



Illinois Mathematics & Science Academy

School Data Profile



INDIANA UNIVERSITY
SCHOOL OF EDUCATION
IUPUI

INTRODUCTION

This School Data Profile summarizes selected disaggregated data for the Illinois Mathematics & Science Academy (IMSA) in Aurora, IL for 2018-2019, 2017-2018, and 2015-16 school years.

Abbreviations

AIAN = American Indian/Alaskan Native

NHPI = Native Hawaiian/ Pacific Islander

IMSA = Illinois Mathematics & Science Academy

NR = Not Reported

OCR = Office of Civil Rights

CRDC = Civil Rights Data Collection

Data Analysis

Sources: All data presented in this summary were retrieved from:

<https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

<https://www.illinoisreportcard.com/>

and <https://ocrdata.ed.gov>.¹

A significant portion of the data presented in this summary was obtained directly from IMSA leadership so that the most up-to-date, accurate and comprehensive data at the building-level could be included in the summary.

and/or

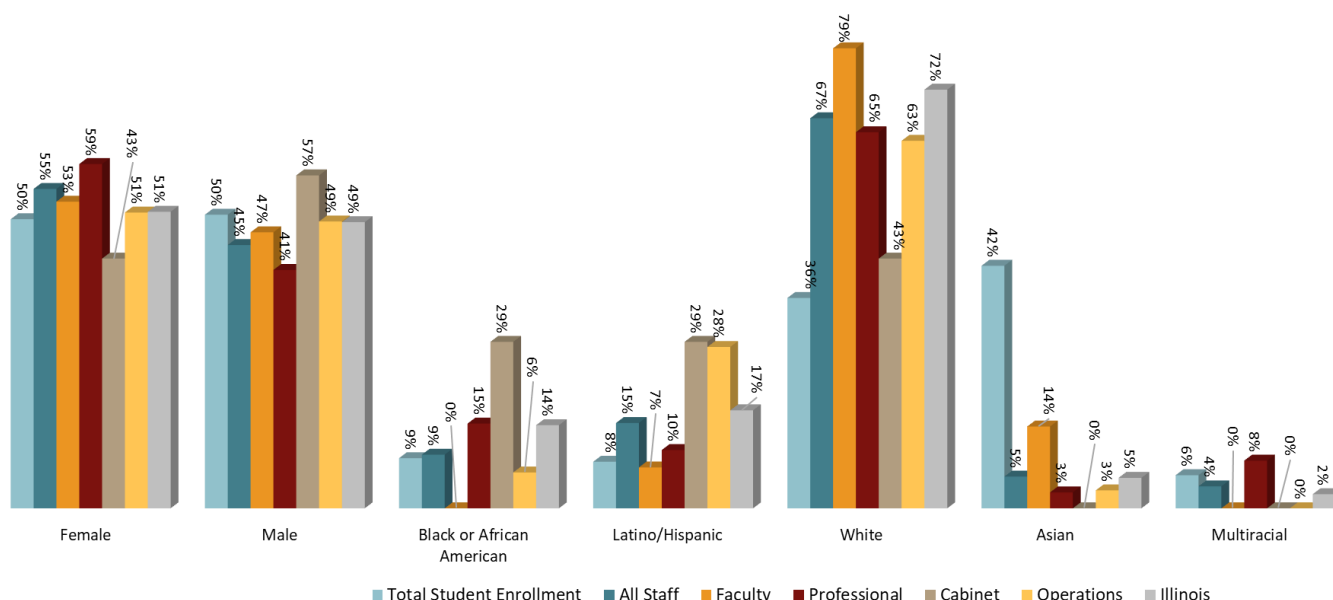
Minimum Cell Size: Sometimes data was not available for certain student demographic groups due to the small number of students enrolled at the school or due to the fact that data is not collected on this demographic group. For instance, data were not available for students with dis/abilities, emergent bi/multilingual learners, American Indian/ Alaskan Native (AI/AN) students and Native Hawaiian /Pacific Islander students.

¹ Please note that the Midwest & Plains Equity Assistance Center (MAP Center) uses people-first language throughout the text and charts in the report. For instance, the Center uses emergent bi/multilingual learners in place of English Language Learners (ELL), Students with dis/abilities in place of Special Education Services, etc. although the data reported is based on federal and state sources that may use the these terms.

Data Display: Not Reported (NR) may be used in place of data labels where data are unavailable. Data labels are always percentages even when not explicitly labeled with the percent sign; no student counts are displayed and precision is always one decimal place.

SCHOOL DATA

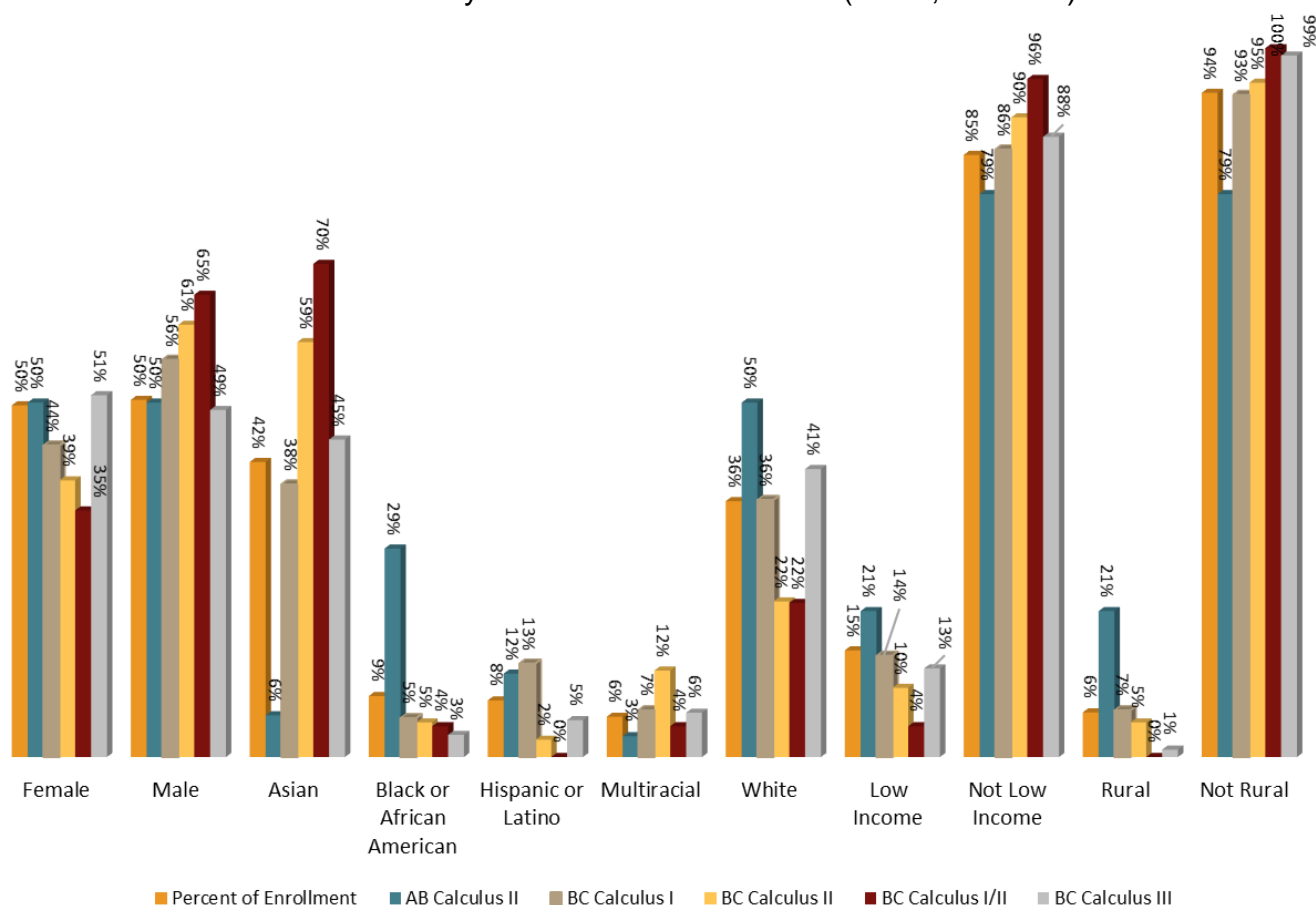
Figure 1. Comparison of race/ethnicity of IMSA students, teachers and Illinois (IMSA, 2018-19; United States Census Bureau, 2017)



INTERPRETING THIS FIGURE

More females are represented in the staff (55%) than in the student body (50%). While 9% of students are Black and/or African American, there are no faculty that are Black and/or African American. While 36% of students are White, 67% of staff and 79% of faculty are White. While there are more Asian students enrolled at IMSA than make up the state population as a whole, there are less Latinx and/or Hispanic students and White students enrolled in the school than are represented in the population as a whole. Although Asian students are 42% of the student population, faculty is 14% Asian and 0% of the Cabinet is Asian. Multiracial and those identifying in another way make up 6% of the student population, 4% of all staff and 0% of faculty. Data were not available on students with dis/abilities, emergent multi/bilingual learners, American Indian and Alaskan Native and Native Hawaiian and Pacific Islanders.

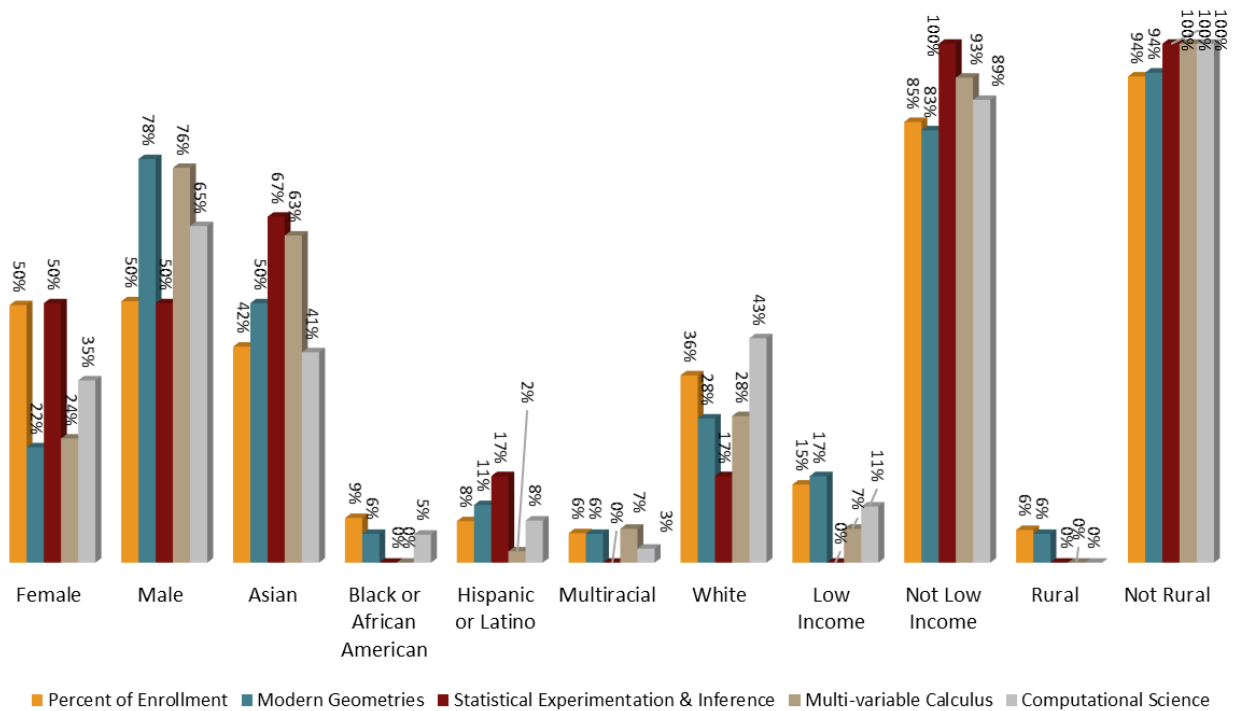
Figure 2. IMSA Calculus Enrollment by Selected Characteristics (IMSA, 2017-18)



INTERPRETING THIS FIGURE

While Black and/or African American Students make up 9% of the student population, Black and/or African American students make up 29% of AB Calculus II. While Asian students make up 42% of the student population, Asian students make up 6% of AB Calculus II enrollment and 70% of BC Calculus I/II. White students make up 36% of the student population, 50% of AB Calculus enrollment and 41% of BC Calculus III. No Latinx and/or Hispanic students or from rural areas are enrolled in BC Calculus I/II. Only 1% of enrollment in BC Calculus III is made up of rural students.

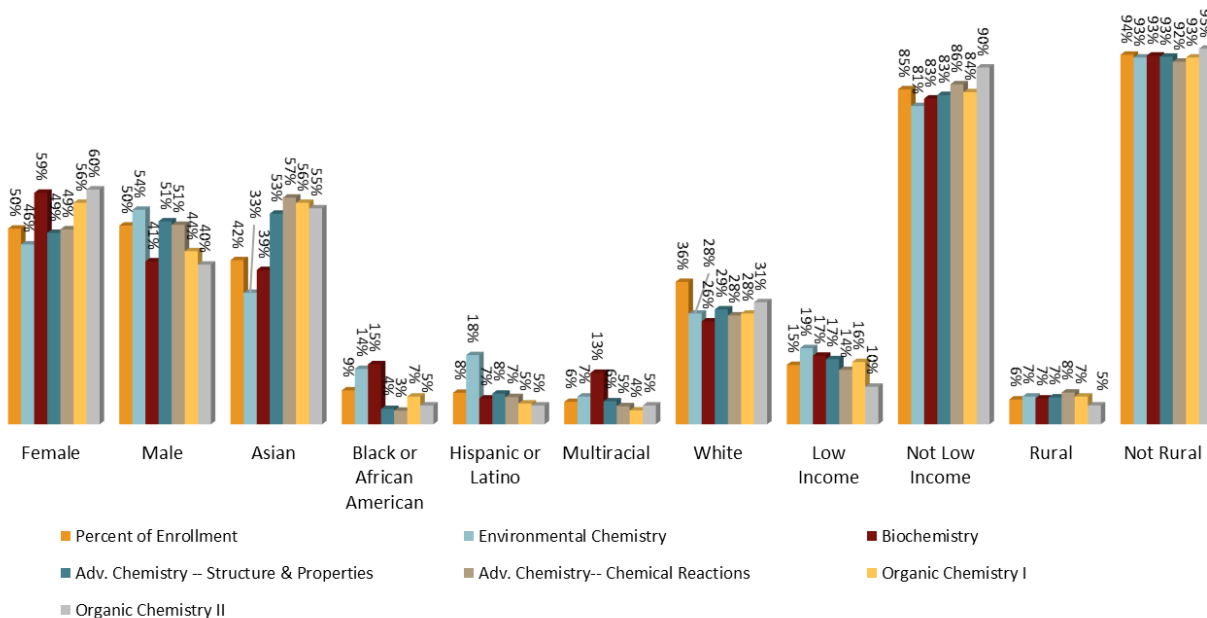
Figure 3. IMSA Mathematics and Statistics Course Enrollment by Selected Characteristics (IMSA, 2017-18)



INTERPRETING THIS FIGURE

Although male students make up 50% of the IMSA student population, they account for 78% of enrollment in Modern Geometries. No African American or Black students and students from rural areas are enrolled in Statistical Experimentation and Inference and Multi-variable Calculus. No multiracial, low income or students from rural areas are enrolled in Statistical Experimentation and Inference. While White students make up 36% of the student population, White students make up 17% of the students enrolled in Statistical Experimentation and Inference and 43% of students enrolled in Computational Science.

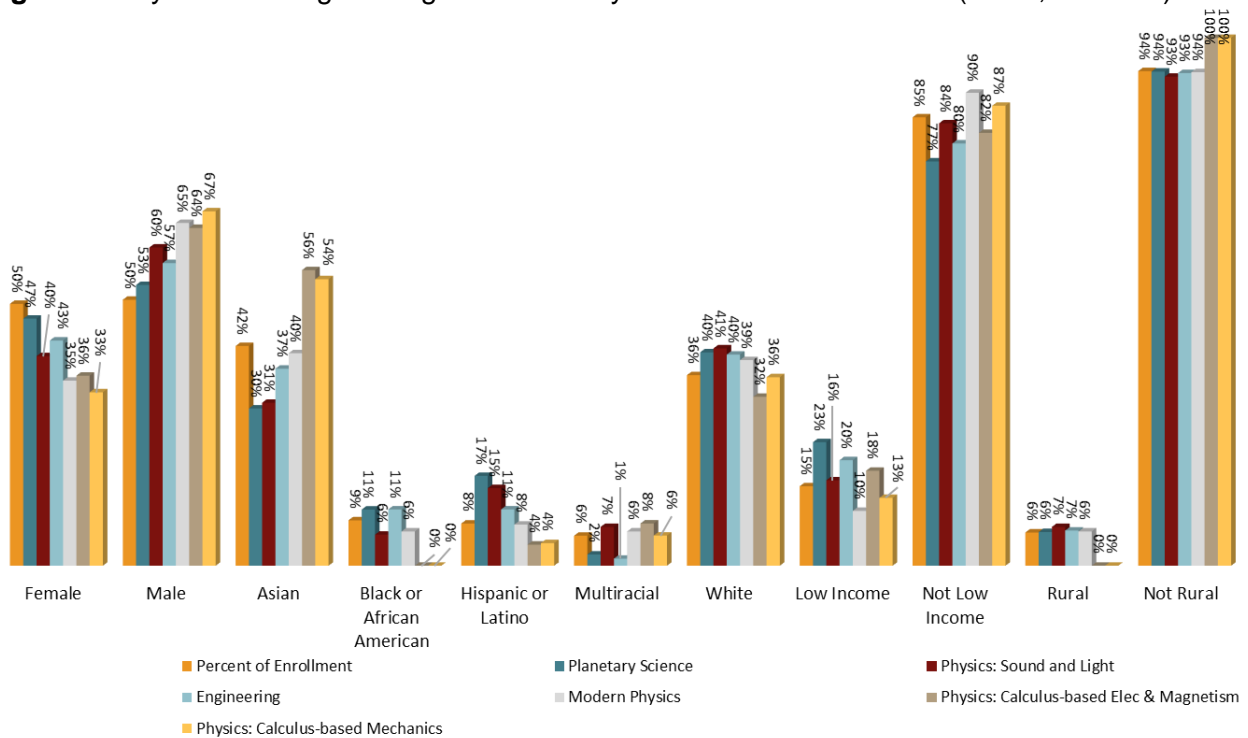
Figure 4. IMSA Chemistry Enrollment by Selected Characteristics (IMSA, 2017-18)



INTERPRETING THIS FIGURE

Enrollment in IMSA for Black and/or African American students (9%), Latinx and/or Hispanic students (8%), Multiracial (6%) and low-income students (15%) is lower than their enrollment in Environmental Chemistry: 14% for Black and/or African American students, 18% for Latinx and/or Hispanic students, 7% for Multiracial students and 19% for low income students. While Asian students make up 42% of the student body, Asian students make up 53% of enrollment in Advanced Chemistry: Structures and Properties, 57% enrollment in Advanced Chemistry: Chemical Reactions, 56% in Organic Chemistry I and 55% in Organic Chemistry II. While White students make up 36% of the student enrollment, White students make up 28% of enrollment in Environmental Chemistry, 26% in Biochemistry, 29% in Advanced Chemistry: Structure and Properties, 28% in Advanced Chemistry: Chemical Reactions, 28% in Organic Chemistry I and 31% of enrollment in Organic Chemistry II. Black and/or African American students comprise 15% and 13% of enrollment in Biochemistry, although their share of the student population 9% and 6% respectively.

Figure 5. Physics and Engineering Enrollment by Selected Characteristics (IMSA, 2017-18)



INTERPRETING THIS FIGURE

While female students comprise 50% of the IMSA student body enrollment, female students are less than 50% of the enrollment in all Physics and Engineering courses. While Black and/or African American students are 9% of the student population, Black and/or African American students make up 11% of enrollment in Planetary Science and Engineering, 6% of enrollment in Physics: Sound and Light and Modern Physics. Low income students make up 15% of the student body, but make up 23% of enrollment in Planetary Science. While Multiracial students make up 6% of the student body, Multiracial students comprise 2% of enrollment in Planetary Science and 1% of enrollment in Engineering. Black and African American students and rural students are not enrolled in Physics: Calculus-based Electricity and Magnetism or in Physics: Calculus-based Mechanics.

Figure 6. IMSA Faculty Years of Teaching Experience (IMSA, 2018-19)

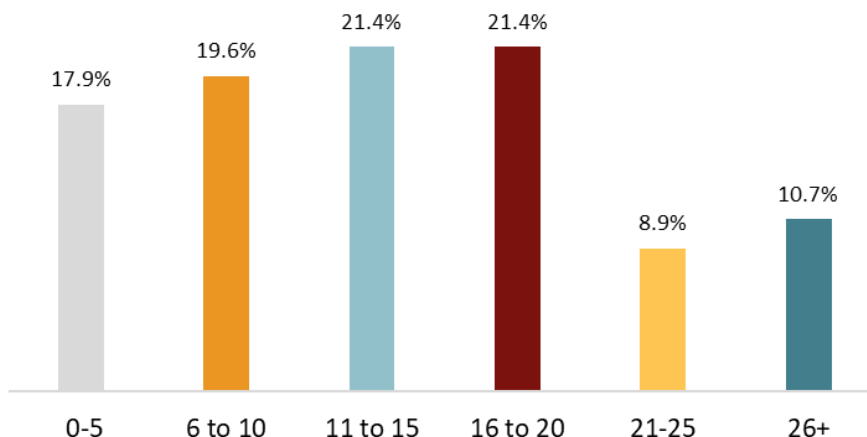


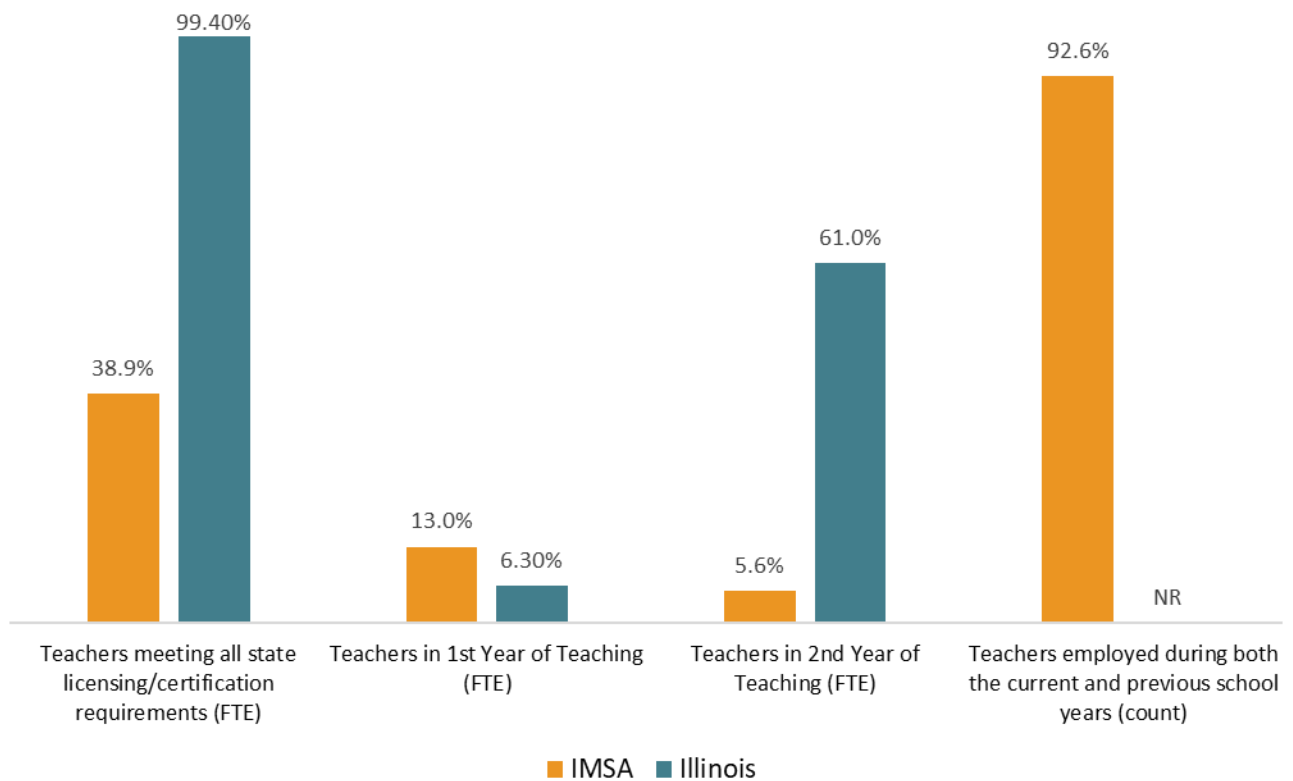
Figure 7. IMSA Faculty Educational Attainment (IMSA, 2018-19)



INTERPRETING THESE FIGURES

In Figure 6, we can see the majority of IMSA teachers have six or more years of teaching experience. In Figure 7, the bar chart shows the educational attainment of IMSA faculty. The +30, +45, and +60 indicate how many credit hours have been earned beyond the degree. According to the Illinois Report Card data, 61% of Illinois teachers have a Master's degree or higher, while all of IMSA's teachers have a Master's degree or higher. Fifty-six percent of IMSA faculty have a PhD.

Figure 8. IMSA Faculty Teacher Experience (OCR, 2015)

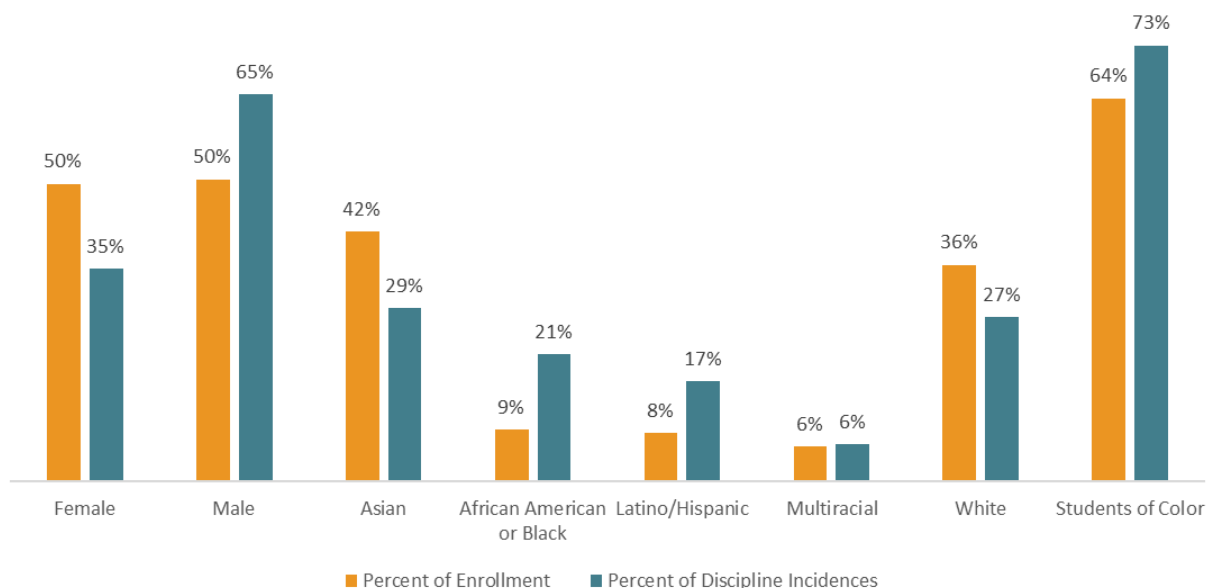


INTERPRETING THIS FIGURE

In 2015, almost twice as many teachers at IMSA were in their first year of teaching than in the state as a whole. About 5 and a half percent of IMSA teachers were in their second year of teaching, significantly less than in the state as a whole. About 92% of teachers employed the previous year were employed in the current school year, suggesting relatively low teacher turnover (OCR, 2015).

DISCIPLINE DATA

Figure 9. Distribution of student discipline incidents in IMSA by selected student characteristics (IMSA, 2016-17, 1st semester)



INTERPRETING THIS FIGURE

These data reveal that male students make up 50% of the student body, but experienced 65% of all discipline incidents during the 1st semester of 2016-17. While African American or Black, Hispanic and Multiracial students comprise 9%, 8% and 6% respectively of the student body overall, discipline incidents were reported at higher rates for these groups that one would expect given their share of the student body. This is especially striking for or African American or Black students which were subject to 21% of total discipline incidences, but make up only 9% of the student body. On the other hand, Asian and White students make up 42% and 36% of the student body, but were subject to 29% and 27% of discipline incidences. Students of Color make up about 64% of the school population but were subject to 73% of the discipline incidents that occurred during the 2016-17 semester.

References

- Bollmer, J. M., Bethel, J. W., Munk, T. E., & Bitterman, A. R. (2014). *Methods for Assessing Racial/Ethnic Disproportionality in Special Education*.
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Appendix A

Another way to monitor discipline disproportionality is using the composition index and risk index. The disciplinary actions data collected and shared via the Civil Rights Data Collection (CRDC) provide an overview of the extent to which there is disproportionate representation of various student groups in disciplinary practices. More specifically, the data describe the degree to which given student groups are:

- 1) Over or under-represented in suspensions (composition index), and
- 2) Expelled at differing rates compared to all other student groups (risk index and risk ratio) (The Equity Project, 2015)

The analyses used in summarizing these data adhere to Westat's guidelines for calculating composition indices, risk indices, and risk ratios for discipline practices in special education (Bollmer, Bethel, Munk, & Bitterman, 2014). What follows are definitions of three primary methods often used to describe discipline data, derived from the Equity Project's definitions (2014):

- Composition Index: The proportion of students receiving suspensions who belong to a given student group as compared to the proportion that group represents in overall school enrollment. [e.g., the percent of all students receiving in school suspensions who were Asian compared to the total percent of Asians in the school.]
- Risk Index: The total proportion of a given student group receiving suspensions. The risk index is an estimate of the risk for receiving suspensions for a given student group. [e.g., the proportion of ALL Asian students in a school receiving in school suspensions.]
- Risk Ratio: The risk index of a given student group receiving suspensions divided by the risk index for ALL other students to receive suspensions. The risk ratio is a way to interpret risk indices, and provides a rate at which students from a given group receive suspensions. [e.g., Asian students are 3.0 times more likely than all other students in a given school to receive an in-school suspension.] Ideally, we would expect to see a series of risk ratios close to 1.0 for each student group. Any value above 1.0 reveals an increased risk, and values below 1.0 reveal a reduced risk.