in 2016-2017). Enrollment in the Cambridge AICE program also increased by 19%, from 3,518 students in 2015-2016 to 4,186 students in 2016-2017.
- In 2016-2017, AICE examinations were taken in 29 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 and Hialeah Gardens Senior in 2016-2017 (1,833 and 1,736, respectively).
- From 2015-2016 to 2016-2017, the number of AICE examinations taken increased at 11 of the 13 M-DCPS Cambridge schools. The largest increases in the number of examinations taken were at South Miami Senior (from 55 examinations taken in 2015-2016 to 256 examinations taken in 2016-2017, a 365% increase) and at the Center for International Education (from 221 examinations taken in 2015-2016 to 515 examinations taken in 2016-2017, a 133% increase).

Examination Results

- Across all M-DCPS Cambridge schools, the percentage of AICE examinations receiving passing scores in M-DCPS decreased by one percentage point, from 68% in 2015-2016 to 67% in 2016-2017.
- The 2016-2017 subject areas in which the highest percentages of AICE examinations received passing scores were French and Spanish. The subject areas in which the lowest percentage of examinations received passing scores were Biology, Business, Economics, and Information Technology.
- American Senior had the highest percentage of examinations receiving passing scores (95%) in 2016-2017.

- From 2015-2016 to 2016-2017, the percentage of examinations receiving passing scores increased at four M-DCPS Cambridge schools, remained stable at two schools, and decreased at seven M-DCPS Cambridge schools. Keys Gate Charter High School had the largest increase in the percentage of examinations receiving passing scores (+17%), while South Miami Senior had the largest decrease in the percentage of examinations receiving passing scores (-37%).

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 60% (from 268 students in 2015-2016 to 429 students in 2016-2017).
- A total of 333 M-DCPS students, or 78% of the 429 eligible M-DCPS students, received AICE diplomas at the conclusion of the 2016-2017 school year. From 2015-2016 to 2016-2017, the percentage of M-DCPS students receiving AICE diplomas decreased by seven percentage points (from 85% to 78%). However, the number of students eligible to receive an AICE diploma increased by 60%, from 268 students in 2015-2016 to 429 students in 2016-2017.
- Of the 10 M-DCPS schools offering full diploma track programs, G. Holmes Braddock Senior and Ronald W. Reagan/Doral Senior had the highest percentages of eligible students receiving AICE diplomas (95% and 93%, respectively).
- The percentage of students receiving diplomas increased by one percentage point at G. Holmes Braddock Senior, but decreased at the other M-DCPS schools with a full AICE diploma track program. (Year-to-year comparisons are not provided for Miami Killian Senior and Miami Norland Senior because 2016-2017 was the first school year that students at those schools were eligible to receive AICE diplomas. Data are also not provided when fewer than 10 students were eligible for the AICE diploma.)
- The decrease in the percentage of M-DCPS students receiving AICE diplomas may be due to the fact that the Cambridge program introduced changes that added rigor to the curriculum and assessment requirements. For example, students were required to achieve a minimum of seven credits, rather than six credits, to earn the AICE diploma. In addition, a compulsory one-credit course, *Cambridge International AS Level Global Perspectives and Research*, was added to the curriculum requirements. These changes became effective beginning with the June 2017 examinations and impacted students enrolled in the program during the 2016-2017 school year. A description of the changes made to the Cambridge AICE diploma program is available on Cambridge's "Qualification Update" page, which can be accessed at <http://www.cambridgeinternational.org/programmes-and-qualifications/cambridge-advanced/cambridge-aice-diploma/update/>.

**Table 1. Number of Cambridge AICE Examinations Taken and Percent of Examinations Passed, by Subject Area, 2015-2016 and 2016-2017
M-DCPS, All Cambridge AICE Schools Combined**

| Subject Area | # of Exams Taken | | % of Exams Passed | |
|--------------------------------|------------------|--------------|-------------------|------------|
| | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 |
| Accounting | 8 | 0 | N/A | N/A |
| Art and Design | 50 | 53 | 42% | 38% |
| Biology | 280 | 270 | 39% | 24% |
| Business | 118 | 128 | 34% | 23% |
| Chemistry | 148 | 179 | 45% | 58% |
| Economics | 25 | 189 | 36% | 11% |
| English Language | 808 | 1054 | 82% | 80% |
| English Literature | 426 | 554 | 75% | 74% |
| Environmental Management | 379 | 548 | 90% | 73% |
| French (A Level) | 6 | 12 | N/A | 100% |
| French Language (AS Level) | 26 | 20 | 89% | 100% |
| Further Mathematics | 0 | 1 | N/A | N/A |
| General Paper | 836 | 1121 | 93% | 93% |
| Geography | 0 | 7 | N/A | N/A |
| Global Perspectives & Research | 646 | 751 | 92% | 94% |
| History | 871 | 1094 | 49% | 48% |
| Information Technology | 0 | 41 | N/A | 20% |
| Marine Science | 536 | 761 | 54% | 56% |
| Mathematics | 293 | 239 | 33% | 59% |
| Media Studies | 28 | 61 | 100% | 92% |
| Music | 18 | 14 | 78% | 71% |
| Physics | 106 | 144 | 43% | 38% |
| Portuguese (A Level) | 13 | 9 | 100% | N/A |
| Portuguese Language (AS Level) | 21 | 13 | 100% | 92% |
| Psychology | 747 | 764 | 41% | 45% |
| Sociology | 43 | 125 | 42% | 45% |
| Spanish (A Level) | 24 | 158 | 100% | 100% |
| Spanish Language (AS Level) | 372 | 406 | 100% | 100% |
| Thinking Skills | 408 | 476 | 76% | 69% |
| Travel/Tourism | 149 | 191 | 71% | 68% |
| Total, All Subjects | 7,385 | 9,383 | 68% | 67% |

Table 2. Number of Cambridge AICE Examinations Taken and Percent of Examinations Passed, by School, 2015-2016 and 2016-2017

| School | # of Exams Taken | | % of Exams Passed | |
|------------------------------------|------------------|-----------|-------------------|-----------|
| | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 |
| American Senior | 52 | 59 | 87% | 95% |
| G. Holmes Braddock Senior | 1155 | 1833 | 76% | 74% |
| Center for International Education | 221 | 515 | 51% | 52% |
| Cutler Bay Senior | 257 | 399 | 82% | 74% |
| Hialeah Gardens Senior | 1710 | 1736 | 57% | 57% |
| Keys Gate Charter High School | 519 | 467 | 38% | 55% |
| MAST Academy | 1039 | 1395 | 78% | 72% |
| Miami Killian Senior | 676 | 836 | 71% | 71% |
| Miami Lakes Educational Center | 144 | 237 | 84% | 74% |
| Miami Norland Senior | 162 | 294 | 25% | 18% |
| Miami Springs Senior | 223 | 163 | 78% | 74% |
| Ronald W. Reagan/Doral Senior | 1172 | 1193 | 80% | 84% |
| South Miami Senior | 55 | 256 | 98% | 61% |

Table 3. Number and Percent of Students Receiving Cambridge AICE Diplomas, by School and M-DCPS Overall, 2015-2016 and 2016-2017

| School | Number of Students Eligible for AICE Diplomas | | Number of Students Receiving AICE Diplomas | | Percent of Students Receiving AICE Diplomas | |
|--|---|------------|--|------------|---|------------|
| | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 |
| G. Holmes Braddock Senior | 52 | 96 | 49 | 91 | 94% | 95% |
| Cutler Bay Senior | 2 | 11 | N/A | 7 | N/A | 64% |
| Hialeah Gardens | 51 | 83 | 39 | 56 | 76% | 68% |
| Keys Gate Charter | 11 | 23 | 11 | 9 | 100% | 39% |
| MAST Academy | 27 | 54 | 23 | 42 | 85% | 78% |
| Miami Killian Senior | 0 | 28 | N/A | 20 | N/A | 71% |
| Miami Norland Senior | 0 | 1 | N/A | N/A | N/A | N/A |
| Miami Lakes Educational Center | 23 | 30 | 14 | 16 | 61% | 53% |
| Miami Springs Senior | 20 | 12 | 14 | 6 | 70% | 50% |
| Ronald W. Reagan/Doral Senior | 82 | 91 | 78 | 85 | 95% | 93% |
| Total, All Cambridge AICE Schools | 268 | 429 | 228 | 333 | 85% | 78% |

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 13 M-DCPS schools in 2016-2017. The number of Cambridge AICE examinations taken by M-DCPS students increased by 27%, from 7,385 in 2015-2016 to 9,383 in 2016-2017. Enrollment in the Cambridge AICE program also increased by 19%, from 3,518 students in 2015-2016 to 4,186 students in 2016-2017. M-DCPS students took AICE examinations in 29 subject areas in 2016-2017.

The percentage of AICE examinations receiving passing scores in M-DCPS decreased by one percentage point, from 68% in 2015-2016 to 67% in 2016-2017. Overall, the percentage of eligible M-DCPS students receiving a Cambridge AICE diploma decreased by seven percentage points, from 85% in 2015-2016 to 78% in 2016-2017; however, the number of students eligible to receive an AICE diploma increased by 60%, from 268 students in 2015-2016 to 429 students in 2016-2017. The decrease in the percentage of eligible students receiving a diploma may be due to the fact that the eligibility requirements for the AICE diploma increased, affecting students enrolled in the program during the 2016-2017 school year.