THE ANALYSIS OF THE GROWTH IN PUPIL ACHIEVEMENT AND OVERALL APPR PERFORMANCE RATINGS OF COMPLETERS OF THE TEACHER EDUCATION PROGRAM AT TOURO'S GRADUATE SCHOOL OF EDUCATION TEACHING IN THE NEW YORK CITY PUBLIC SCHOOLS

Data for completers from the classes of 2015 - 2018

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OVERVIEW

In order to improve the quality of the nation's teachers, the public education system has long relied on requirements and rewards for formal teacher education, experience, and other traits—the "characteristics strategy." However, policymakers and some prominent educators are increasingly embracing a radical overhaul—an "accountability strategy"— that largely ignores these traits and instead rewards teachers' measured contributions to student results (Harris, 2007).[1] Chief among these accountability measures are student-growth scores based on value-added models (VAM), which attempt to measure a teacher's individual contribution to the growth in their pupils' standardized achievement test scores, controlling for students' social, economic, and learning potential characteristics that are beyond the influence of the teachers.

The use of VAM measures for assessing the effectiveness of teachers has been controversial. The Harris paper presents evidence pro and con concerning the methodological, statistical, and policy validity of these models for making high-stakes decisions about teacher effectiveness. Nevertheless, the use of VAM has become ubiquitous as accountability measures by state education departments, researchers, and national accreditation agencies. The Council for the Accreditation of Educator Preparation (CAEP) Standard 4 on program impact, requires that, "The provider documents, using multiple measures, that program completers contribute to an expected level of student growth."[2] Among these measures, the CAEP Handbook lists value-added measures and student growth percentiles.

As part of the Annual Professional Performance Review (APPR) process pursuant to Education Law § 3012-d, New York State teachers of mathematics and English language arts (ELA) in grades 4–8 and their principals receive State-provided Student Growth Percentile (SGP) scores based on 2017-18 State tests. The SGPs describe how much students are growing academically in mathematics and ELA (as measured by the New York State tests) compared to similar students statewide.[3] The growth scores are used to assign HEDI growth ratings to each

[1] Harris, Douglas N (2007). *TQR The Policy Uses and "Policy Validity" of Value-Added and Other Teacher Quality Measures.* Paper prepared for ETS. Downloaded in May 2018 from http://www.teacherqualityresearch.org
[2] *CAEP Handbook, Initial-Level Programs 2018*, March 2018. Downloaded May 2018 from http://caepnet.org/~/media/Files/caep/accreditation-resources/handbook-initiallevelprograms.pdf?la=en
[3] For 2016-17, the State-provided growth scores are to be used for advisory purposes only pursuant to Section 30-3.17 of the Rules of the Board of Regents.

teacher and, along with teacher observation reports, an overall APPR rating. The acronym HEDI stands for **H**ighly Effective, **E**ffective, **D**eveloping, and **I**neffective, categories that are used to express each teacher's pupil growth rating, as well as an overall APPR effectiveness rating.

This is the fifth report issued by the Touro Graduate School of Education (GSE) on the effectiveness of its program completers teaching in NYC public schools (NYCPS) using state SGP and APPR data. Previous reports on the scores and ratings of completers from 2008 – 2013 in the 2013-14 school year, completers from 2012 – 2015 in the 2014-15 school year, completers from 2013 – 2016 in the 2015-16 school year, and completers from 2014 - 2017 in the 2016-17 school year concluded that Teacher Education graduates of Touro's GSE were well prepared to teach effectively and raise the achievement of their pupils. Their pupil's growth in ELA and mathematics was above average on state ELA and mathematics tests as compared to similar students statewide and the vast majority of graduates had growth ratings and overall APPR ratings in the Effective and Highly Effective range. This report expands on the previous reports by presenting data for a new class, program completers from the 2017-18 academic year, in addition to new data for the Classes of 2015 - 2017, based on 2018 measures. This report focuses on pupil growth measures in state tests of ELA and mathematics for teachers of ELA and mathematics in grades 4 and 8. It does not include pupil growth measures for high school teachers and it does not include separate data on local pupil growth measures or measures of teaching practice, which are other components of the APPR. The SGP data and Overall APPR ratings have been constant fixtures across the reporting cycles allowing for the tracking of historical trends in effectiveness for Touro's GSE Teacher Education completers.

RESEARCH QUESTIONS

Using data from the New York State tests of ELA and mathematics for grades 3-8 and student demographics, the New York State Education Department (NYSED) annually calculates and reports Mean Growth Percentiles (MGP) for teachers of these subjects in grades 4 – 8. The MGP is a normative measure that compares the growth in test scores of a teacher's pupils from one year to the next to that of similar students statewide. In the analysis reported here, growth means the change in scaled scores in ELA, mathematics, or both from 2017 to 2018, and similar students means students with approximately the same baseline (2017) scaled scores, academic

history, and similar levels of educational needs. The MGP is similar to a percentile score and shows the relative ranking of the growth of a teacher's students compared to similar students statewide. For instance, a teacher with an MGP of 50 had students whose growth was equal to the median for similar students statewide; that is their growth was equal to or greater than 50% of similar students and lower than 50%.

The NYSED uses the MGP to assign growth ratings (using the HEDI scale of effectiveness) to teachers using the following classifications: Highly Effective, which means their aggregate pupils' growth (MGP) is well above the state average for similar students (at least 1.5 standard deviations (SD) above the mean); Effective, pupils' growth is equal to the state average for similar students (between 1.0 SD below and 1.5 SD above the mean); Developing, pupils' growth is below the state average for similar students (between 1.5 SD below and 1.0 SD below the mean); and Ineffective, pupils' growth is well below average for similar students (less than 1.5 SD below the state mean). State MGP measures comprise 20% of the points that are used to determine the teachers' Overall APPR performance rating, along with locally selected measures of student achievement (20%) and measures of teaching practice, including rubrics, observations, surveys, etc., which count for (60%).[4]

This study used pupil growth scores based on MGPs and the Overall APPR performance ratings to help the Touro GSE monitor the effectiveness of its teacher education program completers on the learning of their pupils and the completers' overall performance in the NYC public schools. Since, in 2017-18, state pupil growth scores were only issued for ELA and mathematics teachers in grades 4 – 8, this report is focused only on Touro graduates who were teaching these subjects to pupils in these grades The results of this study are intended to be used to inform program decision-making and provide evidence in support of continued program accreditation.

[4] The information on student growth measures and APPRs used in this section is based on the NYSED publication, *A Teacher's Guide to Interpreting Stats-Provided Growth Scores for Grades 4-8 in 2016-17*, which was downloaded in May 2018 from https://www.engageny.org/resource/teachers-guide-interpreting-state-provided-growth-scores-grades-4-8-2016-17

Using the MGP, HEDI ratings, and the Overall APPR performance ratings, this study is designed to address the following three research questions about Touro GSE graduates from the Classes of 2015 – 2018, who were teaching ELA and/or mathematics in the NYCPS during the 2017 – 18 school year:

1. What were the MGP scores in ELA and mathematics of the Touro completers? How did the scores vary by the completers' year of completion at Touro, program major, grade levels of the schools in which they taught, type of teacher (Regular vs. Special Education), and total years of teaching experience?
2. What were the HEDI pupil growth ratings of the Touro completers? How did they vary by year of completion and program major?
3. What were the Overall APPR ratings of the completers and how did these vary by year of completion and program major?

METHOD

Participants

The analysis focused on Touro GSE Teacher Education program completers from the classes of 2015 - 2018 who were teaching ELA and/or mathematics in the NYC public schools during the 2017 – 2018 school year in grades 4 – 8. In order to be included in these analyses, these teachers had to have at least five pupils on a grade with state test data for both 2017 and 2018.

Data

The data included three sets of metrics that were computed by the NYSED for each participant. The first two metrics, adjusted MGPs and HEDI ratings, are based upon the 2017 and 2018 state ELA and mathematics test scores, academic histories, and demographics of the pupils they taught during the 2017 – 2018 school year. The adjusted MGP is the mean of the teachers' pupils' SGPs, which are based on the rank of each student's 2018 state ELA and/or math test scores compared to the scores of similar students throughout the state. Similar students are those with similar academic histories, including 2017 test scores, and demographics, including English language learner status, economic status, and disability status. Based on the teachers' adjusted MGP, they are assigned points ranging from 0 to 20. The assigned points, in

turn, are used to give HEDI ratings to the teachers, the second metric used in this study. The third metric is the Overall APPR. The Overall APPR is scaled from 0 to 100 and is a summary rating based on the number of points each teacher earns in three components: adjusted MGP (0-20), local measures (0-20), and measures of teaching practice (0-60), mainly observations.

Procedures

The researcher transferred an Excel spreadsheet containing the names, social security numbers (last 5 digits), and birth dates of all participants to a NYC Department of Education (NYCDOE) data manager over a secure FileZilla client. The data manager matched the participant file to NYCDOE's Human Resources files and merged all data from the state APPR measures for 2017-18 into the participant file. The data were returned to the researcher over the same FileZilla client for downloading and analysis.

RESULTS

Description of Participants

The participants included Touro GSE teacher education completers from the classes of 2015 – 2018 who were responsible for teaching ELA and/or math in grades 4 – 8 in NYCPS. Tables 1 - 5 present descriptive information on the participants in the study. Table 1 shows the numbers of completers that were hired in the NYCPS from each of the classes of completers and the numbers and percentages of the hires that had MGP data, disaggregated by school level. For the four classes combined, a total of 1,424 were on the faculties of all elementary, middle, and mixed-level schools (K-8 and K-12) as of December 31, 2018, with 312 (21.9%) of these hired completers having MGP data. The percentage with-MGP data is reasonable considering that only teachers in grades 4 – 8 teaching ELA and math would be eligible to have MGPs. Sample attrition may also have been increased by the testing opt-out movement, which reduced student test participation throughout the state. For the completers of 2018, only 56 (18.2%) of the 307 hired completers had MGPs. For the four classes combined, middle schools (grades 6 - 9) had the highest percentage of hires with MGPs, 37.2%, which is not surprising considering that all ELA and math teachers in most of these schools' grades were eligible for MGP inclusion. The percentage of hired completers with MGP data has been decreasing over the four classes at all

school levels, chiefly due to the opt-out movement, which has reduced the numbers of students participating in the state test program over these years.

Table 1. Number and percent of hired completers from Touro Teacher Education programs that had Mean Growth Percentile (MGP) scores in spring 2018 disaggregated by completion year and school level

Completion Year			2015	2016	2017	2018	Total
School Level	Elementary	N Hired	178	231	216	171	796
		N MGP	34	51	34	27	146
		% MGP	19.1%	22.1%	15.7%	15.8%	18.3%
	Middle	N Hired	74	67	63	62	266
		N MGP	33	27	24	15	99
		% MGP	44.6%	40.3%	38.1%	24.2%	37.2%
	Multi-level	N Hired	74	118	96	74	362
		N MGP	18	17	18	14	67
		% MGP	24.3%	14.4%	18.8%	18.9%	18.5%
Total		N Hired	326	416	375	307	1424
		N MGP	85	95	76	56	312
		% MGP	26.1%	22.8%	20.3%	18.2%	21.9%

Note. N Hired includes completers in all subjects in elementary and middle schools, who were actively employed as of Dec. 31, 2018; N with MGP only includes completers teaching ELA and/or Math in grades 4-8 who had MGP scores for spring 2018.

Table 2 shows the number of years of active teaching service for completers with MGPs in each of the four classes. The data indicate that the research sample was relatively inexperienced. For the four classes combined, nearly three out of five had less than four years of total teaching experience, with 15.1% having less than two years. Only around 15% had six or more years of experience, with 5% having more than ten. Over the four classes, the percentage of very inexperienced teachers (< 2 years) increased from 8.3% for the Class of 2015 to 26.9% for the Class of 2018. Although this is to be expected, given the more recent hiring of the later classes of completers, it needs to be kept in mind when comparing the results among classes.

Table 2. Total number of years of active teaching service for Touro Teacher Education completers in the NYC public schools who had Mean Growth Percentile (MGP) data from spring 2018 disaggregated by year of program completion

Number of years of active teaching	Statistic	Year of completion				Total
		2015	2016	2017	2018	
<2	N completers	7	9	16	14	46
	% within Year	8.3%	9.6%	21.3%	26.9%	15.1%
2 to 4	N completers	36	46	27	20	129
	% within Year	42.9%	48.9%	36.0%	38.5%	42.3%
4 to 6	N completers	28	25	20	9	82
	% within Year	33.3%	26.6%	26.7%	17.3%	26.9%
6-10	N completers	10	8	8	6	32
	% within Year	11.9%	8.5%	10.7%	11.5%	10.5%
>10	N completers	3	6	4	3	16
	% within Year	3.6%	6.4%	5.3%	5.8%	5.2%
Total	N completers	84	94	75	52	305
	% within Year	100.0%	100.0%	100.0%	100.0%	100.0%

Note. Data are missing for 7 completers who had MGP data but were terminated from service prior to data extraction from NYCDOE HR systems on Dec. 31, 2018.

Table 3 displays the numbers of completers hired with MGP data for each program major for each program completion year and the four classes combined. As can be seen in Table 3 for the four classes combined, the program major with the highest number of completers with MGPs was **Childhood Education, Teaching Students with Disabilities, Grades 1-6**, with 100 completers. **Ed/Special Ed Childhood, Grades 1-6**, a program major that was discontinued and replaced with the one above, had the next highest number at 42 completers, all from the Class of 2015. Other majors with relatively large numbers of completers with MGPs were **Teaching English to Speakers of Other Languages**, 41 completers, **Teaching Students with Disabilities, Grades 7 – 12**, 45 completers, and **Teaching Literacy**, with 29 completers.

Table 3. Number of Touro Teacher Education completers with mean MGP scores disaggregated by program major and year of program completion

Program major	Completion year				Total
	2015	2016	2017	2018	
Childhood Ed Tch Std W Dis Gr 1-6	0	43	31	26	100
Edu/Spcl Ed Childhood (Grd1-Grd6)	42	0	0	0	42
Edu/Special Education Early Child	4	0	0	0	4
English to Speakers of Other Lang	8	16	13	4	41
Instructional Technology	4	3	0	5	12
Mathematics Education	0	0	3	1	4
Tch Early Childhood Ed Std W Dis B-Gr2	0	3	5	5	13
Tch SWD Generalist Gr 7-12	11	14	11	9	45
Teaching Literacy	8	8	8	5	29
TESOL- CR-ITI	0	6	5	1	12
Total*	85	95	76	56	312

Note includes only program majors with at least 4 total completers with mean MGP data

* Total is for all completers with MGP data

Table 4 displays the number the numbers and percentages of Regular Education and Special Education teachers among the completers with MGPs for each class. A large percentage of the completers taught classes for Special Ed students. For the four classes combined, the distribution was 53.5% Regular Ed versus 46.5% Special Ed. The Class of 2018 had the smallest percentage teaching Special Ed at 43.3%. Class differences in the balances of completers teaching General and Special Ed might affect the relative performance of classes on the MGP measures.

Table 4. Types of teacher (Regular Education vs. Special Education) of Touro Teacher Education completers with MGP data for spring 2018 disaggregated by year of program completion

Type of Teacher	Statistic	Completion Year				Total
		2015	2016	2017	2018	
Teacher Reg Ed	N Completers	42	53	37	30	162
	% within Year	50.6%	56.4%	50.0%	57.7%	53.5%
Teacher Spec Ed	N Completers	41	41	37	22	141
	% within Year	49.4%	43.6%	50.0%	42.3%	46.5%
Total	N Completers	83	94	74	52	303
	% within Year	100.0%	100.0%	100.0%	100.0%	100.0%

Note. These data missing for nine completers with MGPs

Table 5 shows the distributions of tests included in the MGPs of each class of completers and for the four combined. Each teacher's MGP is based on state tests in the subject areas that they are responsible for teaching, ELA, math, or both. For the four classes combined, 57.7% of the completers' MGPs were based on the data from both tests with about one in five based only on one or the other. Data for the 56 completers with MGPs for the class of 2018 show the lowest percentage based on both tests, 51.8%. In the presentation of results, MGP data will be disaggregated by tests included in the MGP.

Table 5. Tests included in computation of spring 2018 MGPs of Touro Teacher Education program completers disaggregated by year of completion

Tests included in MGPs	Statistic	Year of Completion				Total
		2015	2016	2017	2018	
Both ELA & Math	N completers	46	60	43	29	178
	% within Year	54.1%	63.2%	56.6%	51.8%	57.1%
ELA Only	N completers	14	15	21	15	65
	% within Year	16.5%	15.8%	27.6%	26.8%	20.8%
Math Only	N completers	25	20	12	12	69
	% within Year	29.4%	21.1%	15.8%	21.4%	22.1%
Total	N completers	85	95	76	56	312
	% within Year	100.0%	100.0%	100.0%	100.0%	100.0%

RQ1. Mean Adjusted Growth Percentiles (MGP)

Mean Adjusted MGPs by completion year

Table 6 displays the spring 2018 mean adjusted MGPs, as well as the mean number of students whose scores were included in the calculation of each MGP, for the four classes of Touro completers included in the study. In total across the four classes, 312 completers received adjusted MGP scores. The number of students' SGP scores included in each teachers' MGP varied considerably, based on the numbers of students in their classes and other factors, including the number of days during the school year that they taught each student. Overall, the mean number of student scores included in the teachers' MGP ratings was 51.7, with a relatively large standard deviation of 23.8. The mean adjusted MGP for the four classes combined was 53.2 (SD=10.7), which indicates that the Touro completers' performance was above average (i.e., above the 50th percentile) for teachers with similar students across the state. There was only small variation among the mean MGPs of the four classes, with the Class of 2016 showing the highest, 54.3 (SD=10.1). It should be noted that year of completion and teaching experience are not same. Completers of all classes vary in years of experience depending on when they were first hired. The relationship between mean MGP and years of experience is explored later in the Results section.

Table 6. Spring 2018 adjusted MGPs for Touro Teacher Education completers and the mean number of student scores used to calculate the teacher MGPs disaggregated by year of completion

Year of Completion	N Completers with MGP data	Mean N of Student Scores*		Adjusted MGP	
		Mean	SD	Mean	SD
2015	85	50.5	22.1	52.3	10.2
2016	95	50.5	25.5	54.3	10.1
2017	76	51.4	21.5	53.5	11.4
2018	56	56.0	26.1	52.3	11.3
Total	312	51.7	23.8	53.2	10.7

* Number of students with Student Growth Percentiles used to calculate each completers' MGP

Mean Adjusted MGPs by subjects tested

Each teacher's MGP is based on the subjects, ELA and/or mathematics, that s(he) is responsible for teaching. Table 7 shows the mean adjusted MGPs for all Touro completers (2015 – 2018 combined) disaggregated by the subjects included in their scores, ELA only, math only, or both ELA and math. The table also shows the mean number of student scores included in the MGPs of each test group. As can be seen in Table 7, the differences in the mean adjusted MGPs of the three groups did not vary appreciably. The mean adjusted MGPs for all three groups were above the statewide average (i.e., 50). Therefore, types of tests included in the calculation of MGP did not matter.

Table 7. Spring 2018 Adjusted Mean Growth Percentiles (MGPs) for Touro Teacher Education completers whose scores included only ELA tests, only Math tests, or both ELA and Math tests (Classes of 2015 - 2018 combined)

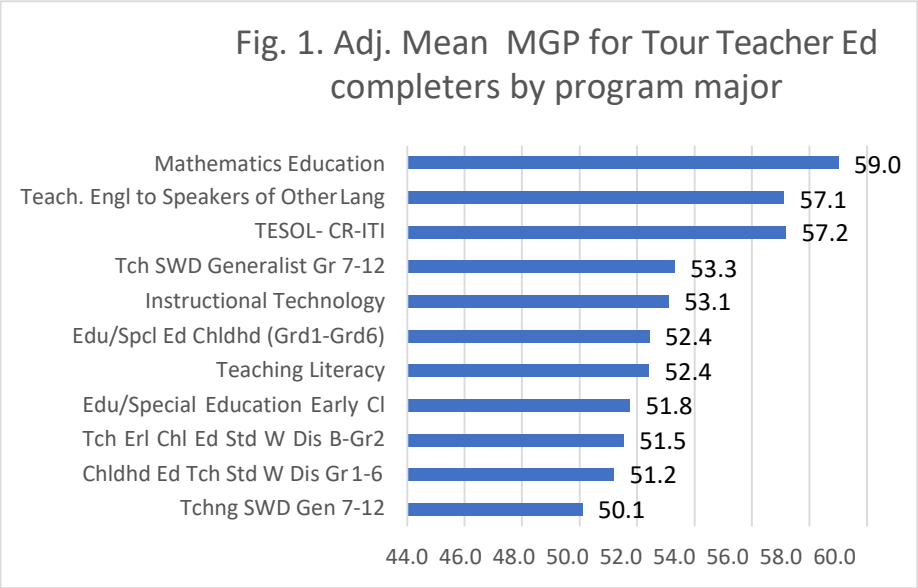
Tests included in MGP	N Completers with MGP data	Mean N of Student Scores*		Adjusted MGP	
		Mean	SD	Mean	SD
ELA Only	65	55.9	26.0	52.1	9.1
Math Only	69	57.9	25.2	53.9	11.8
Both ELA & Math	178	47.8	21.6	53.3	10.8
Total	312	51.7	23.8	53.2	10.7

* Number of students with Student Growth Percentiles used to calculate each completers' MGP

Mean adjusted MGPs by program major

Figure 1 displays the mean adjusted MGPs of the combined four classes of completers disaggregated by program major. Data are only shown for program majors with at least four completers with MGP data. The data in Figure 1 are presented numerically in Table 8, along with numbers of completers and standard deviations (SD) for each adjusted mean MGP. Both displays present the data in descending numerical order of adjusted mean MGP. Completers from the **Mathematics Education** program major had the highest adjusted mean MGP (59.0), although there were only four completers for this major. The majors with the next highest values were **TESOL-CR-ITI** (Mean = 57.2, n = 12) and **Teaching English to Speakers of Other Languages (TESOL)** (Mean = 57.1, n=41). Other certification areas with high mean adjusted

MGPs were **Teaching Students with Disabilities, Generalist, Grades 7 – 12** (Mean = 53.3, n = 45), and **Instructional Technology** (Mean = 53.1, n = 12). All 10 program majors exceeded the state mean adjusted MGP of 50.



Above excludes majors with fewer than 4 completers with MGPs

Table 8. Adjusted Mean spring 2018 MGPs for Touro Teacher Education completers disaggregated by Program Major (Classes of 2015-18 combined)

Program major	Adj. Mean MGP	N Completers	SD
Mathematics Education	59.0	4	8.2
TESOL- CR-ITI	57.2	12	8.7
Teaching English to Speakers of Other Lang	57.1	41	13.1
Tch SWD Generalist Gr 7-12	53.3	45	8.3
Instructional Technology	53.1	12	11.1
Edu/Spcl Ed Childhood (Grd1-Grd6)	52.4	42	10.1
Teaching Literacy	52.4	29	9.7
Edu/Special Education Early Cl	51.8	4	18.9
Tch Early Childhood Ed Std W Dis B-Gr2	51.5	13	8.9
Childhood Ed Tch Std W Dis Gr 1-6	51.2	100	10.3
Total	53.2	312	10.7

Note. Excludes majors with fewer than 4 completers with MGPs; Total is for all completers.

Adjusted MGPs by school level, type of teacher, and teaching experience

Table 9 displays the mean adjusted MGPs for completers teaching at each school level. Completers teaching in elementary schools had the highest adjusted mean MGP (Mean = 53.9, n = 145), followed by those teaching in a variety of middle-school configurations (Mean = 52.9, n = 99). The 11 completers teaching in schools labeled Secondary were the only group to fall below the state average (Mean = 49.3).

Table 10 compares the mean adjusted MGPs for completers teaching Regular Education versus Special Education classes. The difference is small, less than 1 percentile in favor of Special Education teachers, a finding that differs from previous reports of this research, which found meaningful differences in favor of completers teaching Regular Education classes. It should be noted that the Touro majors for special education teachers have been revised and upgraded over recent years.

Table 9. Mean Adjusted MGP for Touro Teacher Education completers in Spring 2018 (Classes of 2015 - 2018 combined)

School Level	N completers	Adj. Mean MGP	SD
ELEMENTARY	145	53.9	11.9
JUNIOR HIGH-INTERMEDIATE-MIDDLE	99	52.9	8.8
K-12 ALL GRADES	4	51.0	5.7
K-8	47	52.7	11.0
SECONDARY SCHOOL	11	49.3	7.9
Total *	312	53.2	10.7

* Total includes some completers who are not in table entries.

Table 10. Adjusted mean spring 2018 MGP for Touro Teacher Education completers by type of teacher (Classes of 2015 - 2018 combined)

Type of Teacher	N Completers	Adj. Mean MGP	SD
TEACHER-Regular Education	162	53.4	11.2
TEACHER-Special Education	141	54.0	10.2
Total *	303	53.2	10.7

* Type of teacher Data not available for 9 completers with MGPs

Finally, Figure 2 displays the mean adjusted MGPs for completers varying in total years of teaching experience. The same data are presented in table format in Table 11, which also

shows numbers of completers and SDs. Figure 2 shows a curvilinear relationship between adjusted mean MGP and years of experience, with scores rising sharply for intervals between less than 2 years of experience and 4 to 6 years, and then leveling off for the intervals 6 to 10 and more than 10 years. These data suggest that years of experience matter up to six years, but beyond six, there is no additional gain in teacher effectiveness for Touro completers, using the adjusted mean MGP metric. It should be noted that this relationship was not observed in previous reports of this research study. Continued updates on this research may provide additional evidence concerning this relationship.

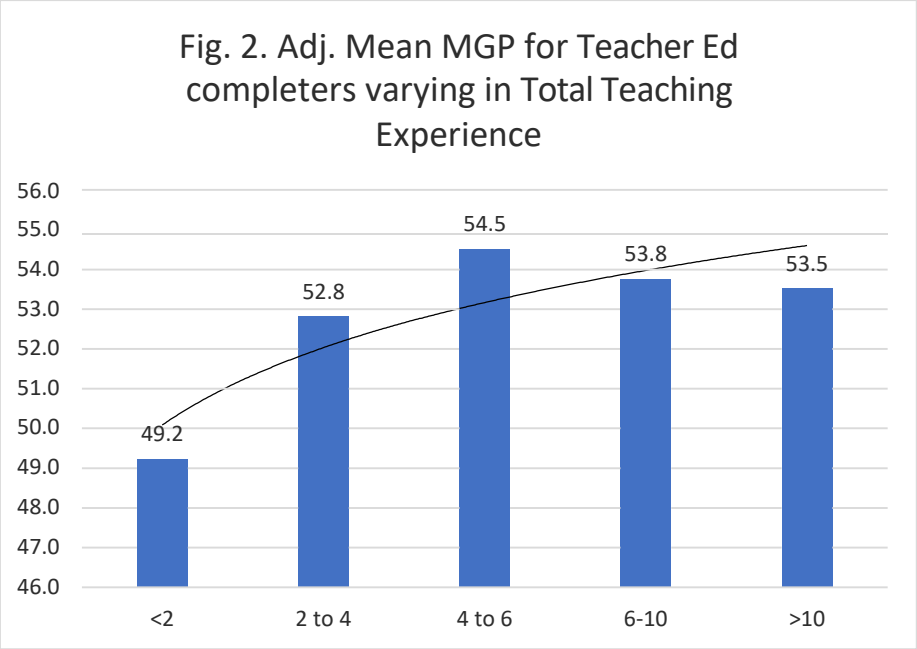


Table 11. 2018 adjusted mean MGP for Touro Teacher Education completers disaggregated by total years of teaching experience (Classes 2015 - 2018 combined)

Total years of teaching experience	N completers with MGPs	Adj. Mean MGP	SD
<2	47	49.2	11.0
2 to 4	130	52.8	10.0
4 to 6	85	54.5	12.0
6-10	43	53.8	8.8
>10	23	53.5	12.7
Total	305	52.9	10.8

Note. Total years of teaching experience not available for 7 teachers.

RQ2. State MGP HEDI Ratings

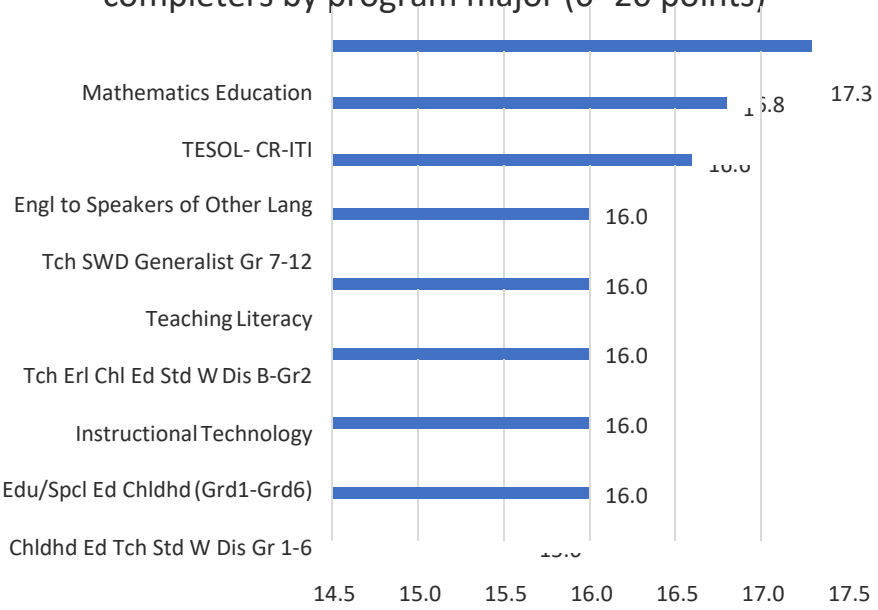
Table 12 shows the frequency distributions of HEDI ratings and the mean HEDI scores for the Touro completers for each class and the totals across the four classes of the study. These ratings and scores are based on the adjusted mean MGPs. For the four classes combined, 83.7% of the completers were rated as Effective, with an additional 8.0% rated as Highly Effective, for a total of 91.7 % Effective or Highly Effective. Only 8.3% were rated as Ineffective or Developing. For the total sample, the mean number of HEDI score points earned was 16.0 (SD = 2.3) out of 20. For the completers of 2018, 80.4% earned Effective ratings while an additional 8.9% were rated as Highly Effective, for a total of 89.3% Effective or Highly Effective.

Table 12. HEDI ratings and mean HEDI score for spring 2018 state pupil growth measure for Touro teacher education completers by year of program completion

Year of completion	Statistic	HEDI Rating				Total	HEDI Score (0-20)	
		Ineffective (MGP 0-12)	Developing (MGP 13-14)	Effective (15-17)	Highly Effective (18-20)		Mean	SD
2015	N completers	4	7	70	4	85	15.8	2.4
	% within Year	4.7%	8.2%	82.4%	4.7%	100.0%		
2016	N completers	2	3	82	8	95	16.3	1.6
	% within Year	2.1%	3.2%	86.3%	8.4%	100.0%		
2017	N completers	4	0	64	8	76	16.0	2.8
	% within Year	5.3%	0.0%	84.2%	10.5%	100.0%		
2018	N completers	4	2	45	5	56	15.8	2.4
	% within Year	7.1%	3.6%	80.4%	8.9%	100.0%		
Total	N completers	14	12	261	25	312	16.0	2.3
	% within Year	4.5%	3.8%	83.7%	8.0%	100.0%		

Figure 3 displays the mean HEDI scores for nine program majors that had at least four completers each. The data are displayed in descending order of mean score. The program major with the highest mean HEDI score was **Mathematics Education** (17.3 out of 20), which had only four completers. The two other program majors with mean scores above the Touro completer average were **TESOL-CR-ITI** (16.8 for 12 completers) and **Teaching English to Speakers of Other Languages** (16.6 for 41 completers).

Fig. 3. Mean HEDI Scores of Touro Teacher Ed completers by program major (0 -20 points)



Above only majors with at least 4 completers

Table 13 displays the MGP HEDI ratings disaggregated by program major for the four classes combined. The data include all majors with four or more completers. The modal rating by far for all program majors was Effective. Nearly 30% (29.3%) of the 41 program completers from **Teaching English to Speakers of Other Languages** were rated as Highly Effective, the largest percentage of all majors with the highest rating. Two majors had 100% of their completers rated Effective or Highly Effective combined, including **Mathematics Education** (4 completers) and **TESOL-CR-ITI** (12 completers). Most majors had only one or two completers rated below Effective.

Table 13. HEDI ratings for spring 2018 state pupil growth measure for Touro teacher education completers disaggregated by program major (Classes of 2015 - 2018 combined)

Program Major	Statistic	HEDI Rating				Total
		Ineffective (MGP 0 - 12)	Developing (MGP 13 - 14)	Effective (MGP 15 - 17)	Highly Effective (MGP 18 - 20)	
Mathematics Education	N completers	0	0	3	1	4
	% within major	0.0%	0.0%	75.0%	25.0%	100.0%
English to Speakers of Other Lang	N completers	1	1	27	12	41
	% within major	2.4%	2.4%	65.9%	29.3%	100.0%
TESOL- CR-ITI	N completers	0	0	11	1	12
	% within major	0.0%	0.0%	91.7%	8.3%	100.0%
Tch SWD Generalist Gr 7-12	N completers	1	1	43	0	45
	% within major	2.2%	2.2%	95.6%	0.0%	100.0%
Edu/Spcl Ed Childhood (Grd1-Grd6)	N completers	2	5	33	2	42
	% within major	4.8%	11.9%	78.6%	4.8%	100.0%
Instructional Technology	N completers	1	0	10	1	12
	% within major	8.3%	0.0%	83.3%	8.3%	100.0%
Tch Early Childhood Ed Std W Dis B-Gr2	N completers	0	1	11	1	13
	% within major	0.0%	7.7%	84.6%	7.7%	100.0%
Teaching Literacy	N completers	1	1	25	2	29
	% within major	3.4%	3.4%	86.2%	6.9%	100.0%
Childhood Ed Tch Std W Dis Gr 1-6	N completers	6	3	88	3	100
	% within major	6.0%	3.0%	88.0%	3.0%	100.0%
Total *	N completers	14	12	261	25	312
	% within major	4.5%	3.8%	83.7%	8.0%	100.0%

* Table includes program majors with fewer than 4 completers with MGP data; program majors only include majors with at least 4 completers.

RQ3. Overall APPR Ratings

Table 14 shows frequency distributions of Overall APPR ratings for each of the four classes of completers and the combined totals for all four. For the four years combined, 66.7% were rated Effective and an additional 32.4% were rated as Highly Effective, for a combined 99% Effective or Highly Effective. Only three out of 306 were rated below Effective. Overall APPR ratings were higher than the MGP HEDI ratings, especially in the Highly Effective category, with 24.4% points more rated as Highly Effective in the Overall APPR than the MGP HEDI rating, 32.4% for the former versus 8.0% for the latter. For 2018 completers, 64.8% were

rated Effective and 33.3% Highly Effective, for a combined 98.1% Effective or Highly Effective. Only one completer was rated Developing for the class of 2018.

Table 14. Overall APPR ratings for spring 2018 for Touro teacher education completers employed in NYCPS by year of completion

Year of completion	Statistic	APPR Overall Rating			Total
		Developing (MGP 43-45)	Effective (MGP 46-58)	Highly Effective (MGP >58)	
2015	N completers	0	46	36	82
	% within Year	0.0%	56.1%	43.9%	100.0%
2016	N completers	1	69	25	95
	% within Year	1.1%	72.6%	26.3%	100.0%
2017	N completers	1	54	20	75
	% within Year	1.3%	72.0%	26.7%	100.0%
2018	N completers	1	35	18	54
	% within Year	1.9%	64.8%	33.3%	100.0%
Total *	N completers	3	204	99	306
	% within Year	1.0%	66.7%	32.4%	100.0%

* Data missing for 6 completers with MGP data

Table 15 displays the frequency distributions of the Overall APPR ratings for the combined four-year totals disaggregated by program majors. The data include all majors with four or more completers. Eight of the nine majors did not have any completers rated below Effective. Three majors had more than 40% of completers with Highly Effective APPR ratings: **TESOL-CR-ITI** (45.5% of 11 completers), **Ed/Special Ed Childhood, Grades 1 – 6** (43.9% of 41 completers), and **Teaching Literacy** (42.9% of 28 completers).

Table 15. Overall APPR ratings for spring 2018 for Touro teacher education completers employed in NYC public schools disaggregated by program major (Classes of 2015 - 2018)

Program Major	Statistic	APPR Overall Rating			Total
		Developing (MGP 43-45)	Effective (MGP 46-58)	Highly Effective (MGP >58)	
TESOL- CR-ITI	N completers	0	6	5	11
	% within major	0.0%	54.5%	45.5%	100.0%
Edu/Spcl Ed Childhood (Grd1-Grd6)	N completers	0	23	18	41
	% within major	0.0%	56.1%	43.9%	100.0%
Teaching Literacy	N completers	0	16	12	28
	% within major	0.0%	57.1%	42.9%	100.0%
English to Speakers of Other Lang	N completers	0	26	15	41
	% within major	0.0%	63.2%	36.8%	100.0%
Instructional Technology	N completers	0	8	4	12
	% within major	0.0%	66.7%	33.3%	100.0%
Tch SWD Generalist Gr 7-12	N completers	0	32	13	45
	% within major	0.0%	71.1%	28.9%	100.0%
Mathematics Education	N completers	0	3	1	4
	% within major	0.0%	75.0%	25.0%	100.0%
Tch Early Childhood Ed Std W Dis B-Gr2	N completers	0	9	3	12
	% within major	0.0%	75.0%	25.0%	100.0%
Childhood Ed Tch Std W Dis Gr 1-6	N completers	3	75	22	100
	% within major	3.0%	75.0%	22.0%	100.0%
Total *	N completers	3	204	99	306
	% within major	1.0%	66.7%	32.4%	100.0%

* Data missing for 6 completers with MGP data. Total includes all completers with APPR data regardless of major; program majors only include majors with at least 4 completers with APPRs.

SUMMARY AND CONCLUSIONS

This is the fifth report issued by Touro on the effectiveness of its program completers teaching in New York City public schools (NYCPS) using New York State Education Department Student Growth Percentiles (SGP), a value-added metric, and Annual Professional Performance Review (APPR) data.[5] This report expands on the previous reports by presenting

[5] Although NYSED computed and compiled the data, they were provided to Touro's GSE Dean's Office by the NYC Department of Education's Research Group.

data for a new class, program completers from the 2017-18 academic year, in addition to new data for the classes of 2015 - 2017, based on spring 2018 measures. It focuses on pupil growth measures in state tests of ELA and mathematics for 312 teachers of ELA and mathematics in grades 4 and 8. The findings are summarized as follows:

- **The mean adjusted MGP for the four classes combined was 53.2 (SD = 10.7), which was 1.0 percentage point higher than the value reported last year for the Classes of 2014 – 2017. The mean adjusted MGP indicates that the Touro completers' performance was above average (i.e., above the 50th percentile) for teachers with similar students across the state.**
- **The mean adjusted MGPs did not vary appreciably for completers grouped by the types of tests included in their MGPs.** The mean adjusted MGPs for completers with scores based only on ELA tests, or only on Math tests, or based on both ELA and Math tests were all above the statewide average.
- **All 10 program majors exceeded the state mean adjusted MGP of 50**. Completers from the **Mathematics Education** program major had the highest adjusted mean MGP (59.0), although there were only four completers for this major. The majors with the next highest values were **TESOL-CR-ITI** (Mean = 57.2, n = 12) and **Teaching English to Speakers of Other Languages** (TESOL) (Mean = 57.1, n=41).
- **Comparing school levels, completers teaching in elementary schools had the highest adjusted mean MGP (Mean = 53.9, n = 145)**, followed by those teaching in a variety of middle-school configurations (Mean = 52.9, n = 99).
- **There was little difference in the mean adjusted MGPs of completers teaching Regular Education versus Special Education classes**. This finding differs from previous reports, which consistently found moderate to large differences in favor of the former.
- **There was a curvilinear relationship between adjusted mean MGP and years of experience, with scores rising sharply between less than 2 years of experience and 4 to 6 years, and then leveling off for the intervals 6 to 10 and more than 10 years.** These data suggest that years of experience matter up to six years, but beyond six, there is no additional gain in teacher effectiveness for Touro completers.

- **For the four classes combined, 83.7% of the completers received HEDI ratings of Effective with an additional 8.0% rated as Highly Effective, for a total of 91.7% Effective or Highly Effective.** Only 8.3% were rated as Ineffective or Developing.
- **The program major with the highest mean HEDI score was Mathematics Education (17.3 out of 20), which had only four completers. The two other program majors with mean scores above the Touro completer average were TESOL-CR-ITI (16.8 for 12 completers) and Teaching English to Speakers of Other Languages (16.6 for 41 completers).**
- **For the four years combined, 66.7% received APPR ratings of Effective and an additional 32.4% were rated as Highly Effective, for a combined 99% Effective or Highly Effective.** Only three out of 306 were rated below Effective.
- **Three majors had more than 40% of completers with Highly Effective APPR ratings: TESOL-CR-ITI (45.5% of 11 completers), Ed/Special Ed Childhood, Grades 1 – 6 (43.9 of 41 completers), and Teaching Literacy (42.9% of 28 completers).**

The findings presented in this report confirm the conclusion drawn from similar analyses in the previous four years—teacher education graduates of Touro's GSE are well prepared to teach effectively and help their pupils perform above expectancy in ELA and mathematics. Their pupils performed above average for similar students statewide in state pupil MGP scores and the vast majority of Touro completers had MGP HEDI ratings and Overall APPR ratings in the Effective and Highly Effective categories. This evidence of success was observed for completers in most program majors and across completers from all four classes studied. It is important to note that these consistently positive results have been obtained through research that used a statewide teacher evaluation system and focused on Touro completers facing the challenges of teaching mostly inner-city students in the NYCPS. Accordingly, the results indicate that Touro's GSE has shown continued success in preparing their graduates to meet the challenges of teaching and learning in these inner-city schools.