



Tradeoffs Between Authenticity and Standardization in Teacher Candidate Assessments

In this research brief, we investigate potential tradeoffs between authenticity and standardization in teacher candidate assessments by testing whether characteristics of student teaching schools and cooperating teachers predict teacher candidates' performance assessment scores. We find that candidates earn higher edTPA scores if they student taught in a school with higher levels of student achievement growth and with a cooperating teacher who received higher evaluation ratings. Evidence also suggests that candidates earn higher edTPA scores when they are mentored by a cooperating teacher who is more familiar with performance assessments. Our estimates are modest in magnitude but may influence high-stakes decisions regarding program completion and licensure. This study reinforces the importance of student teaching placements in high-quality learning environments and highlights the inherent tradeoffs in teacher candidate assessments.

Introduction

In recent years, many educator preparation programs (EPPs) have adopted teacher performance assessments (TPAs) as a way to measure teacher candidates' knowledge and skills. TPAs (e.g. edTPA, PPAT) are portfolio-based assessments, often completed during the student teaching practicum, that combine observations, artifacts, and reflective commentaries to assess what candidates know and are able to do. EPPs can use evidence from TPAs to inform program improvement efforts. Likewise, states can require that candidates pass a TPA before conferring a teaching license.

TPAs are not the only way that states and EPPs assess the knowledge and skills of teacher candidates. Many states require that prospective teachers pass licensure exams (e.g. Praxis II) and many EPPs collect candidate artifacts and observation ratings throughout their program coursework and clinical experiences. Relative to many of these other candidate assessments, TPAs may have a distinct advantage — *authenticity*. TPAs capture the planning, instruction, and assessment that occurs in real P-12 schools and with real P-12 students. By more closely

approximating the work of actual teaching, TPAs may more closely measure what they are intended to assess — whether a teacher candidate possesses the knowledge and skills to be an effective teacher.

While the authenticity of TPAs is an asset, it may also introduce tradeoffs that are important to acknowledge and evaluate. In particular, TPAs have standardized content but they are not completed in standardized classroom environments. Candidates complete TPAs in a wide range of student teaching schools and in the classrooms of cooperating teachers with varying instructional and mentoring skills. Given that early-career teachers are more effective if they student taught in a high-quality learning environment and with a highly-effective cooperating teacher, it is possible that characteristics of the student teaching placement also impact the TPA scores of candidates. This research brief considers potential tradeoffs between authenticity and standardization in teacher candidate assessments by addressing the following question: Are teacher candidates' TPA scores influenced by the environment in which they student teach?

With this work, we provide evidence to inform the placement practices of EPPs and highlight the inherent strengths and limitations in teacher candidate assessments.

Background

Our analyses focus on 2,842 teacher candidates, from 13 public universities in North Carolina, who completed a TPA as part of a student teaching experience in the 2015–16, 2016–17, or 2017–18 school years. As shown in the top panel of Table 1, 83 percent of these teacher candidates are female, 85 percent are white, and their average GPA was 3.58. We analyze scores from the edTPA, a widely-adopted TPA that consists of three main teaching tasks — Planning, Instruction, and Assessment. In particular, we created four outcome measures for our analyses: the total score and scores for the Planning, Instruction, and Assessment tasks.¹ The second panel of Table 1 presents these edTPA outcomes. In our sample of candidates, the average total score was 44.69 and the average scores for the Planning, Instruction, and Assessment tasks were 15.14, 14.80, and 14.75, respectively. While we assess edTPA scores, it is important to note that scores from other TPAs (e.g. PPAT/NOTE) may also present tradeoffs between authenticity and standardization. Furthermore, it is important to highlight a limitation of these data. TPAs did not become consequential across North Carolina until 2019, and as such, it is possible that the relationships between student teaching environments and edTPA scores will change with the presence of high-stakes consequences.

With administrative data from the North Carolina Department of Public Instruction (NCDPI), we link these teacher candidates to characteristics of their student teaching school and cooperating teacher.² Given prior work showing the value of high-quality learning environments to the development of pre-service teachers, we assess whether the following placement school characteristics impact edTPA scores: the percentage of economically-disadvantaged and racial/ethnic minority students, suspension rates, school achievement growth, teacher retention rates, and a measure of teacher collaboration.³ The cooperating teacher characteristics we analyze fall into one of three categories — demographics, credentials, and measures of prior performance. The demographic measures are indicators for gender and race/ethnicity. For cooperating teacher credentials, we examine teacher experience, National Board Certification (NBC), graduate degrees, and licensure exam scores. These credentials are associated with teacher effectiveness, and as such, may identify high-quality

Table 1. Descriptive Data for the Analysis Sample

TEACHER CANDIDATE CHARACTERISTICS	AVERAGE VALUES
% Female	83.43
% White	85.29
Average GPA	3.58
% Enrolled in Undergraduate Program	85.91
% Completing a TPA in the Spring	76.04
EDTPA SCORES	
Total Score	44.69
Planning Score	15.14
Instruction Score	14.80
Assessment Score	14.75
PLACEMENT SCHOOL CHARACTERISTICS	
% Economically-Disadvantaged	49.91
% Racial/Ethnic Minority	51.23
Suspension Rate (Per 100 Students)	12.68
% Exceeds Achievement Growth	31.47
% Meets Achievement Growth	43.61
% Does Not Meet Achievement Growth	24.92
Teacher Retention Rate	81.42
Teacher Collaboration	3.84
COOPERATING TEACHER CHARACTERISTICS	
% Female	85.49
% White	89.36
Teacher Experience	14.51
% NBC	23.44
% Graduate Degree	41.43
Licensure Exam Scores (Std.)	0.249
% Alumni of EPP	35.31
Prior-Year Evaluation Ratings	4.01
Prior-Year EVAAS Estimates (Std.)	0.299

Note: For our analysis sample, this table displays candidate characteristics, candidate edTPA scores, and characteristics of the student teaching placement school and cooperating teacher.

¹ We exclude observations for candidates completing edTPA handbooks with less than 15 rubrics and only consider rubrics 1–15 if a candidate completed an edTPA handbook with 18 rubrics.

² Ninety-four percent of teacher candidates had a student teaching experience in only one placement school and with only one cooperating teacher. Six percent of teacher candidates had two cooperating teachers — either at the same placement school or a different school. We weight these observations at 0.50 in analyses.

³ This teacher collaboration measure comes from four survey items on the NC Teacher Working Conditions Survey.

learning environments for candidates. We also consider whether the cooperating teacher was prepared by the same university as the teacher candidate. Lastly, for cooperating teachers' prior-year performance, we assess evaluation ratings and value-added (EVAAS) estimates.⁴ The bottom panels of Table 1 display descriptive data on the placement school and cooperating teacher characteristics for our sample.

We estimate regression models with controls for teacher candidate characteristics and an EPP fixed effect. Our candidate characteristics — e.g. demographics, cumulative GPA, degree level, edTPA handbook area — help adjust for the possibility that higher caliber candidates are disproportionately placed in higher-quality schools or matched to more effective cooperating teachers.⁵ Our EPP fixed effect adjusts for the possibility that candidates who student teach in high-quality learning environments may also enjoy other, high-quality preparation experiences that predict their edTPA scores. With an EPP fixed effect we assess the extent to which variation in placement school and cooperating teacher characteristics, within EPPs, predicts variation in the edTPA scores of candidates from the same EPP.

Do Placement School Characteristics Predict TPA Scores?

Table 2 presents associations between placement school characteristics and the edTPA scores of teacher candidates. We find that a 10 percentage point increase in the percentage of

economically-disadvantaged students at the placement school is associated with a reduction of approximately 0.16 points in the TPA total score and of 0.06 points in the Instruction and Assessment scores. These demographic estimates are quite modest in size — e.g. 0.16 points is 2.5 percent of a standard deviation in the total score. Regarding student discipline, we find that a 10 percentage point increase in suspension rates (i.e. from 10 to 20 suspensions per 100 students) is associated with a 0.16 point increase in the TPA total score and a 0.07 point increase in the Assessment score. These suspension results are somewhat surprising, as we expected lower edTPA scores in placement schools with more student conduct issues. However, it is important to note that suspension rates may not accurately convey the extent of student misconduct at a school.

Our most robust estimates are for the achievement growth status of the placement school. We find that candidates who student taught in a placement school that exceeded growth have edTPA scores nearly 0.70 points higher than peers who student taught in a school that did not meet expected growth. These candidates also have Planning and Instruction scores that are 0.22 and 0.28 points higher, respectively, than candidates who student taught in a school that did not meet growth. These estimates are approximately 9–13 percent of a standard deviation in the respective edTPA scores. Likewise, we find that candidates who student taught in a placement school that met growth have higher total and Instruction scores than peers who student taught in schools that did not meet growth. These achievement growth results suggest that environments in which P-12 students are learning more are also environments that benefit teacher candidate development.

Table 2. Placement School Characteristics and edTPA Scores

	TOTAL SCORE	PLANNING SCORE	INSTRUCTION SCORE	ASSESSMENT SCORE
Economically-Disadvantaged	-0.156*	-0.028	-0.066**	-0.061*
Racial/Ethnic Minority	0.047	-0.013	0.005	0.054+
Suspension Rate	0.164+	0.060	0.032	0.072+
Exceeded Growth	0.692*	0.220*	0.277**	0.196
Met Growth	0.441+	0.087	0.232*	0.121
Teacher Retention (Std.)	-0.188	-0.095	-0.086	-0.007
Collaboration (Std.)	-0.094	-0.070	-0.047	0.023

Note: This table displays associations between placement school characteristics and the edTPA scores of teacher candidates. Models control for teacher candidate characteristics and include an EPP fixed effect. +, *, and ** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

⁴ The evaluation measure is an average of the prior-year ratings on the Leadership and Facilitating Student Learning standards. For value-added, we standardize EVAAS estimates within test and year across all NC teachers.

⁵ Descriptive analyses show that teacher candidates do not sort into different student teaching environments according to their GPA.

Table 3: Cooperating Teacher Characteristics and edTPA Scores

	TOTAL SCORE	PLANNING SCORE	INSTRUCTION SCORE	ASSESSMENT SCORE
Female	0.431	0.111	0.126	0.194
Racial/Ethnic Minority	-0.064	0.018	0.185	-0.267+
6-10 Years Experience	-0.260	-0.083	-0.085	-0.092
> 10 Years Experience	-0.573+	-0.211	-0.152	-0.210
NBC	0.457+	0.074	0.170+	0.213+
Graduate Degree	-0.013	0.050	-0.037	-0.026
Licensure Exam Scores (Std.)	0.183	-0.004	0.093	0.094
Alumni of EPP	-0.252	-0.033	-0.064	-0.155
Prior Evaluation Ratings	0.507*	0.113	0.120	0.274**
Prior EVAAS Estimates (Std.)	-0.013	0.010	-0.022	-0.001

Note: This table displays associations between cooperating teacher characteristics and the edTPA scores of teacher candidates. Models control for teacher candidate characteristics and include an EPP fixed effect. +, *, and ** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Do Cooperating Teacher Characteristics Predict TPA Scores?

Table 3 displays associations between cooperating teacher characteristics and the edTPA scores of candidates. Most estimates for cooperating teacher demographics are statistically insignificant. The exception is that candidates score lower on the Assessment task, by 0.27 points, when matched to a cooperating teacher of color. Estimates for cooperating teacher credentials reveal two noteworthy findings. First, estimates indicate that having a more experienced cooperating teacher does not benefit the edTPA scores of candidates. Specifically, we find that candidates matched to an experienced cooperating teacher (greater than 10 years of experience) have lower total scores, by nearly 0.60 points, than peers matched to a cooperating teacher in their early-career period (less than six years of experience). Second, results show that candidates matched to a cooperating teacher with NBC have higher total, Instruction, and Assessment scores than peers whose cooperating teacher does not have NBC. In particular, these candidates have total scores that are 0.46 higher and Instruction and Assessment scores that are 0.17 and 0.21 points higher, respectively.

Considering the effectiveness of cooperating teachers, we find that teacher candidates have higher edTPA scores if their cooperating teacher earned higher evaluation ratings in the prior year. Specifically, a one point increase in cooperating teachers' average prior-year evaluation ratings is associated with an increase

of 0.50 points in candidates' total score and an increase of 0.27 points in their Assessment score. These estimates are 8–10 percent of a standard deviation in the respective edTPA scores. We find very little evidence that cooperating teacher value-added predicts candidates' edTPA scores. Estimates for cooperating teachers' EVAAS estimates are statistically insignificant and alternate models (not shown), that examine cooperating teachers' EVAAS growth status, return only one significant result.⁶

Discussion

We assessed whether the characteristics of student teaching schools and cooperating teachers predict the edTPA scores of candidates. From a research perspective, these analyses are motivated by recent work showing that in-service teachers who student taught in high-quality learning environments and with highly-effective cooperating teachers are more effective. From the perspective of EPPs and states, these analyses are motivated by an opportunity to further inform placement decisions and to help policymakers and teacher educators recognize tradeoffs in the assessment of teacher candidates. Our analyses identified two key takeaways.

First, we find that teacher candidates have higher edTPA scores when they student teach in a high value-added school and when they are matched to a cooperating teacher with higher prior-year evaluation ratings. These results support the notion that high-quality learning environments further the development of teacher candidates. Second, our estimates

⁶ Student teachers assigned to cooperating teachers who met expected growth in the previous year have significantly higher Planning scores (by 0.30 points) than peers assigned to a cooperating teacher that did not meet growth. Results were not significant for cooperating teachers who had exceeded expected growth.

suggest that candidates earn higher edTPA scores when matched to a cooperating teacher who is more familiar with performance assessments. For instance, we find that candidates assigned to less experienced cooperating teachers (less than 6 years of experience) earn higher edTPA scores. One potential explanation for this result is that less experienced teachers, who more recently completed their preparation program, are more familiar with TPAs. Furthermore, we find that candidates matched to a cooperating teacher with NBC earn higher edTPA scores. This suggests that cooperating teachers who have successfully completed a performance assessment are better able to support candidates as they prepare their own portfolio.

While we find tradeoffs between authenticity and standardization, it is important to note that our results are modest in magnitude. Our key estimates — i.e. for a high value-added school, for cooperating teachers with NBC, for cooperating teacher evaluation ratings — are approximately 5–10 percent of a standard deviation in the edTPA total score. These estimates will not change high-stakes licensure determinations for most candidates. However, for candidates near a cut-score threshold, it is possible that their student teaching environment may influence whether they pass or fail their performance assessment.

Moving forward, our results further illustrate the value of student teaching placements in high-quality learning environments. Research now shows that such placements predict TPA scores and in-service teacher performance. These findings call for states, EPPs, and P-12 districts to form closer partnerships focused on making evidence-based placement decisions and providing cooperating teachers with the necessary training and resources for the role. Lastly, our work highlights the inherent strengths and limitations in teacher candidate assessments. It is the responsibility of policymakers

and teacher educators to recognize these tradeoffs, identify priorities in candidate assessment, and craft policies that both minimize concerns and ensure that candidates possess the knowledge and skills to effectively teach. Tradeoffs between candidate assessments highlight the potential value in using multiple measures to gain a more complete picture of teacher candidate ability.

For More on This Topic

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