B. Technical Appendix to Exhibit 2

Delaware Department of Education | Plan to Ensure Equitable Access to Excellent Educators for All Students

This appendix serves as a technical appendix to Exhibit 2.

School Sample

The analytic sample is restricted to **traditional**, **magnet**, and **vocational** schools (except charters in by district results).

Significance Tests

T-tests are conducted to determine the significance of the gaps. An asterisk symbolizes gaps with p values less than .05.

Groups (Columns)

- ▶ **School Low Income Quartiles/Deciles:** Share of students in school classified as Economically Disadvantaged (*ed_indc* == "Y") quantiled within school sample using 2013–14 FAY student data. Gaps are defined as difference between top and bottom quantiles; t-tests between these quantiles are conducted to determine significance of gaps.

- ▶ **School High-Need Status:** Indicator for whether the school is identified as high need.

- ▶ **School Minority Quartiles/Deciles:** Share of students in school classified as minority (non-White, *race_code* ! = 5) quantiled within school sample using 2013–14 FAY student data. Gaps are defined as difference between top and bottom quantiles; t-tests between these quantiles are conducted to determine significance of gaps.

- ▶ **School Limited English Proficiency Quartiles/Deciles:** Share of students in school defined as English language learners (*s_ell_code* == "LEPN" | *s_ell_code* == "LEPO") quantiled within school sample using 2013–14 FAY student data. Gaps are defined as difference between top and bottom quantiles; t-tests between these quantiles are conducted to determine significance of gaps.

- ▶ **School Disability Quartiles/Deciles:** Share of students in school defined as disabled (*swd_code* ! = 0 [none]) quantiled within school sample using 2013–14 FAY student data. Gaps are defined as difference between top and bottom quantiles; t-tests between these quantiles are conducted to determine significance of gaps.

- ▶ **School County:** Categorical variable for school county.

- ▶ **School Locale:** Categorical variable pulled from the National Center for Education Statistics (NCES).

- ▶ **Urban/Nonurban:** Urban defined as school's NCES locale == "Urban"; Nonurban defined as all other NCES locales ("Suburb," "Town," "Rural"). Gaps defined as difference between urban and nonurban; t-tests between these groups are conducted to determine significance of gaps.

- ▶ **Wilmington/Non-Wilmington:** Wilmington defined as *sch_city* == "Wilmington"; non-Wilmington defined as schools not located in Wilmington. Gaps are defined as difference between Wilmington and non-Wilmington; t-tests between these groups are conducted to determine significance of gaps.

- ▶ **Districts:** Districts defined using district code/name; all charters are combined into a group named "Charters." *Note:* This group is the only one that includes charters.

Metrics (Rows)

Metrics defined using 2013–14 data across groups defined at the school level, using a data set unique at the teacher level:

▶ Share of Teachers Who Are Novices (first appearance in data, years of teacher experience == 0)

▶ Share of teachers who are early career teachers (teachers with two or fewer years of experience)

▶ average years of teacher experience

▶ Share of teachers rated as *unsatisfactory* on one or more DPAS I–IV components

▶ Average teacher criterion scores on DPAS I–IV

▶ Shares of teachers *unsatisfactory/satisfactory/exceeds* on Measures A/B/C

▶ Share of teachers rated as *ineffective* or *needs improvement* (combined) on summative ratings

▶ Share of teachers rated as *effective/exceeds* on summative rating

▶ Share of teachers Nationally Board Certified

▶ Share of teachers with advanced degrees (masters or above)

▶ Average teacher salary

▶ Average teacher salary adjusted for years of experience and whether teacher holds an advanced degree

Metrics defined using 2013–14 and prior school years across groups defined at the school level, using a data set unique at the principal level:

▶ Share of principals in first year at school, defined as principals whose tenure at the school began in 2013–14.

▶ Share of principals whose tenure at school is less than or equal to two years, defined as principals whose tenure at the school started in 2012–13 or later.

▶ Share of principals whose tenure at school is three or more years, defined as principals whose tenure at the school started in 2011–12 or earlier.

▶ Share of principals whose tenure at school is five or more years, defined as principals whose tenure at the school started in 2009–10 or earlier.

Metrics defined using 2013–14 data across groups defined at the school level, using a data set unique at the school level:

▶ Percentage of classes taught by highly qualified teachers

Metrics defined using 2012–13 snapshot across groups defined at the school level, using a data set unique at the school level:

▶ TELL metrics

Metrics defined using 2012–13 and 2013–14 data across groups defined at the school level, using a data set unique at the teacher level:

▶ Percentage of teachers who left teaching in Delaware Public Schools after 2012–13

▶ Percentage of teachers who transferred districts in Delaware after 2012–13

▶ Percentage of teachers who transferred schools within a district in Delaware after 2012–13

▶ Overall percentage of teacher turnover (sum of previous retention metrics)

▶ Aforementioned retention metrics restricted to teachers rated as *unsatisfactory/satisfactory/exceeds* on Measure A

Metrics defined using 2012–13 and 2013–14 data across groups defined at the school level, using a data set unique at the principal level:

▶ Percentage of principals who left Delaware after 2012–13

▶ Percentage of principals who transferred districts in Delaware after 2012–13

▶ Percentage of principals who transferred schools within a district in Delaware after 2012–13

▶ Overall percentage of principal turnover (sum of previous retention metrics)