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Professional Pathways for Teachers: 2018–2019 Evaluation Report





Executive Summary

The purpose of this report is to help stakeholders of Professional Pathways for Teachers (PPfT) understand and refine the methods used to measure program implementation and outcomes. This report also contains summative data on the progress of PPfT, which just completed its third year. PPfT first launched district-wide in AISD in the 2016–2017 school year, and since then the concept behind the program has been refined to that of empowering teachers and improving the quality of teaching through a multi-measure appraisal and compensation system. Additional goals are to retain quality teachers and improve student outcomes.

The Department of Research and Evaluation (DRE) provides evaluation and support for PPfT. Support includes data collection and retrieval, validation of appraisal methods, ongoing support for measurement of student outcomes, and educating stakeholders. Program evaluation activities include data analysis and reporting of implementation, conceptualizing the theory of change and logic model, and summarizing implementation and measurement. PPfT evaluation reporting occurs in the fall highlighting the prior school year's progress toward program goals.

Summary of Results

In terms of participation, about half of the 5,456 teachers (2,750) opted into compensation, while the remaining 2,706 were in appraisal only. Teachers who were on a new teacher PPfT plan or who were on a late-contract PPfT plan were less likely (10% and 26%, respectively) to opt-in to PPfT compensation. Existing teachers, however, were more likely to opt-in to compensation (57%).

Teacher completion of professional development units (PDUs) in 2018–2019 was slightly lower than it was in the 2017–2018 school year. Teachers choosing to be in compensation are eligible to complete PDUs. In the 2018–2019 school year, 69 compensation-eligible teachers (or 87% of PDU participants) met the PDU requirements and received their two compensation points.

The cohort of teachers who started Leadership Pathways (LPs) in the 2017–2018 school year completed the two-year LP cycle in 2018–2019. Progress of teachers over the last two years through three pathways (literacy, social and emotional learning [SEL], and transformative technology) was monitored and reported. A majority of teachers chose the literacy and SEL pathways, with fewer enrolled in transformative technology.

Results of an evaluation of appraisal validity and reliability (how well and how consistently the PPfT appraisal system measured teaching quality) showed that despite strong evidence of content validity, stakeholders had mixed perceptions of how well teaching quality was measured. Appraisal procedures also underwent tests of concurrent, convergent and discriminant validity, as well as dominance analysis and interrater reliability analyses.

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Introduction

Purpose of 2018–2019 Evaluation

The purpose of the 2018–2019 PPfT evaluation was to (a) help program staff conceptualize program implementation and its goals; (b) refine and/or define measurable indicators of implementation, outputs, and outcomes; and (c) provide summative data on the third year of program implementation.

Program Description

PPfT is a human capital system that blends four primary components: teacher appraisal, teacher professional development (PD) opportunities, teacher leadership opportunities, and teacher compensation.

Teacher appraisal under PPfT is a multi-measure system that covers three areas: instructional practice (IP), professional growth and responsibilities (PGR), and two measures of student growth: a teacher-level student learning objective (SLO) measure and a campus-level school-wide value-added (SWVA) measure. PPfT appraisal uses three types of appraisal plans that cover all teachers, inclusive of those new to the district and teaching on special campuses.

Three types of PPfT-specific PD opportunities were offered to teachers: PDUs, LPs, and PD opportunities aligned to the PPfT observation rubric. PDUs are an optional 1-year cycle of collaborative action inquiry by small teams of teacher researchers participating in PPfT compensation. LPs are a 2-year cycle of online, face-to-face, and blended learning applications in the classroom, and reflections on the impact on teaching that are offered to teachers participating in PPfT compensation. The PD opportunities aligned to the PPfT observation rubric are offered to teachers through the district's human capital management system as a way to target their growth in specific areas of need.

In 2018–2019, one type of leadership opportunity was offered to staff through PPfT. Campus-based staff were offered a stipend-based position in addition to their regular responsibilities to be the campus contact for SLOs. During 2018–2019, additional opportunities were developed for the 2019–2020 school year.

PPfT compensation is base building, which means it adds permanent pay increases to a teacher's regular salary instead of operating within a traditional step-and-lane salary schedule. The compensation framework builds base increases through a cumulative point system in which teachers earn PPfT compensation points each year from a year of service, their PPfT appraisal rating, and optional participation in PPfT PD opportunities.

Program Goal

The goal of PPfT is to build the capacity of Austin Independent School District (AISD) teachers through a comprehensive system of supports and compensation. Underlying this goal is the core belief that professionalizing teaching and empowering teachers will lead to positive impacts on teacher retention and student achievement.

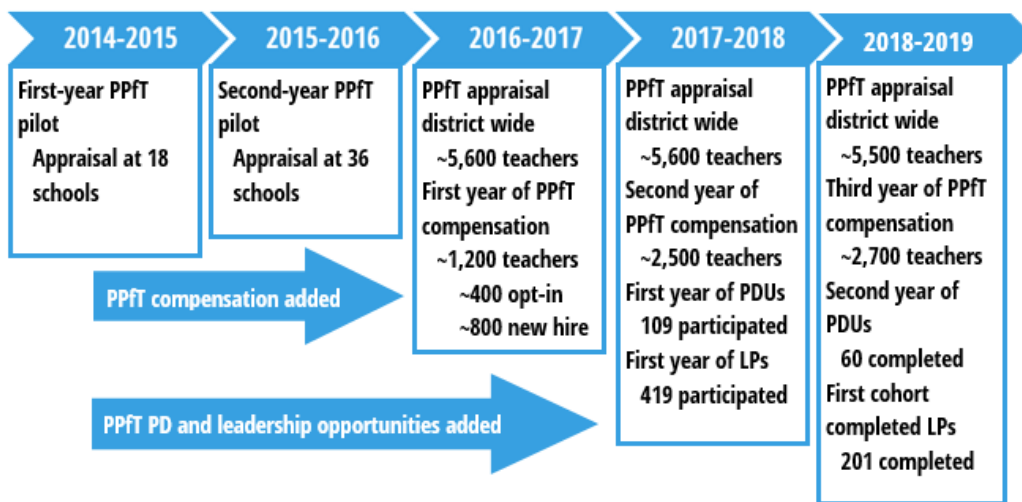
Program Background

Timeline: Pilot Years Through the 2018–2019 School Year

PPfT began district-wide implementation in AISD in the 2016–2017 school year, a product of collaboration between AISD, Education Austin, and the American Federation of Teachers. Prior to district-wide implementation, the district ran a 2-year pilot from 2014–2015 through 2015–2016, first with 18 schools and the next year with 36 schools. Although drawing from numerous resources, much of the pilot of PPfT appraisal was built upon learning from the district's 8-year implementation of its strategic compensation program, AISD REACH, funded by the Institute of Education Sciences (IES), from 2007–2008 through 2014–2015.

Unique to the 2016–2017 PPfT implementation was the addition of the second of four PPfT components: PPfT compensation. Thus, the 2018–2019 school year was the third year of implementing PPfT compensation under PPfT appraisal. In 2017–2018, the third and fourth PPfT components (i.e., PPfT PD and leadership opportunities) were added to the implementation. In 2018–2019, the first three cohorts of teachers completed the 2-year cycle of LPs in literacy, SEL, and transformative technology (Figure 1).

Figure 1.
Implementation history timeline graphic.



Program Structure in 2018–2019

Although all teachers participate in PPfT appraisal, the compensation component of PPfT has been implemented through a multiyear scale-up process that includes optional opt-in of teachers. Existing teachers choosing not to join compensation remain on the traditional step-and-lane salary schedule. Consequently, two systems of teacher compensation temporarily operate under PPfT appraisal (Appendix A). Teachers under both compensation systems participate in PPfT appraisal and receive an appraisal rating. However, only teachers participating in PPfT compensation have access to the PPfT-specific PD opportunities (i.e., PDUUs and LPs) and base-salary building increases. The two systems of compensation will exist under the PPfT implementation until the step-and-lane option is 100% phased out and all existing teachers and new hires are participating in PPfT compensation.

Teachers' Professional Development Impact

In 2001 the No Child Left Behind Act mandated teachers receive high-quality, research-based and continuous professional development opportunities. Research has shown a strong link between high-quality, professional development for teachers and student achievement. For example:

In a comparison study of kindergarten and first-grade teachers, two groups of students were given pre-and post-tests on reading, comprehension, and spelling. Students whose teachers underwent professional development improving their knowledge of teaching word sounds and structure improved significantly more than students whose teachers did not undergo professional development (Holland, 2005).

In a meta-analysis of nine studies with rigorous research designs, students improved an average of 21 percentage points in math, science, and reading and English/language arts when teachers participated in high quality professional development (Yoon et al., 2007).

In a study of elementary school teachers, student achievement was consistently highest when their teachers' professional development focused on student learning and effective ways to gauge learning (Holland, 2005).

Description of 2018–2019 Program Evaluation and Support

Overview

The DRE PPfT support year runs from July to June each school year. However, year-end PPfT appraisal data do not become available until the end of summer in the subsequent support year. Consequently, DRE PPfT support in 2018–2019 began with analysis and reporting of the prior school year's appraisal results in parallel with the program evaluation activities and program support activities for the 2018–2019 PPfT implementation.

The 2018–2019 AISD DRE program evaluation activities included:

- Providing 2017–2018 data analysis and reporting on the PPfT implementation, outputs, and outcomes in support of board accountability
- A conceptualization process inclusive of goal reidentification, development of a theory of change (ToC), and operationalization of the ToC in a logic model to guide measurement activities
- A summary of the 2018–2019 PPfT implementation work
- A measurement validity and reliability study of PPfT appraisal ratings (Hutchins, 2019)

The 2018–2019 AISD DRE program support activities included:

- Support for the prior years' program data (i.e., 2017–2018 and 2016–2017), including work with the vendor, retrieving, cleaning, and validating appraisal data
- Ongoing data and contractual support for measuring student growth and stakeholder education, with respect to its use in appraisal

The ultimate goal of ongoing AISD DRE program evaluation activities was to help program staff understand if, where, and to what extent PPfT is working. Analyses toward the ultimate goal were divided into two reporting cycles in 2018–2019: one cycle occurring in the fall, focused on understanding the prior school year's progress toward program goals (i.e., 2017–2018 PPfT implementation and outputs, see Hutchins, Looby, DeBaylo, Leung, 2019), and another cycle occurring in the summer, focused on current-year program evaluation support activities (i.e., current-year implementation activities and special research and evaluation projects). This evaluation report focuses on (a) program conceptualization, (b) 2018–2019 implementation work, and (c) appraisal rating measurement validity and reliability.

Evaluation Methods

PPfT Conceptualization Process

Conceptualization of PPfT followed a systematic questioning process, with program staff starting by reflecting on the purpose of PPfT (i.e., What is the current evolution of purpose for PPfT?).



After the purpose of PPfT was identified, staff were asked to tease apart the purpose related to three conceptually distinct ideas:

1. What's the goal of PPfT? More specifically, what do we want to change as a direct result of the implementation of PPfT?
2. In the big picture, what's the point of PPfT? More specifically, if the desired change happens, then what outcome(s) do we hope will improve in the district?
3. What are the major categories of PPfT implementation work that contribute to accomplishing its goal?

After each of the above ideas was articulated, it was further framed into a programmatic ToC statement. The ToC statement took the form of If-Then-Therefore. If we achieve the goal of PPfT, then we will enable the positive outcomes. Therefore, we should engage in the implementation work of PPfT. The ToC statement was conceptually translated into work, goal, and outcome constructs and organized into a ToC graphical representation. The overall ToC document was operationalized into sets of measures specific to the implementation, the goal, and the outcomes.

2018–2019 PPfT Implementation Evaluation Process

Evaluation of the 2018–2019 PPfT implementation focused on assessing how well the program was operating in terms of its implementation activities. A few basic questions guided the descriptions:

- How many teachers were appraised under PPfT appraisal in 2018–2019?
- How many teachers participated in PPfT compensation?
- To what extent did teachers participate in PDUs?
- To what extent did teachers participate in LPs?
- What new implementation work occurred in 2018–2019?

Validity and Reliability Method

Several questions were selected from the numerous questions that could be asked to assess the extent that PPfT produced what was intended. One question asked if PPfT produced unbiased and equitable teacher appraisals that differentiated teaching quality. Hutchins et al. (2019) descriptively addressed whether PPfT produced unbiased and equitable teacher appraisals that differentiated teaching quality by examining distributions of scores from 2017–2018 PPfT appraisal results across a multitude of teacher and school characteristics. The measurement validity and reliability study described here addressed how well the appraisal system measured teaching quality, and how consistently it did so, by examining the psychometric properties of the PPfT

appraisal instrument. Please refer to DRE Publication 18.17 (Hutchins, 2019) for a detailed description of methods.

Content validity, concurrent validity, convergent validity, discriminant validity, and dominance were examined to address the validity question and are described below.

Content validity analyses examined stakeholders' perceptions about PPfT gathered from the spring 2018 AISD Employee Coordinated Survey (ECS). The items analyzed for content validity asked stakeholders whether they felt their 2017–2018 PPfT final ratings and 2017–2018 PPfT IP ratings reflected the quality of their teaching.

Concurrent validity analyses examined the distributions of 2017–2018 PPfT final ratings and PPfT appraisal component scores. Each scale was analyzed to assess the extent to which teachers were differentiated in the distributions of measures.

Convergent validity analyses examined the relationship between teachers' final ratings and their students' growth. Correlation analyses between 2017–2018 PPfT final ratings and 2017–2018 SAS Education Value-Added Assessment System (EVAAS) data assessed if teaching quality was associated with student growth.

Discriminant validity analyses examined the relationship between teachers' final ratings and their students' demographic characteristics. Correlation analyses between 2017–2018 PPfT final ratings and characteristics of the students served by teachers assessed whether ratings of teaching quality were independent of the characteristics of the students taught by the teachers.

Dominance analyses examined the relative importance of appraisal components for predicting teachers' final ratings. Multiple regression analyses predicting 2017–2018 PPfT final ratings were conducted to examine the additional variance accounted for in teachers' final ratings, based on the contribution of each component (R^2) in models of all possible combinations of PPfT appraisal components.

Interrater reliability and internal consistency were examined to address the question of reliability. Interrater reliability analyses examined the degree of agreement between raters who scored teachers' instructional practices. T tests, correlations, and agreement (i.e., Cohen's weighted kappa coefficient) were run between fall and spring ratings on all seven strands of 2017–2018 PPfT IP ratings.

Tests of Validity and Reliability

Validity and reliability are types of evidence used to defend the use and accuracy of a particular test (Drost, 2011). The most common forms are:

- **Content validity-** the extent to which a measure accurately represents all facets of a given construct
- **Concurrent validity-** degree to which a test correlates well with a measure that has previously been validated
- **Convergent validity-** degree to which two measures of constructs that theoretically should be related are in fact related
- **Discriminant validity-** when two dissimilar constructs that are easily differentiated actually are unrelated as indicated by evidence
- **Dominance analyses-** a statistical method used to determine the order of relative importance of predictors in an established linear regression model
- **Interrater reliability-** the degree to which different raters agree
- **Internal consistency-** measures consistency within an instrument and questions how well a set of items measures a particular behavior or characteristic



Results of 2018–2019 Program Evaluation

Conceptualization of the PPfT Implementation and Goals

Through reflection on the priorities of the PPfT oversight committee and collaboration with PPfT program staff, DRE staff reconceptualized the work of PPfT and the reasons for engaging in it. A new working statement of purpose was developed, the implementation work of PPfT was conceptually reorganized, and a working statement of the ToC underlying PPfT was developed (Appendix B). According to the statement of purpose, PPfT is intended to build the capacity of AISD teachers through a comprehensive system of supports and compensation, with the ultimate intent of having a positive impact on teacher retention and student achievement. The ToC of PPfT states that if PPfT professionalizes teaching and empowers teachers with voice and choice in their teaching careers, then AISD will retain high-quality teachers and improve student outcomes for all students. Therefore, AISD will develop and offer teachers (a) a singular, multi-measure appraisal system that reflects good teaching practices for all teachers; (b) PD opportunities in data-driven instruction, leadership in district priority areas, and evaluation strands; (c) teacher leadership opportunities tied to compensation; and (d) a compensation system inclusive of points for years of service, appraisal performance, and participation in PD opportunities.

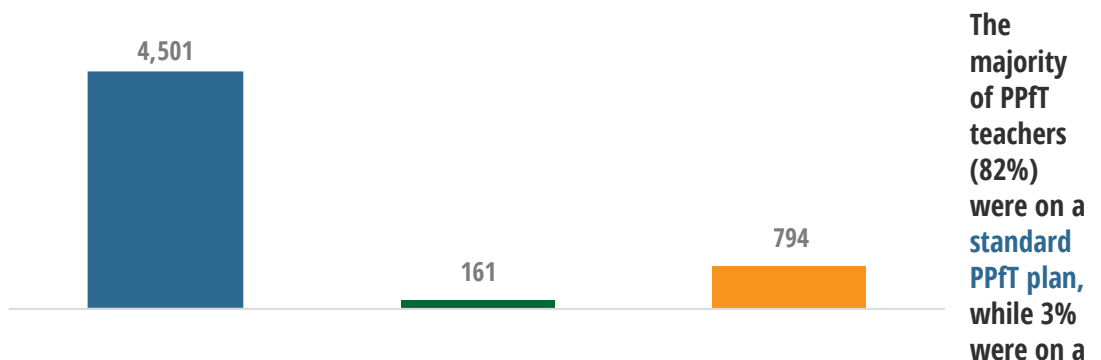
A significant reconceptualization reflected in the PPfT ToC was explicitly capturing PD opportunities and teacher leadership opportunities as two conceptually distinct parts of the PPfT implementation. PD opportunities were conceptualized as teacher growth opportunities offered through PPfT that were aligned with district priority areas. Teacher leadership opportunities were conceptualized as specific leadership roles offered to teachers through PPfT to provide additional compensation opportunities while keeping our best teachers in the classroom.

Evaluation of Implementation Work

How many teachers were appraised under PPfT Appraisal in 2018–2019?

In 2018–2019, 5,456 teachers were appraised under PPfT. Of those teachers in 2018–2019, 4,501 were on a standard PPfT plan, 161 were appraised on a late-contract plan, and 794 were appraised on a new teacher plan (Figure 2).

Figure 2.



How many teachers participated in PPfT compensation?

Participation in PPfT compensation was slightly higher (50% of teachers) in 2018–2019 than in 2017–2018 (45% of teachers). Of the 5,456 teachers in appraisal in 2018–2019, 2,706 also opted in to compensation (Figure 3).

Figure 3.

In 2018–2019, about half of all teachers were in PPfT compensation and half were in appraisal only.



Source. PPfT 2018–2019 data

Most teachers in PPfT compensation were on a standard appraisal plan (Table 1). Of the 4,501 teachers on a standard plan, more teachers were in PPfT compensation ($n = 2,586$) than those who were not in PPfT compensation ($n = 1,915$). However, teachers on a late contract or new teacher plan were less likely to opt-in to PPfT compensation.

Table 1.

Fifty-seven percent of teachers on a standard PPfT appraisal plan were in PPfT compensation, whereas only 26% of teachers on a late contract plan and only 10% of teachers on a new teacher plan were in PPfT compensation.

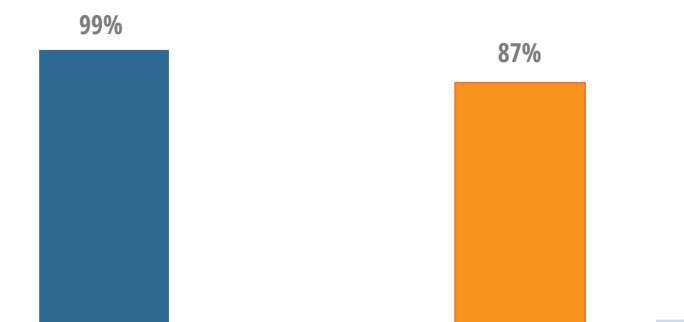
Appraisal type	Compensation status	N
PPfT standard	Appraisal only	1,915
	PPfT compensation	2,586
	Total	4,501
PPfT late contract	Appraisal only	119
	PPfT compensation	42
	Total	161
PPfT new teacher	Appraisal only	716
	PPfT compensation	78
	Total	794

Source. PPfT 2018–2019 data.

Of the 69 PPfT compensation-eligible teachers who completed the annual PDU process in 2018–2019, 87% ($n = 60$) met the PDU requirements and received their two compensation points. In 2017–2018, 68 of 69 teachers (99%) completing the annual process met the PDU requirements (Figure 4).

Figure 4.

A higher percentage of teachers completed the PDU requirements in 2017–2018 ($n = 68$) than in 2018–2019 ($n = 60$).



Source. PPfT 2017–2018 and 2018–2019 data.

Two cohorts of teachers progressed through the 2-year LP process during the 2018–2019 school year. A cohort that began the LP process in 2017–2018 worked toward completion of their LP journey, and a second cohort began their LP journey in 2018–2019. Those beginning their LP journey in 2018–2019 could complete micro-credential (MC) 1 and MC 2 and may have the opportunity to complete MCs 3 and 4 in 2019–2020. The comparisons of those enrolled and successfully completing each MC between 2017–2018 and 2018–2019, for each LP, are displayed in Table 2 and in Figures 5 through 7.

Six hundred and fourteen teachers opted into a LP during the three-week opt-in window in the spring of 2017. For this 2017–2018 LP cohort, 52 out of 71 teachers (73%) completed the 4th MC and the culminating badging process for the literacy LP, 78 out of 97 teachers (80%) completed the 4th MC and the culminating badging process for the SEL LP, and 71 out of 88 teachers (81%) completed the 4th MC and the culminating badging process for the transformative technology LP.

Table 2.

Of the 201 LP graduates from the 2017–2018 cohort, 78 graduated from the SEL LP (39%), 71 (35%) graduated from the transformative technology LP, and 52 (26%) graduated from the literacy LP.

Content area	Year	MC 1	MC 2	MC 3	MC 4
Literacy	2017–2018	71	64	55	52
	2018–2019	35	27	*	*
SEL	2017–2018	97	89	80	78
	2018–2019	50	46	*	*
Transformative Technology	2017–2018	88	82	75	71
	2018–2019	48	44	*	*

Source. PPfT 2017–2018 and 2018–2019 data.

Note. Teachers who started a LP in 2018–2019 have not yet had the opportunity to complete MC 3 or MC 4. They will have the opportunity to complete these MCs in the fall of 2019 and spring of 2020.

Leadership Pathways in PPfT Compensation

Teachers who opt in to PPfT compensation earn points to increase their pay based on 4 things:

- Years of service
- Appraisal
- Professional development units (PDUs)
- Leadership pathways (LPs)

PPfT-specific opportunities for professional development (i.e., PDUs and LPs) are only available to teachers participating in PPfT compensation. A teacher may choose to earn PDUs or take a LP, but cannot do both. Teachers earn PDUs by joining a teacher-researcher group and conducting a long-term (1-2 years) campus-specific (or student population specific) research project that produces a living document outlining their results.

On the other hand, teachers earn points in an LP by attending training (either online, in-person, or a combination thereof) in one of five topic areas deemed important to the district:

- Literacy
- SEL (Social-and-Emotional Learning)
- Transformative technology
- Advanced academics
- Problem-based learning

Each semester in the two-year training process earns the teacher one Micro-credential, resulting in 4 MCs total. Earning 4 MCs makes a teacher eligible for a Badge and earns them points that apply to their PPfT compensation pay increases.

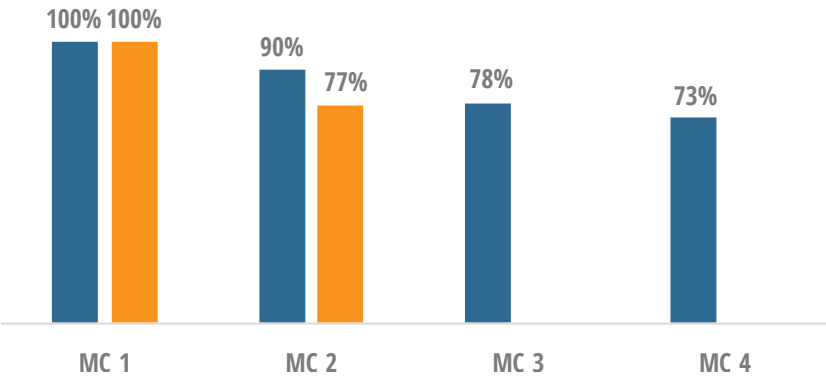
Fewer teachers started a new leadership pathway in 2018–2019 than in 2017–2018, however, the opt-in window was shorter in 2017–2018. During the one-week opt-in window in the spring of 2018, 341 teachers opted into a LP. For this 2018–2019 cohort,

Of the 35 teachers starting the literacy LP by completing the first MC, 27 (77%) completed the second MC.

Of the 50 teachers starting the SEL LP by completing the first MC, 46 (92%) completed the second MC.

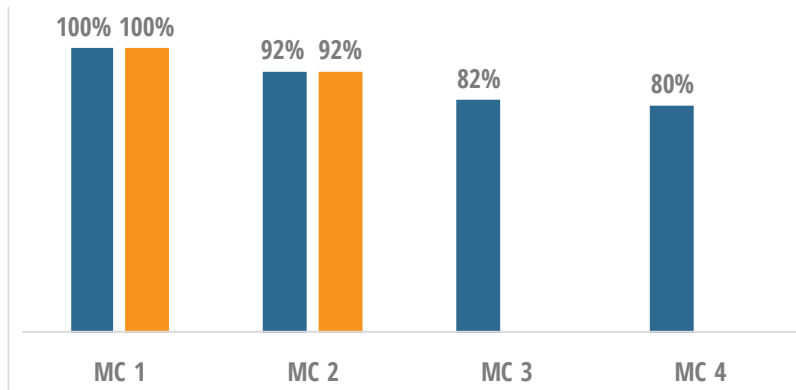
Of the 48 teachers starting the transformative technology LP by completing the first MC, 44 (92%) completed the second MC.

Figure 5.
2017–2018 literacy LP cohort members were able to progress through to MC 4 in 2018–2019, with 52 members (73%) receiving their literacy LP badge. Enrollment for the **2018–2019 literacy LP cohort** ($n = 35$) was lower than enrollment for the literacy LP cohort in 2017–2018 ($n = 71$).



Source. PPfT 2017–2018 and 2018–2019 data.
Note. MC 2, 3, and 4 percentages reflect number of enrollees who completed each MC, compared to the number of cohort members who completed MC 1.

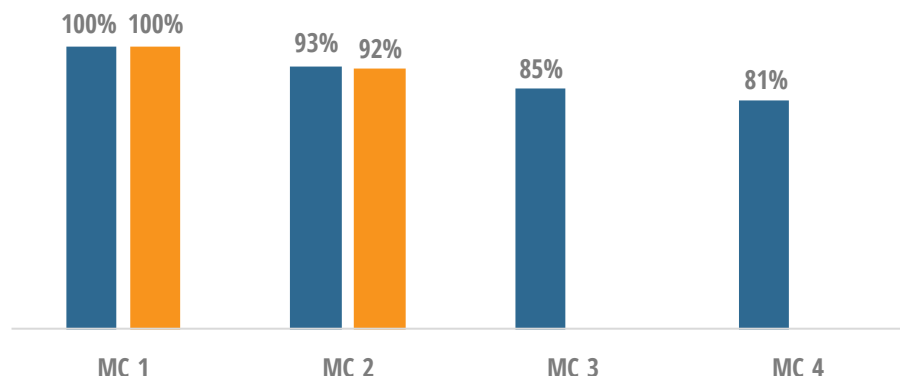
Figure 6.
2017–2018 SEL LP cohort members completed MC 4 in 2018–2019, with 78 members (80%) receiving their SEL LP badge. Enrollment for the **2018–2019 SEL LP cohort** ($n = 50$) was down in comparison with the SEL LP cohort number enrolled in 2017–2018 ($n = 97$).



Source. PPfT 2017–2018 and 2018–2019 data.
Note. MC 2, 3, and 4 percentages reflect number of enrollees who completed each MC, compared to the number of cohort members who completed MC 1.

Figure 7.

Seventy-one 2017–2018 transformative technology LP cohort members (81%) completed MC 4 in 2018–2019 and received their badge. Fewer people enrolled in the 2018–2019 transformative technology LP ($n = 48$) in comparison with those who enrolled in the 2017–2018 transformative technology LP ($n = 88$).



Source. PPfT 2017–2018 and 2018–2019 data.

Note. MC 2, 3, and 4 percentages reflect number of enrollees who completed each MC, compared to the number of cohort members who completed MC 1.

What new implementation work occurred during 2018–2019?

During the 2018–2019 school year, new implementation work was conducted related to the PD opportunities and teacher leadership opportunities components of PPfT. Two additional pathways were developed for launch in the 2019–2020 school year: one in problem-based learning (PBL) and another in advanced academics (AA). Although not final at the time of writing this report, initial enrollment counts in the new LPs for 2019–2020 were comparable to counts in existing LPs:

- PBL: preliminary count = 79 teachers
- AA: preliminary count = 52 teachers
- Literacy: preliminary count = 69 teachers
- Transformative technology: preliminary count = 64 teachers
- SEL: preliminary count = 109 teachers

Three new leadership opportunities were also developed for teacher participation in the 2019–2020 school year. Starting in the 2019–2020 school year, teachers who earn their badge in a pathway will be eligible to earn additional compensation points by serving in a leadership position, providing mentoring to teachers currently engaged in a pathway, scoring LP MC submissions, or delivering PD on pathways for teachers. Enrollment in the new leadership opportunities opened in August 2019.

Evaluation of Appraisal Validity and Reliability

Two questions related to validity and reliability were posed: how well did the PPfT appraisal system measure teaching quality, and how consistently was teaching quality Measured. The main findings are highlighted here, but detailed descriptions of validity and reliability results and suggestions for ways to strengthen validity and reliability were provided in DRE Publication 18.17 (Hutchins, 2019).

How well did the PPfT appraisal system measure teaching quality?

Analyses of 2017 PPfT ECS items suggested strong content validity related to the entire instructional practice process. However, stakeholders seemed divided on their perceptions of whether the appraisal system measured teaching quality.

The overall differentiation of teachers across final rating categories (i.e., distinguished, highly effective, effective, minimally effective, and ineffective) suggested concurrent validity. However, the large number of teachers receiving a highly effective final rating (56.6%) suggested that the concurrent validity may be weak.

Associations between 2017–2018 PPfT final ratings and 2017–2018 SAS EVAAS data suggested strong convergent validity of final ratings. For most grades and subjects examined, correlation analyses showed that as teaching quality increased, so did student growth. The exception was in grade 8 and on the U.S. history end-of-course (EOC) assessments, where findings yielded mixed results.

Associations between 2017–2018 PPfT final ratings and their students' demographic characteristics suggested inconclusive discriminant validity findings. The gender of the students served by teachers, gifted and talented (GT) status, and special education (SPED) status appeared to operate independently of the final ratings teachers received. However, limited English proficiency (LEP) status, economically disadvantaged (ECONDIS) status, and the race/ethnicity of the students served by teachers were correlated with the final ratings teachers received.

Dominance analysis revealed that IP ratings were the most important contributor to predicting final ratings, followed by SLO ratings, PGR ratings, and lastly SWVA ratings. Results further underscored the importance of distribution quality (e.g., variance and normality) for each PPfT appraisal component.

How consistently was teaching quality measured?

Interrater reliability analyses were inconclusive due to confounds between raters, time, and teacher improvement. In PPfT, two different raters observe every appraised teacher, but they do so at different points in time (i.e., one rater observes in the fall and a different rater observes in the spring) and teachers use their fall observation feedback to improve their craft for their subsequent spring observation. Despite the confounds, the collective set of analyses on interrater reliability pointed toward adequate agreement between raters. The use of floating peer observers to partner with school administrators during both observations was considered a means to reduce confounds in analysis of interrater reliability.

Fall IP ratings, spring IP ratings, and PGR ratings all showed evidence of strong internal consistency. However, the four appraisal components taken as a set (i.e., IP, PGR, SLOs, and SWVA) showed evidence of somewhat weak internal consistency. Although internal consistency did not meaningfully improve with the removal of any appraisal components, exploratory analyses replacing the SWVA with a teacher value-added component did meaningfully improve internal consistency.



Summary and Recommendations

Summary of Findings

The conceptualization of PPfT in its third year of implementation (i.e., 2018–2019) evolved in two distinct ways. First, PPfT appraisal was more explicitly highlighted as one of four components of the overall PPfT human capital system. PPfT is an entire human capital system comprising (a) PPfT appraisal, (b) PPfT PD opportunities, (c) PPfT leadership opportunities, and (d) PPfT compensation. The second evolution of PPfT in 2018–2019 resulted in a more explicit differentiation of PPfT PD opportunities from PPfT leadership opportunities. A significant part of the growth and development of the PPfT human capital system in 2018–2019 aligned with these two distinct components, with the focus on increasing PD opportunities and leadership opportunities for teachers, and therefore further professionalizing teaching and empowering teachers with voice and choice in their career paths.

Validity analyses generally showed evidence for content, concurrent, and convergent validity of PPfT appraisal, jointly suggesting valid measurement of quality teaching. Discriminant validity findings were mixed, and dominance analyses highlighted the importance of actively working to avoid ceiling effects in any of the rating scales. Reliability analyses generally suggested consistent measurement, particularly between the campus-administrator-rated parts of PPfT appraisal. However, confounds between raters and time and within-year teacher improvement precluded a conclusive assessment of rater agreement.

Recommendations

The body of evaluative work on PPfT conducted in 2018–2019 (i.e., DRE Publications 18.20, 18.17, and 17.60) collectively support several recommendations for future evaluation efforts. These are not exhaustive recommendations.

- Given the expansion of PD opportunities and leadership opportunities, consideration should be given to evaluation of their efficacy for growing teacher capacity, for increasing teacher choice, differentiating compensation, and retaining high-quality teachers in the classroom.
- Revisions to the PPfT survey instrument and administration schedule are recommended to improve measurement of stakeholders' perceptions.
- Education, training, and expectations related to observation ratings should continue to be a focus of annual onboarding and certification, with additional emphasis on differentiating 2s from 3s and 3s from 4s.
- Consider strategically leveraging tools (e.g., the Comprehensive Schools Improvement Model) for incentivizing a more equitable distribution of high-quality teaching across student populations to help improve the operational independence of teacher final ratings from student racial, economic, and language characteristics.

- Consider a redesign of classroom observation to include the use of floating peer observers to partner with school administrators during fall and spring observations. The simultaneous observations would control for confounds in analysis of interrater reliability and mitigate possible rater bias among teachers with whom campus administration has a close working relationship.
- The juxtaposition of strong internal consistency of campus-administrator-rated items with the adequate, yet weaker internal consistency of the four appraisal components highlights the need for ongoing discussion and explicit valuing related to collective and individual attribution to student growth measurement (e.g., *our* students versus *my* students). Comparisons of the internal consistency and factor analytic solutions with school-wide value-added and teacher value-added should provide data for these conversations.

References

- Drost, E. A. (2011). Validity and reliability in social science research. *Education Research and perspectives*, 38(1), 105-124.
- Holland, H. (2005). Teaching Teachers: Professional Development To Improve Student Achievement. AERA Research Points, Volume 3, Issue 1, Summer 2005. *American Educational Research Association (AERA)*.
- Hutchins, S. D. (2019). *Measurement validity and reliability of Professional Pathways for Teachers ratings: Technical report* (DRE Publication 18.17). Austin, TX: Austin Independent School District.
- Hutchins, S. D., Looby, K., DeBaylo, P., & Leung, J. (2019). *Professional Pathways for Teachers: Summary of evaluation findings from 2017–2018* (DRE Publication 17.60). Austin, TX: Austin Independent School District.
- Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. L. (2007). Reviewing the Evidence on How Teacher Professional Development Affects Student Achievement. Issues & Answers. REL 2007-No. 033. Regional Educational Laboratory Southwest (NJ1).

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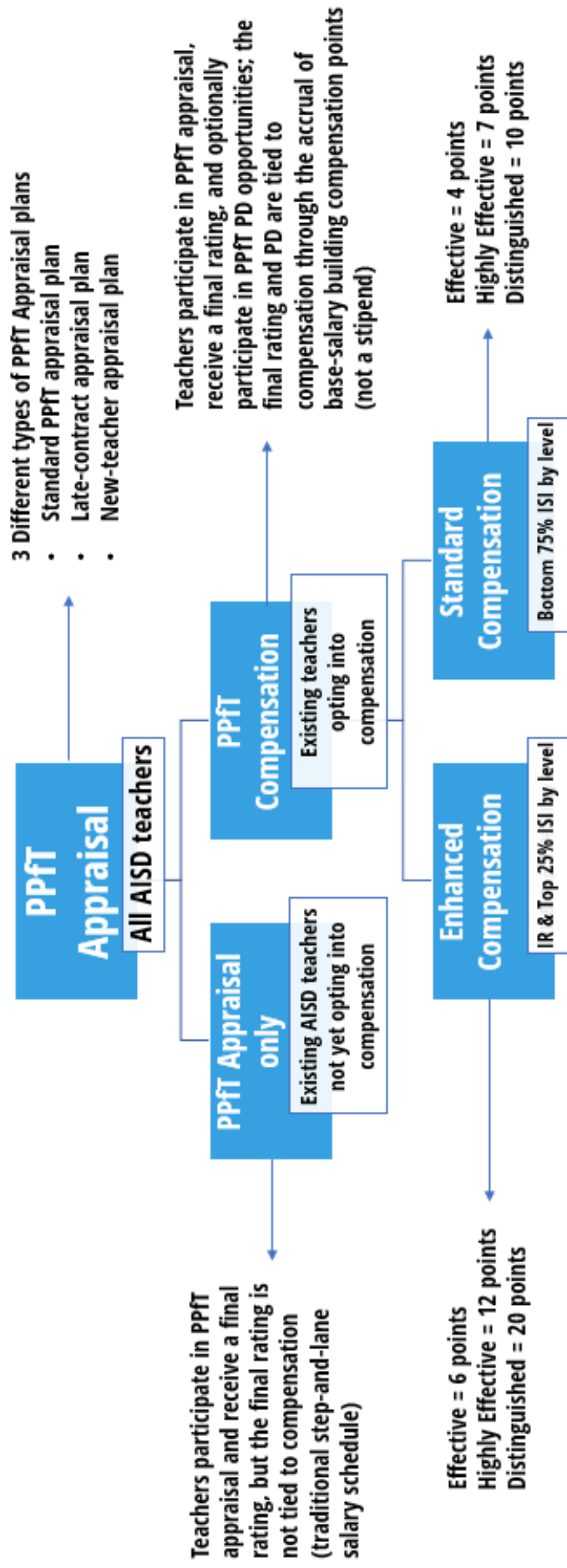
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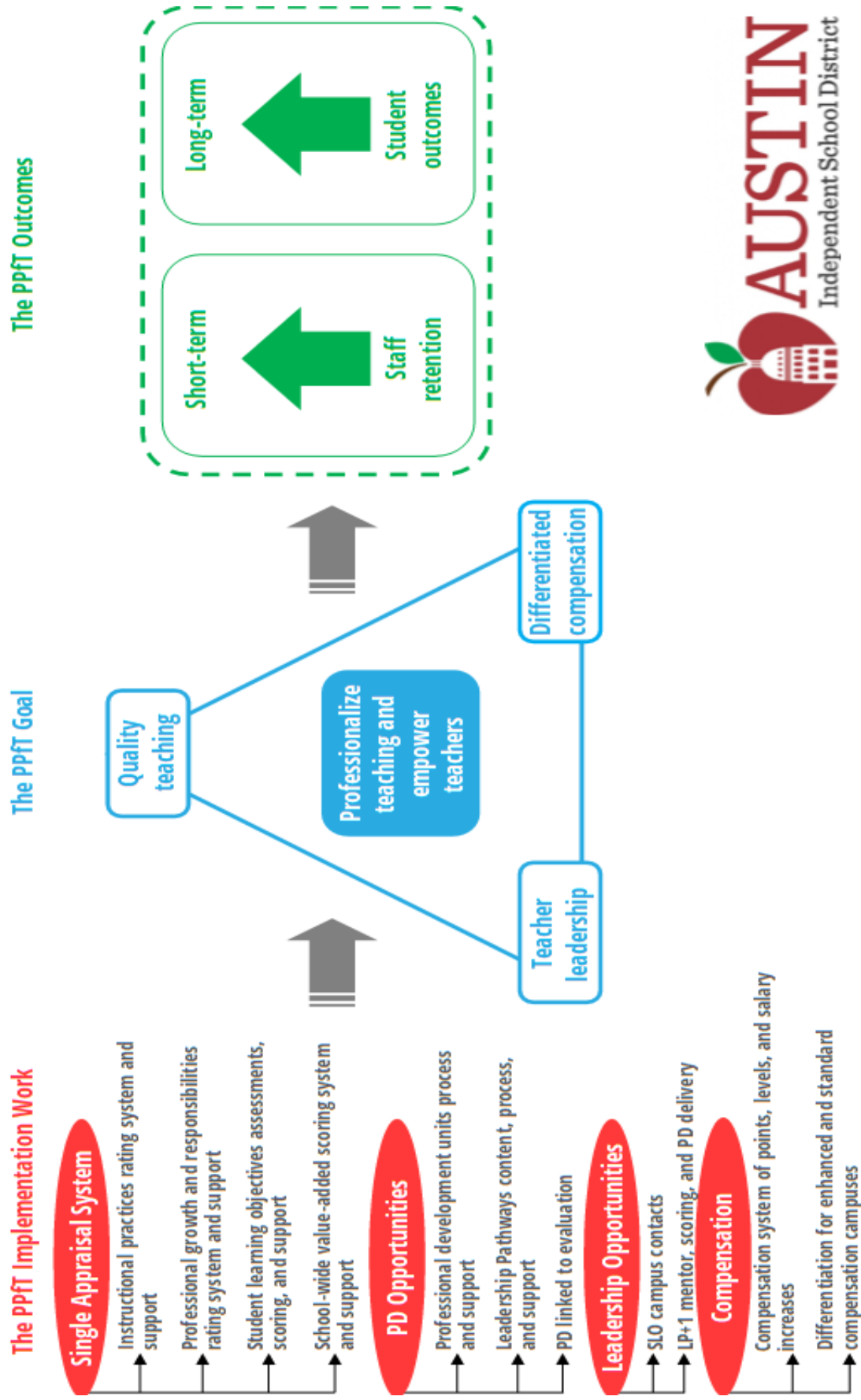
Appendix A

Structure of PPFT in 2018–2019



Appendix B

Graphical Representation of the PPFT ToC



Source. Working draft of the PPFT ToC, last revised on June 11, 2019