November 2015
Publication 14.91b

Technical Supplement to Sustaining a System for High-Quality Teachers, Report 2:

Market Opportunities and Typical Wages for Austin Independent School District Teachers and Leavers

Department of
Research and Evaluation
AUSTIN INDEPENDENT SCHOOL DISTRICT

Executive Summary

Purpose

In this technical supplement to *Sustaining a System for High-Quality Teachers, Report 2: Market Opportunities and Typical Wages for Austin Independent School District Teachers and Leavers,* we describe with more detail the technical information not covered in the main report. The technical supplement provides enough methodological detail to replicate the study over different time periods or in different locations, and also describes data considerations that should be addressed with any similar study of the teacher labor market.

Highlights

Actual earnings data are valuable for studying teacher earning patterns.

Actual earned wage data obtained via a data-sharing agreement with the Texas Workforce Commission (TWC) were a critical component of the study. Not only did the TWC provide more accurate and inclusive estimates of actual teacher earnings while employed by Austin Independent School District (AISD) than provided by publicly available salary schedule data, but the TWC wage data allowed estimation of actual earnings in the subsequent year for teacher leavers employed elsewhere.

AISD teacher salary schedules do not reflect what teachers actually earn.

The minimum 2012–2013 AISD teacher salary schedule for 10 years of experience was $44,522; the maximum was $48,866. The former represented education and teaching assignments for a bachelor's degree and the latter represented a graduate degree with special education and bilingual education certifications and assignments. Actual 2012–2013 TWC wage data for AISD teachers with 10 years of experience revealed that many teachers (more than 50%) earned more than their scheduled salaries (i.e., mean = $50,232, median = $48,365, minimum = $44,527, maximum = $67,605). Furthermore, in Texas, AISD is one of only 17 school districts that participate in Social Security for full-time employees. Therefore, the take-home pay for teachers in AISD is reduced relative to that of teachers with comparable salaries in 1,230 other Texas public school districts.

Salary comparisons are only as accurate as the data sources on which they are based.

When making comparisons between AISD teacher salaries and the salaries of other professional occupations available to these teachers, it is important to compare what teachers actually earned in a contract year (including all extra pay) with the calendar-year salaries of the occupations reasonably available to those teachers in the local market place (i.e., education and training commensurate with the typical teacher). Take-home pay also must be considered when making comparisons across occupations to account for the 6.25% difference between occupations that require Social Security contributions and those that do not require Social Security contributions. Failing to account for systematic differences between salary data sources can distort the financial opportunities available to AISD teachers in the local job market.

Table of Contents

List of Figures

List of Tables

Introduction

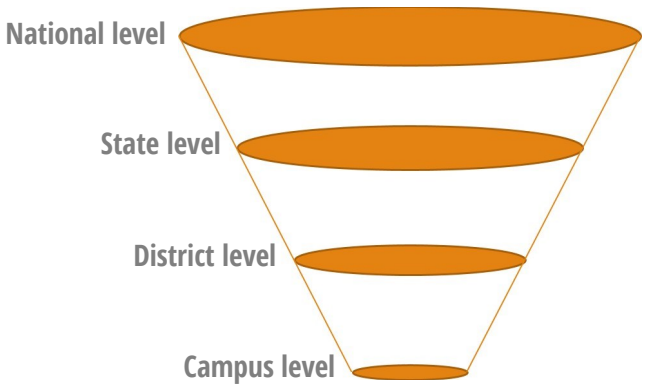
The two studies presented in *Market Opportunities and Typical Wages for Austin Independent School District Teachers and Leavers* [1] examined salary data from multiple sources to estimate annual wages for Austin Independent School District (AISD) teachers and other local professionals. Schmitt and Hutchins (2015) focused on the outcomes of the two studies. However, the data sources required varying degrees of interpretation and manipulation to obtain a common, comparable estimated annual wage. In the following sections, we discuss the conceptualization of teacher mobility that guided our work, provide an overview of salary data sources, and describe the procedures for working with each source of salary data.

Conceptualizing Teacher Mobility

Teacher attrition can be understood as existing along a continuum of granularity, whereby conceptualizations of teacher mobility are shaped by the scope of the context within which mobility is experienced and the availability of data on teacher mobility (Figure 1). For example, at a national level, where mobility was studied for all teachers in the country using data from the Teacher Follow-up Survey (Goldring, Taie, & Riddles, 2014), the stayer-mover-leaver teacher mobility categories were defined in the following manner:

> "Stayers" are teachers who were teaching in the same school in the current school year as in the base year. "Movers" are teachers who were still teaching in the current school year but had moved to a different school after the base year. "Leavers" are teachers who left the teaching profession after the base year. (p. 6)

Figure 1.
Multi-Level Conceptualization of Teacher Mobility



Three further distinctions were made among the *movers* (Goldring et al., 2014): teachers who moved from a teaching position at a public school to (a) a teaching position at another public school in the same school district, (b) a teaching position in another public school district, or (c) a teaching position at a private school. The categories of teacher mobility defined at the national level by the Teacher Follow-up Survey need to

[1] Schmitt, L., & Hutchins, S. (2015). S*ustaining a system for high quality teachers, report 1: Market opportunities and typical wages for Austin Independent School District teachers and leavers.*

be changed if the scope is smaller (i.e., state, district, or campus) and/or the teacher mobility data are limited to state, district, or campus records. Although a stayer is a stayer regardless, the conceptualization of teacher mobility for movers and leavers can vary dramatically, given considerations of loss or retention of human capital within and across positions (e.g., teacher, instructional coach, and school leadership), campuses, and districts.

With regard to how teacher mobility is experienced, teachers who move between teaching positions in the same district are leavers from a campus perspective but movers from a district perspective. However, if teachers move to teach in another district or at a private school, even though still in the teaching profession, they are leavers from both campus and district perspectives. The conceptualization is further challenged when teachers change from teaching positions to non-teaching positions in the education profession. If this move occurs within the district, then arguably the human capital has been retained; yet, if it occurs outside the district, then the human capital is a loss.

With regard to data availability, tracking teacher mobility across campuses, districts, regions, and states requires access to a variety of different teacher records. Following leavers across districts requires access to regional or state records potentially owned individually by school districts. Tracking the mobility of teachers to nearby independent school districts (ISDs) is not a conceptual issue; rather, it is a data access issue. If a study of teacher mobility is limited to researchers' own district's records, then the difference between movers and leavers is blurred. Leaving the profession and leaving the district are different situations, yet indistinguishable given a lack of external records.

How Did We Conceptualize Teacher Mobility for Our Study?

For our studies of teacher mobility, we focused on (a) movement within the district and (b) movement outside the district. We excluded from our analyses any teachers leaving due to retirement. Movement within the district included tracking teachers from teaching at one level or content to teaching at a different level or content at the same or different school, and from teaching to working in another role at the same or different school or the central office. Movement outside the district included tracking teachers from teaching to unemployment or to employment in another ISD, other education services, or other sector.

Our series of studies examined teacher data from multiple levels: individual, campus, district, regional, and state.

- Individual teacher data included:
    - Teacher demographics
    - Teacher appraisal and value-added
    - Teacher survey responses while in AISD
    - Teacher survey responses upon exiting AISD
    - Teacher interviews
- Campus-level data included school leaver status: transferred in AISD, left AISD, retained on campus

- District-level data included district leaver status: left AISD and AISD teacher salary and stipend schedules
- Regional-level data included Bureau of Labor Statistics wage data for the Austin -Round Rock-San Marcos metropolitan statistical area
- State-level data included Texas employment status: employed in Texas (where and wages)

Salary Data Sources Used

Three primary sources of salary data were used to estimate AISD teachers' salaries and then to compare them with both salaries for other occupations and the earnings of leavers in their subsequent employment. We used publicly available AISD teacher salary schedules, Bureau of Labor Statistics (BLS) data, and actual Texas wage data obtained via a data-sharing agreement with the Texas Workforce Commission (TWC). Each is described in detail.

AISD teacher salary schedules, BLS data, and actual Texas wage data obtained via a data-sharing agreement with the TWC were used to estimate AISD teachers' salaries.

Salary Schedules and Extra Pay

Current teacher salary schedules are publicly available on the AISD website. However, because we were following a cohort of teacher leavers from their last year at AISD in 2011–2012 to their first year of post-AISD employment in 2012–2013, we needed teacher salary schedules (and stipend information) from 2 years prior. We acquired archived schedules from the AISD Compensation Department. AISD's compensation system does not differentiate based on teacher effectiveness or other non-traditional criteria; it only differentiates based on experience, education, and teaching assignment (i.e., general education, bilingual education [BE], English as a second language [ESL], and special education [SE]). Step increases are given based on years of experience. The 2012–2013 salary schedules differed from current salary schedules in the teacher daily rate associated with each step; steps differed in the required years of experience. Additional money for education and teaching assignment was the same as in the current salary schedule. An additional $844 was added to the base salary for masters or doctorate degrees, $1,000 was added to the base salary for SE assignment, and $2,500 was added to the base salary for BE assignment.

AISD teacher salary schedules define the daily rate paid to teachers, based on a contracted number of duty days (typically 187-day contracts).

Teacher salary schedules define the daily rate paid to teachers based on a contracted number of duty days for their primary assignment (typically 187 days for AISD teachers). However, teachers often participate in activities outside their contracted assignment's duties that earn them additional pay. Consequently, teacher salary schedules may not be a true indicator of actual earned annual salary. Additional pay for teachers can be in the form of stipends, extra duty days, and extra pay.

Stipends are fixed amounts of money paid for duties performed or program criteria met. Stipends are typically paid in established increments throughout the school year on a schedule associated with meeting the requirements for the stipend. AISD has three general categories of stipends: (a) athletic stipends and wages, (b) non-athletic stipends and wages, and (c) REACH stipends (see AISD REACH Program Overview[2]). Each category has a wide range of duties and associated payouts, and some include extra paid duty days.

Extra paid duty days are a fixed number of additional days of pay associated with performing a stipend's required activities, for which teachers are paid an additional amount at their contracted daily rate. For example, a teacher with a 187-day contract on the step 7 base 2012–2013 salary schedule (i.e., no adjustments for education and teaching assignment) would have had a contracted daily rate of $238.08. If that teacher performed the duties for a stipend paying an additional $1,000 and 10 extra duty days, then the actual additional amount received by the teacher would have been approximately $3,380.80 (i.e., $1,000 + [10 * 238.08] = $3,380.80). Table 1 summarizes stipend amounts and extra duty days for each category of stipend.

Extra pay wages are earned for participating in special duties outside normal teaching duties. Examples of extra pay opportunities for AISD teachers include activities such as curriculum writing, teaching summer school, and attending specialized training opportunities. Extra pay wages are in addition to wages earned as part of a teacher's contracted daily rate, and like stipends and pay for extra duty days, contribute to the gross annual wages beyond what is shown in the salary schedule.

Additional Pay for Teachers

Opportunities were available for AISD teachers **to earn additional pay** not reflected in salary schedules. Examples included:

stipends for duties performed or program criteria met,

extra paid duty days outside of the teacher 187-day annual contract, and

extra pay wages for duties beyond the typical contracted teaching duties.

[2] Reach, Office of Educator Quality, Austin Independent School District. (n.d.). *Program overview*. Retrieved from http://www.austinisd.org/reach/program-overview

Table 1.
Summary of AISD Stipend Opportunities in 2012–2013

Stipend category	Example stipend duties	Approximate stipend range	Extra duty days
Athletic stipends	Athletic Coordinator, Varsity Head Coach, Varsity Assistant Coach, or Freshman Coach	$1,100 to $11,100	0 to 25
Non-athletic stipends	Director or Assistant Director for Band, Orchestra, or Dramatics Print Shop Manager, Department Chair, Student Council, or National Honors Society Individual, team, or school-wide goals	$200 to $9,400	0 to 20
REACH stipends	Professional development units, peer observation ratings, or retention SLO facilitator or PDU team lead	$500 to $13,000	none

Source. AISD 2012–2013 high school and middle school stipends, AISD REACH program overview

BLS Salary Estimates

We determined local professional salaries for the Austin-Round Rock-San Marcos metropolitan statistical area (MSA) using 2013 data from the BLS.[3] According to the BLS, MSAs consist of one or more counties (or towns and cities in New England), contain a core area with a substantial population that has a high degree of economic and social integration with the surrounding areas, and must have at least one urbanized area of 50,000 or more inhabitants. BLS MSA data do not include salary information for self-employed workers. The BLS currently provides annual mean wages within MSAs for each occupation, based on the 2010 federal standard occupational classification (SOC) system.[4]

To estimate local professional salaries, we used BLS annual salary data from the Austin-Round Rock-San Marcos MSA for the 10 professionally oriented major occupation groups referenced in the SOC definition for high-level aggregation 1: management, business, science, and arts occupations.

The 2010 SOC system contains 840 detailed occupations grouped into three higher levels of aggregation: 461 broad occupation groups, 97 minor groups, and 23 major groups. Alternative, even higher levels of aggregation than the major groups are suggested in the SOC system at an intermediate aggregation (i.e., 13 groups) and high-level aggregation (i.e., 6 groups). We referenced the definition for high-level aggregation 1: management, business, science, and arts occupations from the 2010 SOC *User Guide*. The management, business, science, and arts occupation group encompasses 10 professionally oriented major occupation groups. Therefore, we used annual salary data for these 10 major occupation groups from the Austin-Round Rock-

[3] Bureau of Labor Statistics, U.S. Department of Labor. (2013, May). *Occupational employment statistics: Metropolitan and nonmetropolitan area occupational employment and wage estimates*. Retrieved from http://www.bls.gov/oes/current/oessrcma.htm

[4] Bureau of Labor Statistics, U.S. Department of Labor. (2010). *2010 SOC user guide*. Retrieved from http://www.bls.gov/soc/soc_2010_user_guide.pdf

San Marcos MSA. For a full list of the 10 major occupation groups and the detailed occupations encompassed by each major occupation group see Appendix A.

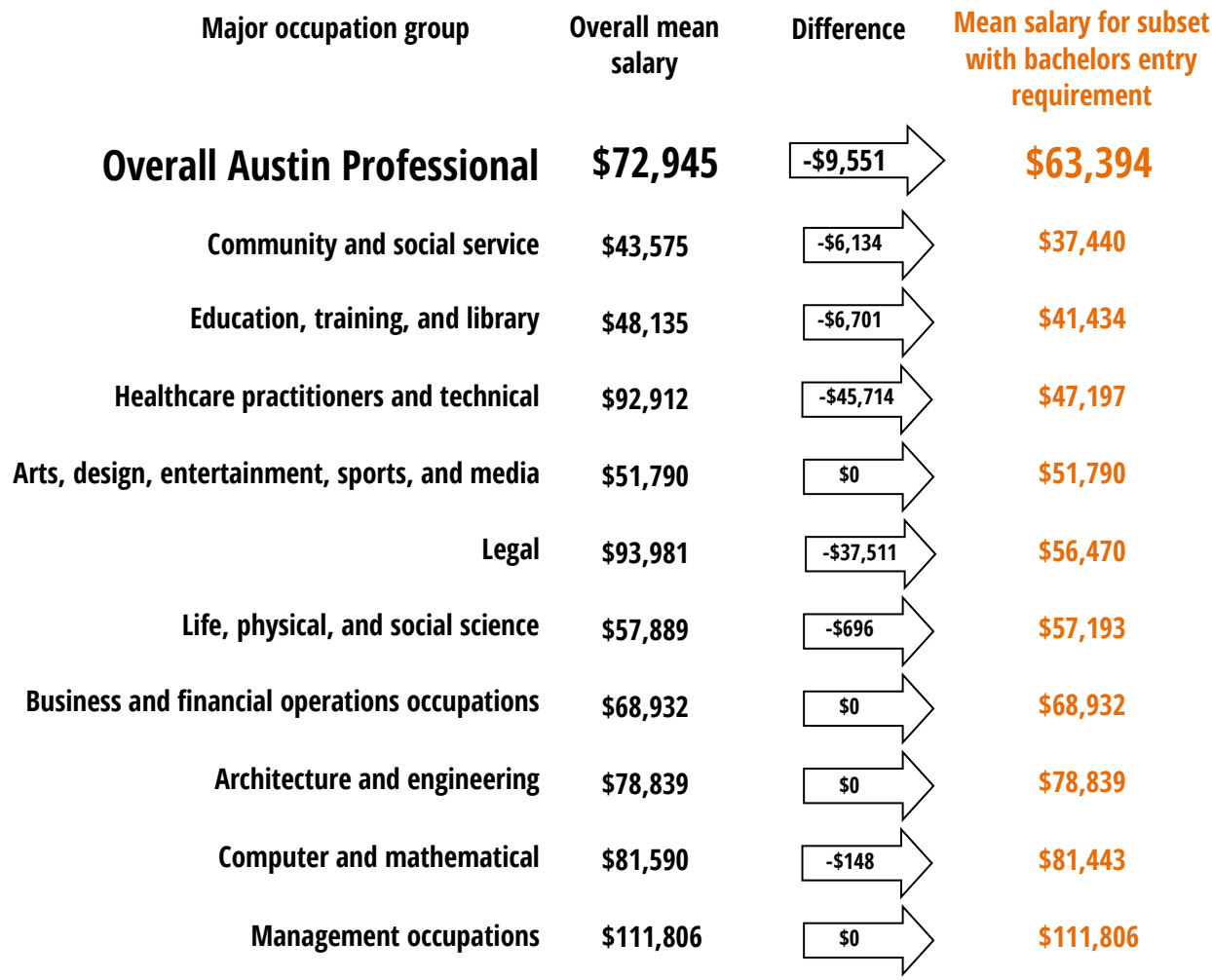
Mean salaries were computed from the BLS Austin-Round Rock-San Marcos MSA data by dividing the sum of detailed occupation wages earned by the sum of the employees within major occupation group. Missing employee counts and annual mean wages within detailed occupations were replaced with the respective mean value within the major occupation group for detailed occupations requiring similar training and education for entry-level employment.

The 10 major occupation groups represented our best approximation of the professional occupations locally available to teachers changing employers or changing careers; however, we recognized that some of the detailed occupations included in the estimates may be out of a teacher's reach upon immediate exit from the teaching workforce. For example, many of the health-care practitioner occupations require advanced education and training (e.g., veterinarians, psychiatrists, surgeons). Consequently, local Austin professional salaries were recalculated excluding detailed occupations that required advanced education and training. We instead focused on occupations with bachelor's degree requirements for entry-level employment. Exclusions were based on the BLS *Occupational Outlook Handbook*'s suggested entry-level education requirements.[5] Salaries used in the analysis are shown in Appendix A for each major occupation group; detailed occupations, as well as occupations included/excluded, given education requirements (the excluded occupations are noted with an asterisk).

Figure 1 shows the differences in annual salaries for each major occupation group when adjusting for education requirements for entry-level employment. Six major occupation groups were affected by partial exclusion based on entry-level requirements. The excluded detailed occupations primarily included research scientists, psychologists, lawyers, judges, college or university professors, and a wide range of medical doctors. The mean and median wages for professional occupations within the Austin area, regardless of entry-level degree requirements, were $72,945 and $73,885, respectively. However, the mean and median wages for the subset of professional occupations with bachelor's degree entry-level requirements were $63,394 and $56,832, respectively; a difference in mean wages of $9,551 for the average professional occupation in Austin and the average professional occupation immediately accessible to the typical AISD teacher.

[5] Bureau of Labor Statistics, U.S. Department of Labor. (2014). *Occupational outlook handbook*. Retrieved from http://www.bls.gov/ooh/

Figure 2.
Mean BLS Salaries for the Entire Occupation Group and the Subset of Occupations With Bachelor's Degree Entry-Level Requirements



Source. 2013 BLS data for the Austin-Round Rock-San Marcos MSA

TWC Wage Data

The TWC wage data were an invaluable resource for understanding actual wages earned in Texas. The data set included quarterly earnings in Texas by Social Security number, company name, company address (although often for the payroll company), and North American Industry Classification System (NAICS) sector. No data were included for those employed out of state. Only individuals initially identified as AISD teachers between 2006–2007 and 2013–2014 were included in the data provided by the TWC. The data set included all Texas wage data for those teachers for that period of time. For AISD teacher leavers unemployed in the state of Texas, unemployed in other states, or employed in other states, no records were included in the TWC data set. TWC data are wages reported for unemployment insurance.

To compare AISD earnings with post-AISD earnings, we used TWC data on actual wages earned in Texas during 2011–2012 and 2012–2013. The TWC data set included quarterly earnings in Texas by Social Security number, company name, company address, and North American Industry Classification System (NAICS) sector.

The TWC wage data were valuable because they addressed the problem of gaps between scheduled and actual wages. However, in cases where no Texas income was reported, we could not discern whether individuals were unemployed, self-employed, or employed out of Texas. Because the wage data were only Texas based, individuals either showed Texas income or did not show any income.

In addition to the challenge of interpreting a lack of wage records, we faced a challenge from individuals with multiple employers during the same quarter. For simplicity and accuracy of wage comparisons, AISD teachers with simultaneous employment at AISD and another employer were excluded from the analysis. Similarly, individuals employed at multiple locations in the same quarter after leaving AISD were excluded from wage comparisons. The remaining sample included teachers employed at no more than one company per quarter.

The TWC wage data included quarterly wages for each calendar year, as follows: quarter 1 (January—March), quarter 2 (April–June), quarter 3 (July–September), and quarter 4 (October–December). AISD teacher annual salaries were based on a contract year (i.e., July–June). To align the TWC quarters to the AISD teacher contract year, quarterly salary data were combined to reflect the school year. For example, quarters 3 and 4 of 2012 and quarters 1 and 2 of 2013 were combined to represent wages for the school year 2012–2013.

We defined levels of employment (i.e., full, majority, limited, and not employed) based on the number of quarters with TWC wage data greater than minimum wage at 20 hours a week with an employer. Almost half of teacher leavers from 2011-2012 were fully employed at the same company (i.e., employed all four quarters with more than half-time minimum wages) in Texas for the full 2012-2013 school year. A small percentage (6%) were employed the majority of the school year (i.e., quarters 4, 1, and 2), and the rest were employed in a limited capacity (one or two quarters; 27%) or were not employed in Texas (21%).

Because TWC data did not include an indicator for full-time versus part-time employment, it was challenging to identify individuals who were employed full time. We limited annual wage comparisons to individuals who had earned at least the minimum AISD scheduled salary while in AISD and at least $30,000 after leaving AISD.

The sector and company name variables included in the TWC wage data provided insight regarding subsequent employment for AISD leavers, but not without data manipulation. Through a combination of researching companies by name and using NAICS sector information, 2012–2013 Texas-based employment was recoded into (a) local ISD, (b) non-local ISD, (c) other education services, or (d) outside education.

Finally, review of the quarterly wages in 2012 and 2013 suggested an employment gap between jobs. Therefore, to account for the possibility that teachers were hired after school started, we determined the average wages earned in the last three quarters of the school year (i.e., quarters 4, 1, and 2) and used the average to represent wages for the first quarter of the school year. Estimated annual wages reflected the sum of actual wages earned in the last three quarters of the school year and their average. We were

Evaluation of Salary Data Sources

AISD teacher salary schedules are the benchmark for contracted teacher salaries, but **did not reflect what teachers actually took home** with extra pay earnings.

BLS salary data provided valuable local area occupation wage norms, but **could not provide insights about what former AISD teachers were actually earning** elsewhere.

TWC wage data provided valuable information about actual earnings during and after AISD employment, but **required considerable data manipulation** for pre/post comparisons of annual earnings.

confident in this method because the average estimated salary for AISD full-time teachers closely matched the average actual salary they earned.

Evaluation of Salary Data Sources

Table 2 shows the comparison of pros and cons for each data source and the rationale for inclusion in the study. The AISD salary schedules provided base salary information by experience, education, and teaching assignment/certification for all 187-day teacher contracts. Although actual earnings did not match scheduled earnings (based on TWC wage data), the difference provided insights into the distribution of actual extra pay earnings beyond teachers' contracted salaries.

Table 2.

Pros, Cons, and Rationale for Salary Data Sources Used

Salary data source	Pros	Cons	Rationale for use
AISD salary schedules	The benchmark for contracted teacher salaries	Did not include information on earnings from extra pay	Provided base salaries for 187-day teacher contracts, and when coupled with TWC data, provided insight in to extra pay
BLS Salary Estimates	Provided earning estimates across professional occupations for the entire MSA	Were only broad occupation estimates rather than averages of actual wages earned working elsewhere	Best available salary approximation for all ISD and non-ISD occupations as well as those occupation outside of education
TWC wage data	Provided actual wages based on unemployment insurance data submitted to the TWC Tracked by Social Security number both during and after AISD employment	Records based on calendar year (Jan-Dec) rather than AISD contract year (July-June) Multiple records per individual No indication of full-time status Available only for Texas employers required to maintain unemployment insurance	Best source for actual wages and employment of teacher leavers

The BLS salary estimates (paired with SOC standards) allowed us to consider only relevant professional occupations in the local MSA when estimating area market opportunities for teachers. We were further able to filter the specific detailed occupations, based on entry-level education requirements, to target only the local market opportunity immediately available to the typical teacher upon leaving the district. However, BLS data only provided broad estimates by occupation group, rather than precise estimates reflecting actual earnings of teachers working elsewhere.

The TWC wage data were extremely valuable for determining actual teacher leaver earnings, both before leaving AISD and in the following year of employment elsewhere in Texas. Rather than relying on industry estimates for other occupations (e.g., BLS data),

we were able to calculate reasonably precise estimates of actual teacher leaver wages and further filter to leavers with only one income source before and after leaving, yielding the most equitable annual comparisons. However, working with TWC data for teacher salary estimates required realigning actual earnings reported during the calendar year (i.e., January–December) to the AISD teacher contract year (July–June), scaling up quarterly data to annual estimates, recoding variables for the after-AISD employment situation, and adjusting gross annual wages for each industry to account for differences in take-home pay due to Social Security contributions. For industries that paid into Social Security, annual wages had to be adjusted downward by 6.25%.

AISD Teacher Salary Samples

In addition to describing the salary data sources used, we provide further detail about working with the salary data sources to create the AISD teacher leaver samples. Samples for study 1 and study 2 are described separately.

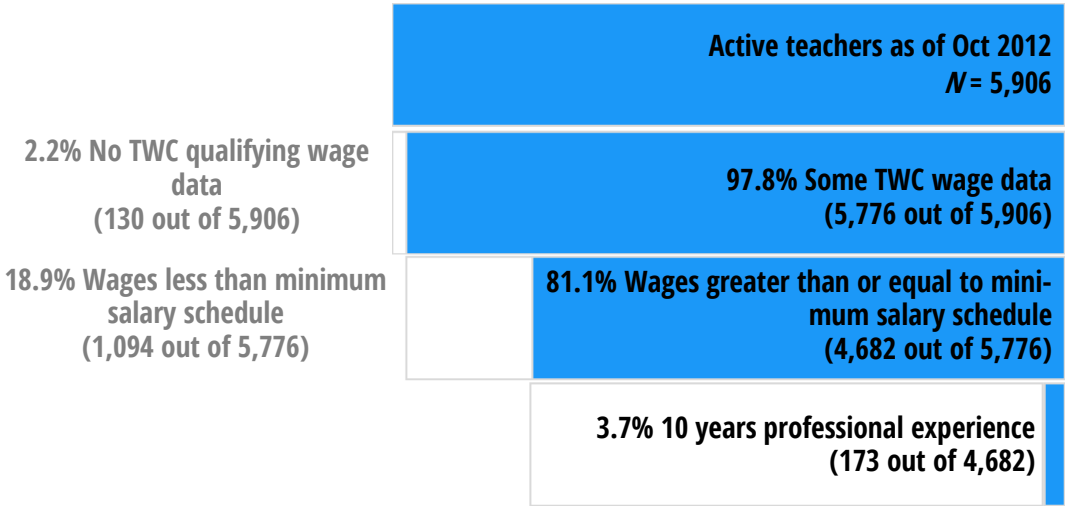
Study 1: The AISD 2012–2013 Sample With 10 Years Experience

The *typical teacher* was defined by the single salary schedule step most closely aligned with the average experience of AISD teachers, rather than with the average teacher given other characteristics. For the 2012–2013 school year, the average experience for AISD teachers was approximately 12 years, and the median was 9 years (N = 5,906). Consequently, we approximated the typical teacher salary in AISD using step 7, 10 years of experience in the 2012–2013 teacher salary schedule.

In addition to the salary schedule for AISD teachers (which only represents base district salaries plus adjustments for experience, education, and teaching assignment), TWC wage data were used to gather information on actual earnings. The distribution of actual wages was used to account for actual wages earned in addition to the posted salary schedule.

To reflect the typical teacher, sampling of actual annual wages limited TWC wage data to employees with a teacher job code, 10 years of professional experience, wage data for the entire 2012–2013 school year, and an annual salary greater than or equal to the minimum salary on the AISD teacher schedule (i.e., $44,522); 173 teacher records (2.9% of all employees with a teacher job code) met the sampling inclusion criteria. Although some teachers with wages less than the minimum annual salary schedule were included in the TWC data, they were excluded from our analyses to avoid including any part-time or partial-year wages in the full-time annual comparisons. Of the 5,906 AISD teachers on record for the 2012–2013 school year, we found four quarters of salary data for 97.8% of the teachers (5,766 out of 5,906) when district records were joined with the TWC wage data set. Of the 5,776 AISD teachers with some TWC data, 81.1% of the teacher salary records (4,682 out of 5,776) were greater or equal to the minimum salary schedule. Of the 4,682 teacher salary records reflecting at least the minimum salary schedule, 3.7% (173 out of 4,682) were for teachers with 10 years of professional experience (Figure 3).

Figure 3.
AISD Teacher Records Meeting the Sampling Criteria



Source. AISD employee records and TWC wage data

The difference between the minimum and maximum AISD teacher schedule salary for 10 years of experience was $4,344, representing a differential between a bachelor's degree ($44,522) and a graduate degree with SE and BE certifications and assignments ($48,866). Actual-wage data for AISD teachers with 10 years of experience revealed that many teachers earned more than their scheduled salaries (i.e., minimum = $44,527, maximum = $67,605); consequently, the difference between highest and lowest teacher salaries ($23,078) was much larger than that shown in the salary schedule. The mean actual earnings of the sample of full-time teachers with 10 years of experience was $50,232; the median was $48,365. The averages of the top five lowest and highest salaries were, respectively, $44,685 and $64,143.

Study 2: The AISD 2011–2012 to 2012–2013 Teacher Leaver Cohort

The leaver cohort for 2011–2012 included teachers in AISD who were fully employed (i.e., earned wages in all four quarters) as a teacher in AISD for the 2011–2012 school year, were not eligible for retirement, had earnings from only AISD during the 2011–2012 school year, and did not return to AISD for the full 2012-2013 school year. We computed retirement eligibility based on years of teaching experience and birth date, according to the Teacher Retirement System of Texas (TRS) definition for eligibility. Of the 5,593 teachers who were employed in AISD for the entire 2011–2012 school year (i.e., those who earned wages in all four quarters), 1,073 (19%) were eligible for retirement. After the 2011–2012 school year, approximately 13% of AISD's teachers who were not eligible for retirement left the district and did not return for the full 2012–2013 school year (n = 572). Of those leavers, 437 teachers had wages only from AISD during all four quarters of the 2011–2012 school year.

The teachers included in the cohort (n = 437) earned slightly higher wages in AISD in 2011–2012 than had the larger group of 572 ($49,106 and $48,790, respectively, for a difference of $316). Although actual annual wages were available in the TWC data, we did not assume teachers would leave AISD for employment elsewhere without a gap in employment. Even among those with wages all four quarters before and after leaving

The Source of salary data is important.

When studying the annual salaries of AISD teachers and leavers, **a number of challenges were revealed** about making comparisons between AISD and post-AISD employment, as well as between AISD employment and other employment situations. Some of these challenges included:

"Annual" salaries are not measured by the same year (i.e., calendar year versus contract year).

Contracted annual earnings are not necessarily the same as actual gross annual earnings (i.e., salary schedules versus extra pay).

The take-home percentage of gross annual wages differs between school districts and industries (i.e., participation in social security).

A complete picture of annual earning opportunities **requires use of multiple data sources.**

AISD, quarterly wages suggested a gap between jobs. Therefore, to make comparisons of salaries before and after leaving AISD, we estimated annual salaries based on the average of wages earned in the final three quarters of the school year: quarter 4 (October–December), quarter 1 (January–March), and quarter 2 (April–June). This method yielded estimated annual wages that were quite similar to actual annual wages teachers earned while employed in AISD.

We compared estimated annual wages for 2011–2012 and 2012–2013 to determine whether teachers earned more or less in the year following their departure from AISD. Because our data did not specify the level of employment (i.e., full time or part time), those identified as employed in Texas after leaving AISD were limited to leavers who earned at least the minimum wage at 20 hours a week.

Lessons Learned

Salary Schedules Versus Actual Earnings

Our review of actual AISD teacher annual wages suggested that earning potential is much greater than what is reflected in salary schedules. More than half the teachers sampled earned more than the maximum salary schedule; on average nearly $5,000 more. Salary schedules show the contracted 187-day daily rates and associated annual pay, but do not reflect actual annual salary earned, given additional pay earned through stipends, extra duty days, or extra pay. Comparisons of wages across school districts become especially problematic, assuming additional deviation between actual earnings and salary schedules at other districts.

Comparing Apples to Apples

It is a major challenge in salary analyses to compute common, comparable estimated annual wages from even a single data source. Even though the TWC wage data provided an accurate source for actual earnings, it still proved challenging to derive an "annual" salary for fully to mostly employed individuals, both during AISD employment as a teacher and after leaving AISD employment for another occupation. Furthermore, actual earnings were not the same as take-home pay, accounting for participation in Social Security across employment situations. Typically, ISDs do not participate in Social Security; however, AISD does. Therefore, comparisons of AISD earnings with earnings at other ISDs required a 6.25% downward adjustment to AISD salaries. Comparisons of AISD salaries with salaries for private sector occupations did not require any adjustment.

Comparability of Local Market Opportunities

A local market opportunity analyses must reflect the types of professional occupations for which teachers are qualified upon leaving the teaching profession. However, our sample suggested that most who left teaching positions at AISD went to other districts or found work in another education-related occupation.

Bridging Conceptual Divides

In this concluding section of the technical supplement, a reflection is provided on some of the more challenging methodological decisions made for the two wage studies. Even though many of the methodological decisions could be attributed to technical challenges of computing a comparable inter-organizational wage metric, many of the methodological decisions were also tied to conceptual gaps between individual and aggregate wages, in addition to intra- versus inter-organizational comparisons of those aggregate wages. Here we attempt to talk through (in hindsight, granted) how we bridged those conceptual gaps, and the methodological consequences that followed.

As individuals, we know exactly what we made last year, without any hesitation or ambiguity. Because of the ease and immediacy of that wage information, it can be difficult to imagine how ascertaining the same in aggregate for an organization would be much more difficult. So why this conceptual gap? Systems of compensation vary widely across organizations, and many offer individuals opportunities to earn more than their annual guarantee through bonuses, stipends, extra pay, commissions, and other means (e.g., stipends in addition to teacher salary schedules). Even for a single organization's employees, the actual earnings of the same position and rank may differ when these extra earning opportunities are realized differently. As a result, scheduled salaries can be quite different from actual earnings. A solution to this variability is using year-end payroll data for wage estimates. Year-end payroll data can yield precise and accurate individual and aggregate earning data for intra-organization comparisons. However, despite the advantages of payroll data for intra-organizational comparisons, it is problematic for inter-organizational comparisons unless all organizations considered are willing to share their employees' payroll data. We did not have that luxury, and our goal was to understand teachers' annual earnings in AISD relative to annual earnings at other organizations. Thus, as a proxy, we used the quarterly wages reported for unemployment insurance purposes in the TWC wage data.

In addition to the challenges of identifying a common comparable wage estimate for inter-organizational wage analyses, the complexity increased when the annual year was not aligned (e.g., the calendar versus a teacher's contract year), and more so when an analytical objective was making year-to-year comparisons across organizations. Therefore, we conceptualized the year as the sum of quarters 3 and 4 from one year with quarters 1 and 2 of the subsequent year. We also had to consider potential employment gaps between jobs for district leavers in quarter 3; handle part-time and full-time wages, absent any indicators of full-time status; and understand possible differences in quarterly payout cycles across organizations (e.g., third-quarter basket of measure payouts in AISD). In our studies, we focused on a common comparable wage metric that would provide insights into the relative differences between inter-organizational wages, but we acknowledge that this potentially could have come at some cost of intra-organizational wage accuracy.

In our wage data studies, we prioritized accounting for employment gaps in our annual estimates over accounting for differences due to quarterly payout cycles (i.e., annual wage estimation using the sum of actual wages earned in the last three quarters of the

school year and their average). We considered programmatic differences with AISD; for example, 57% of the 83 teachers with 10 years of experience who earned more than the highest scheduled salary were at REACH schools and earned an average of $6,782 more than the maximum possible scheduled salary. We also used the maximum step and lane salary schedule for actual earning differences. Using the maximum schedule for the referent step and lane (a) was a more simple calculation and (b) erred on the conservative side of inflating scheduled versus actual earning differences.

It is perhaps worth noting that due to the relative nature of our wage estimates, more weight should be given to insights gained about whether teachers likely earned more, less, or the same after leaving the district, and less weight should be given to the accuracy of how much was earned. We favored the former in our study because, ultimately, understanding teacher compensation had less to do with how much teachers were earning in an absolute sense and more to do with whether they could earn more elsewhere. However, with regard to teacher retention and the importance of compensation, two important findings suggest a caveat. First, earnings for teachers the year after leaving the district appeared to be comparable to what they were earning in the district before leaving. Second, most teachers did not gravitate to the occupations outside public education for which the earning potential was greater. Therefore, the caveat to consider is that teachers' decisions to leave the district may have less to do with earnings than originally thought. If not for money, then why do teachers decide to leave? Organizational fit (as highlighted in report 1 of this series), working conditions (e.g., workload), and individual career advancement flexibility (e.g., the availability of a range of career options/pathways and more control over one's ability to move between those options) could be more important than many think.

Appendix A. 2013 Salaries and Employee Counts in the Austin-Round Rock-San Marcos MSA by Major Occupation Group and Detailed Occupations Under the SOC High-Level Grouping #1

* indicates occupations requiring training and education beyond a bachelor's degree for entry-level employment.

† indicates an imputed value based on the average of the detailed occupations sharing training and education requirements for entry-level employment within the major occupation group.

	Major Occupation Group and Detailed Occupations	Annual Salary	Count Employed
Management Occupations (31)		**$112,770**	**43,030**
1	Chief Executives	$195,190	570
2	General and Operations Managers	$120,310	14,700
3	Legislators	$40,370	50
4	Advertising and Promotions Managers	$69,200	120
5	Marketing Managers	$140,280	1,450
6	Sales Managers	$141,690	1,970
7	Public Relations and Fundraising Managers	$113,690	450
8	Administrative Services Managers	$99,560	3,880
9	Computer and Information Systems Managers	$141,860	2,500
10	Financial Managers	$135,250	2,450
11	Industrial Production Managers	$93,650	580
12	Purchasing Managers	$121,950	330
13	Transportation, Storage, and Distribution Managers	$103,060	470
14	Compensation and Benefits Managers	$144,330	70
15	Human Resources Managers	$119,660	580
16	Training and Development Managers	$106,040	120
17	Construction Managers	$85,060	2,300
18	Education Administrators, Preschool and Childcare Center/Program	$34,930	340
19	*Education Administrators, Elementary and Secondary School	$74,240	1,640
20	*Education Administrators, Postsecondary	$117,880	480
21	Education Administrators, All Other	$94,150	130
22	Architectural and Engineering Managers	$141,170	1,530
23	Food Service Managers	$55,340	1,510
24	Lodging Managers	$75,730	† 1,449
25	Medical and Health Services Managers	$91,660	1,400
26	Natural Sciences Managers	$125,710	240
27	Postmasters and Mail Superintendents	$78,740	30
28	Property, Real Estate, and Community Association Managers	$72,410	1,160
29	Social and Community Service Managers	$66,010	570
30	Emergency Management Directors	$68,500	110
31	Managers, All Other	$110,650	950

	Major Occupation Group and Detailed Occupations	Annual Salary	Count Employed
Business and Financial Operations Occupations (29)		**$68,920**	**52,730**
1	Wholesale and Retail Buyers, Except Farm Products	$58,750	640
2	Purchasing Agents, Except Wholesale, Retail, and Farm Products	$55,530	1,950
3	Claims Adjusters, Examiners, and Investigators	$55,730	1,800
4	Insurance Appraisers, Auto Damage	$62,320	250
5	Compliance Officers	$62,510	1,730
6	Cost Estimators	$71,780	1,200
7	Human Resources Specialists	$62,640	4,180
8	Labor Relations Specialists	$65,550	130
9	Logisticians	$87,650	980
10	Management Analysts	$98,170	3,250
11	Meeting, Convention, and Event Planners	$48,880	820
12	Fundraisers	$53,050	390
13	Compensation, Benefits, and Job Analysis Specialists	$53,490	810
14	Training and Development Specialists	$58,550	2,450
15	Market Research Analysts and Marketing Specialists	$78,780	3,550
16	Business Operations Specialists, All Other	$75,150	6,050
17	Accountants and Auditors	$66,940	9,910
18	Appraisers and Assessors of Real Estate	$71,390	360
19	Budget Analysts	$61,090	570
20	Credit Analysts	$72,980	350
21	Financial Analysts	$91,510	2,590
22	Personal Financial Advisors	$84,900	1,290
23	Insurance Underwriters	$68,020	740
24	Financial Examiners	$80,100	240
25	Credit Counselors	$39,980	220
26	Loan Officers	$67,410	2,200
27	Tax Examiners and Collectors, and Revenue Agents	$43,170	2,100
28	Tax Preparers	$32,660	500
29	Financial Specialists, All Other	$61,960	1,450
Computer and Mathematical Occupations (16)		**$81,570**	**50,370**
1	*Computer and Information Research Scientists	$120,090	190
2	Computer Systems Analysts	$81,370	8,720
3	Information Security Analysts	$91,550	720
4	Computer Programmers	$86,660	3,250
5	Software Developers, Applications	$97,110	9,610
6	Software Developers, Systems Software	$100,760	6,130

	Major Occupation Group and Detailed Occupations	Annual Salary	Count Employed
Computer and Mathematical Occupations (16)		**$81,570**	**50,370**
7	Web Developers	$62,660	1,560
8	Database Administrators	$76,100	1,650
9	Network and Computer Systems Administrators	$71,570	3,470
10	Computer Network Architects	$117,670	1,890
11	Computer User Support Specialists	$49,370	7,950
12	Computer Network Support Specialists	$60,750	2,340
13	Computer Occupations, All Other	$86,320	1,530
14	Actuaries	$140,770	140
15	Operations Research Analysts	$80,420	1,020
16	*Statisticians	$81,910	190
Architecture and Engineering Occupations (27)		**$81,400**	**25,690**
1	Architects, Except Landscape and Naval	$71,330	800
2	Landscape Architects	$55,960	† 1,945
3	Cartographers and Photogrammetrists	$44,530	180
4	Surveyors	$59,540	420
5	Biomedical Engineers	$109,880	110
6	Civil Engineers	$89,090	2,330
7	Computer Hardware Engineers	$101,180	3,750
8	Electrical Engineers	$99,610	2,400
9	Electronics Engineers, Except Computer	$103,130	1,440
10	Environmental Engineers	† $73,703	260
11	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	$80,720	60
12	Industrial Engineers	$90,010	1,020
13	Mechanical Engineers	$85,910	1,390
14	Petroleum Engineers	$150,830	480
15	Engineers, All Other	$105,200	570
16	Architectural and Civil Drafters	$52,450	1,060
17	Electrical and Electronics Drafters	$63,340	560
18	Mechanical Drafters	$53,760	110
19	Drafters, All Other	$58,590	80
20	Civil Engineering Technicians	$51,450	1,370
21	Electrical and Electronics Engineering Technicians	$65,610	4,580
22	Electro-Mechanical Technicians	$55,250	40
23	Environmental Engineering Technicians	$58,640	90
24	Industrial Engineering Technicians	$56,420	220
25	Mechanical Engineering Technicians	$46,260	470

	Major Occupation Group and Detailed Occupations	Annual Salary	Count Employed
Architecture and Engineering Occupations (27)		**$81,400**	**25,690**
26	**Engineering Technicians, Except Drafters, All Other**	**$69,470**	**510**
27	**Surveying and Mapping Technicians**	**$38,130**	**830**
Life, Physical, and Social Science Occupations (31)		**$58,770**	**7,410**
1	**Food Scientists and Technologists**	**$58,440**	**60**
2	***Biochemists and Biophysicists**	**$85,340**	**40**
3	**Microbiologists**	**$46,660**	**160**
4	**Zoologists and Wildlife Biologists**	**$59,560**	**† 293**
5	**Biological Scientists, All Other**	**$66,910**	**60**
6	**Conservation Scientists**	**$55,730**	**410**
7	***Epidemiologists**	**$56,050**	**60**
8	***Medical Scientists, Except Epidemiologists**	**$77,650**	**520**
9	***Physicists**	**$93,170**	**120**
10	**Chemists**	**$62,250**	**340**
11	**Materials Scientists**	**$81,830**	**† 293**
12	**Environmental Scientists and Specialists, Including Health**	**$63,740**	**850**
13	**Geoscientists, Except Hydrologists and Geographers**	**$79,730**	**460**
14	***Hydrologists**	**$65,220**	**130**
15	***Economists**	**$53,760**	**60**
16	***Survey Researchers**	**$34,030**	**510**
17	**Clinical, Counseling, and School Psychologists**	**$62,650**	**520**
18	***Psychologists, All Other**	**$88,770**	**30**
19	***Urban and Regional Planners**	**$60,990**	**410**
20	***Anthropologists and Archeologists**	**$60,790**	**50**
21	**Geographers**	**$59,830**	**40**
22	***Historians**	**$79,760**	**† 178**
23	***Social Scientists and Related Workers, All Other**	**$75,170**	**30**
24	**Biological Technicians**	**$54,170**	**500**
25	**Chemical Technicians**	**$38,250**	**390**
26	**Geological and Petroleum Technicians**	**$33,180**	**60**
27	**Social Science Research Assistants**	**$40,560**	**80**
28	**Environmental Science and Protection Technicians, Including Health**	**$43,030**	**460**
29	**Forensic Science Technicians**	**$41,740**	**180**
30	**Forest and Conservation Technicians**	**$34,360**	**40**
31	**Life, Physical, and Social Science Technicians, All Other**	**$43,690**	**370**

	Major Occupation Group and Detailed Occupations	Annual Salary	Count Employed
Community and Social Service Occupations (17)		**$43,530**	**9,710**
1	Substance Abuse and Behavioral Disorder Counselors	$38,430	390
2	*Educational, Guidance, School, and Vocational Counselors	$49,770	2,110
3	*Marriage and Family Therapists	$47,710	180
4	*Mental Health Counselors	$38,160	570
5	*Rehabilitation Counselors	$46,450	270
6	*Counselors, All Other	$50,240	500
7	*Child, Family, and School Social Workers	$43,180	1,230
8	*Healthcare Social Workers	$54,620	750
9	*Mental Health and Substance Abuse Social Workers	$37,930	330
10	*Social Workers, All Other	$70,180	70
11	Health Educators	$43,570	270
12	Probation Officers and Correctional Treatment Specialists	$41,470	730
13	Social and Human Service Assistants	$33,260	1,380
14	Community Health Workers	$34,860	550
15	Community and Social Service Specialists, All Other	$37,320	150
16	Clergy	$47,260	180
17	Directors, Religious Activities and Education	$48,840	40
Legal Occupations (9)		**$95,210**	**9,020**
1	*Lawyers	$124,740	5,230
2	*Judicial Law Clerks	$44,550	80
3	*Administrative Law Judges, Adjudicators, and Hearing *Officers	$99,900	100
4	Arbitrators, Mediators, and Conciliators	$60,810	80
5	*Judges, Magistrate Judges, and Magistrates	$87,070	130
6	Paralegals and Legal Assistants	$50,290	2,660
7	Court Reporters	$78,140	† 835
8	Title Examiners, Abstractors, and Searchers	$52,740	410
9	Legal Support Workers, All Other	$53,980	190
Education, Training, and Library Occupations (53)		**$48,690**	**56,540**
1	*Business Teachers, Postsecondary	$107,030	570
2	*Computer Science Teachers, Postsecondary	$85,780	240
3	*Mathematical Science Teachers, Postsecondary	$69,240	560
4	*Architecture Teachers, Postsecondary	$74,540	160
5	*Engineering Teachers, Postsecondary	$112,950	1,020
6	*Biological Science Teachers, Postsecondary	$84,070	410
7	*Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	$110,870	170
8	*Chemistry Teachers, Postsecondary	$90,220	190

	Major Occupation Group and Detailed Occupations	Annual Salary	Count Employed
Education, Training, and Library Occupations (53)		$48,690	56,540
9	*Physics Teachers, Postsecondary	$100,990	160
10	*Anthropology and Archeology Teachers, Postsecondary	$74,060	80
11	*Area, Ethnic, and Cultural Studies Teachers, Postsecondary	$68,070	230
12	*Economics Teachers, Postsecondary	$112,790	120
13	*Geography Teachers, Postsecondary	$71,380	80
14	*Political Science Teachers, Postsecondary	$87,470	270
15	*Psychology Teachers, Postsecondary	$66,370	340
16	*Sociology Teachers, Postsecondary	$85,830	150
17	*Health Specialties Teachers, Postsecondary	$64,630	† 537
18	*Nursing Instructors and Teachers, Postsecondary	$63,750	380
19	*Education Teachers, Postsecondary	$68,280	590
20	*Criminal Justice and Law Enforcement Teachers, Postsecondary	$61,830	60
21	*Social Work Teachers, Postsecondary	$65,520	130
22	*Art, Drama, and Music Teachers, Postsecondary	$64,820	680
23	*Communications Teachers, Postsecondary	$63,710	470
24	*English Language and Literature Teachers, Postsecondary	$59,540	590
25	*Foreign Language and Literature Teachers, Postsecondary	$56,820	310
26	*History Teachers, Postsecondary	$75,890	260
27	*Philosophy and Religion Teachers, Postsecondary	$45,930	270
28	*Graduate Teaching Assistants	$38,110	4,920
29	*Recreation and Fitness Studies Teachers, Postsecondary	$62,820	150
30	*Vocational Education Teachers, Postsecondary	$49,830	880
31	*Postsecondary Teachers, All Other	$62,520	320
32	Preschool Teachers, Except Special Education	$31,980	2,180
33	Kindergarten Teachers, Except Special Education	$47,270	1,330
34	Elementary School Teachers, Except Special Education	$47,210	9,340
35	Middle School Teachers, Except Special and Career/Technical Education	$48,270	4,460
36	Career/Technical Education Teachers, Middle School	$49,420	90
37	Secondary School Teachers, Except Special and Career/Technical Education	$48,860	6,750
38	Career/Technical Education Teachers, Secondary School	$49,710	520
39	Special Education Teachers, Preschool	$50,320	70
40	Special Education Teachers, Kindergarten and Elementary School	$47,300	1,090
41	Special Education Teachers, Middle School	$47,500	500
42	Special Education Teachers, Secondary School	$50,850	830
43	Special Education Teachers, All Other	$45,530	300
44	Adult Basic and Secondary Education and Literacy Teachers and Instructors	$41,140	380

	Major Occupation Group and Detailed Occupations	Annual Salary	Count Employed
Education, Training, and Library Occupations (53)		**$48,690**	**56,540**
45	Self-Enrichment Education Teachers	$46,820	1,070
46	Substitute Teachers	$21,800	2,400
47	Teachers and Instructors, All Other, Except Substitute Teachers	$38,310	1,460
48	*Librarians	$55,220	880
49	Library Technicians	$28,650	190
50	Audio-Visual and Multimedia Collections Specialists	$48,840	90
51	*Instructional Coordinators	$62,010	1,530
52	Teacher Assistants	$22,000	4,800
53	Education, Training, and Library Workers, All Other	$29,260	390
Arts, Design, Entertainment, Sports, and Media Occupations (34)		**$52,450**	**14,440**
1	Art Directors	$69,990	290
2	Fine Artists, Including Painters, Sculptors, and Illustrators	$51,170	† 494
3	Multimedia Artists and Animators	$48,190	610
4	Commercial and Industrial Designers	$57,700	80
5	Floral Designers	$27,560	250
6	Graphic Designers	$48,410	1,500
7	Interior Designers	$54,930	350
8	Merchandise Displayers and Window Trimmers	$27,440	690
9	Set and Exhibit Designers	$37,410	† 494
10	Actors	† $51,310	† 494
11	Producers and Directors	$56,120	810
12	Athletes and Sports Competitors	† $51,310	30
13	Coaches and Scouts	$48,230	1,350
14	Umpires, Referees, and Other Sports Officials	$34,820	70
15	Dancers	† $51,310	† 494
16	Music Directors and Composers	$62,240	40
17	Musicians and Singers	† $51,310	720
18	Entertainers and Performers, Sports and Related Workers, All Other	† $51,310	† 494
19	Radio and Television Announcers	$45,770	130
20	Public Address System and Other Announcers	$24,380	†494
21	Reporters and Correspondents	$42,210	250
22	Public Relations Specialists	$66,500	2,800
23	Editors	$54,820	680
24	Technical Writers	$69,080	600
25	Writers and Authors	$55,940	470
26	Interpreters and Translators	$55,830	280

	Major Occupation Group and Detailed Occupations	Annual Salary	Count Employed
Arts, Design, Entertainment, Sports, and Media Occupations (34)		**$52,450**	**14,440**
27	Media and Communication Workers, All Other	$71,470	260
28	Audio and Video Equipment Technicians	$36,380	490
29	Broadcast Technicians	$36,700	110
30	Sound Engineering Technicians	$48,420	70
31	Photographers	$29,570	250
32	Camera Operators, Television, Video, and Motion Picture	$37,510	140
33	Film and Video Editors	$63,720	150
34	Media and Communication Equipment Workers, All Other	$84,510	120
Healthcare Practitioners and Technical Occupations (50)		**$73,050**	**37,710**
1	*Chiropractors	$72,810	180
2	*Dentists, General	$206,840	450
3	*Orthodontists	$248,240	† 1,483
4	Dietitians and Nutritionists	$46,890	310
5	*Optometrists	$89,380	150
6	*Pharmacists	$114,620	1,560
7	*Anesthesiologists	$244,510	† 1,483
8	*Family and General Practitioners	$202,200	400
9	*Internists, General	$247,660	† 1,483
10	*Obstetricians and Gynecologists	$189,700	† 1,483
11	*Pediatricians, General	$206,830	260
12	*Psychiatrists	$142,920	† 1,483
13	*Surgeons	$124,049	180
14	*Physicians and Surgeons, All Other	$198,250	1,070
15	*Physician Assistants	$98,520	360
16	*Occupational Therapists	$84,630	610
17	*Physical Therapists	$87,110	970
18	Recreational Therapists	$54,910	30
19	Respiratory Therapists	$55,760	570
20	*Speech-Language Pathologists	$70,820	740
21	Exercise Physiologists	$36,540	30
22	Therapists, All Other	$55,420	80
23	*Veterinarians	$116,180	440
24	*Registered Nurses	$64,450	12,090
25	Nurse Anesthetists	$139,660	† 576
26	Nurse Practitioners	$81,660	† 576
27	Medical and Clinical Laboratory Technologists	$49,020	850

	Major Occupation Group and Detailed Occupations	Annual Salary	Count Employed
Healthcare Practitioners and Technical Occupations (50)		**$73,050**	**37,710**
28	**Medical and Clinical Laboratory Technicians**	**$35,280**	**730**
29	**Dental Hygienists**	**$75,280**	**820**
30	**Cardiovascular Technologists and Technicians**	**$50,840**	**220**
31	**Diagnostic Medical Sonographers**	**$65,280**	**290**
32	**Nuclear Medicine Technologists**	**$68,390**	**80**
33	**Radiologic Technologists**	**$53,660**	**790**
34	**Magnetic Resonance Imaging Technologists**	**$61,610**	**150**
35	**Emergency Medical Technicians and Paramedics**	**$32,940**	**1,060**
36	**Dietetic Technicians**	**$31,670**	**100**
37	**Pharmacy Technicians**	**$32,240**	**1,830**
38	**Psychiatric Technicians**	**$26,840**	**380**
39	**Respiratory Therapy Technicians**	**$49,990**	**60**
40	**Surgical Technologists**	**$44,810**	**610**
41	**Veterinary Technologists and Technicians**	**$27,590**	**900**
42	**Ophthalmic Medical Technicians**	**$34,700**	**† 576**
43	**Licensed Practical and Licensed Vocational Nurses**	**$45,870**	**3,220**
44	**Medical Records and Health Information Technicians**	**$36,950**	**1,080**
45	**Opticians, Dispensing**	**$26,370**	**470**
46	**Hearing Aid Specialists**	**$22,800**	**† 576**
47	**Health Technologists and Technicians, All Other**	**$46,950**	**240**
48	**Occupational Health and Safety Specialists**	**$68,280**	**340**
49	**Occupational Health and Safety Technicians**	**$48,660**	**160**
50	**Athletic Trainers**	**$49,880**	**150**

References

Bureau of Labor Statistics, U.S. Department of Labor. (2013, May). *Occupational employment statistics: Metropolitan and nonmetropolitan area occupational employment and wage estimates.* Retrieved from http://www.bls.gov/oes/current/oessrcma.htm

Bureau of Labor Statistics, U.S. Department of Labor. (2014). *Occupational outlook handbook*. Retrieved from http://www.bls.gov/ooh/

Bureau of Labor Statistics, U.S. Department of Labor. (2010). *2010 SOC user guide*. Retrieved from http://www.bls.gov/soc/soc_2010_user_guide.pdf

Goldring, R., Taie, S., & Riddles, M. (2014). *Teacher attrition and mobility: Results from the 2012–13 teacher follow-up survey* (NCES 2014-077). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Miles, K. H., Pennington, K., & Bloom, D. (2015). *Do more, add more, earn more. Teacher salary redesign lessons from 10 first-mover districts*. Washington, DC: Center for American Progress.

REACH, Office of Educator Quality, Austin Independent School District. (n.d.). *Program overview.* Retrieved from http://www.austinisd.org/reach/program-overview

Schmitt, L., & Hutchins, S. (2015). S*ustaining a system for high-quality teachers, report 2: Market opportunities and typical wages for Austin Independent School District teachers and leavers* (DRE Publication No. 14.91). Austin, TX: Austin Independent School District.

AUSTIN INDEPENDENT SCHOOL DISTRICT

Author
Lisa Schmitt, Ph.D.
Shaun Hutchins, Ph.D.

Department of Research and Evaluation
1111 West 6th Street, Suite D-350 | Austin, TX 78703-5338
512.414.1724 | fax: 512.414.1707
www.austinisd.org/dre | Twitter: @AISD_DRE

November 2015
Publication 14.91b