



Teacher's Hourly Wages: A Comparison Across Michigan Schools and Alternative Occupations

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Overview:

When teacher salaries are discussed, two very different pictures often emerge. The first of these portrays teachers as underpaid, overworked servants of the public good. The second paints a picture of an overpaid group of civil servants who spend very little time actually working. As we might expect, reality is somewhere between these two extremes. This report looks at Michigan teacher salaries. First, we look at teacher salaries and some of the factors affecting their salaries within the state. Next, we translate those salaries into hourly terms to account for the ten month work schedule of teachers and the amount of time they spend actually working each week. Finally, we compare the actual hourly earnings of teachers with some other professions.

We will show that Michigan's teachers generally earn competitive hourly salaries when compared to salaries paid in professions with similar educational requirements but that this varies depending on tenure in teaching and the type of school where they teach. Secondary school teachers, those in charter schools, and those in rural areas tend to

earn less on an hourly basis than other teachers with similar experience levels.

This report uses data from several sources. Teacher salary and workday length information is based on the National Center for Educational Statistics (NCES) Schools and Staffing Survey for the 1999-2000 school year. The responses of almost 1,000 full-time Michigan traditional and charter public school teachers are included in the analysis.¹ Teachers' total compensation includes their base teaching salary for the academic year, as well as additional income from the school system for extracurricular or additional activities such as coaching, student activity sponsorship, or teaching evening classes and any other income from school sources, such as a merit pay bonus or state supplement. It does not include any income earned for teaching summer school or from any non-school job. Teachers are grouped according to their total years of teaching experience. The overall results for average teacher salaries breaks teachers' experience levels into eight groups, but some experience groups were combined in subsequent analyses due to small sample sizes. Estimates of the

average number of days that teachers are contractually required to work beyond the student school year were provided by Ruth Beier, a labor economist employed by the Michigan Education Association. Hourly earnings of workers outside the teaching profession are based on the Bureau of Labor Statistics National Compensation Survey for the year 2002.

Section One: How much do teachers earn?

The average salary for Michigan’s teachers is \$48,214, but there are large differences in salaries between and within districts. Salaries are generally set at the district level, or at the school level in charter public schools. Most districts have a pay scale based on education level and experience. As shown in Table 1, the average starting base salary for Michigan’s teachers is just over \$30,300. Some teachers receive additional school-related income for coaching, facilitating student activities, or participating in school activities. Income from these additional activities raises the average starting salary for teachers with a bachelor’s degree to about \$30,800.

Base salaries increase as teachers gain experience. Teachers are also paid more for earning academic degrees beyond the bachelor’s. The average Michigan teacher has 15.8 years of experience and 55 percent of Michigan teachers have at least a master’s degree. On average, teachers with a master’s degree earn about \$10,000 more than their colleagues with similar experience levels, but no advanced degree. This pattern is not surprising as virtually all Michigan traditional school districts have established salary schedules in which base teacher salaries are determined by their years of experience and the academic credits they accumulate.³

More experienced teachers generally earn more additional school-related income than novices. This is probably due to several factors. The first is that teachers with more experience are more likely to have been teaching when a good extracurricular “match” to their interests and talents becomes available. For example, a new teacher with the ability to coach swimming

Table 1. School-related salaries of full-time teachers, by highest degree earned and years of experience				
	Bachelor's Degree		Master's Degree and Higher	
Years of Experience	Base Pay	Total Compensation²	Base Pay	Total Compensation
1	\$30,374	\$ 30,843	#	#
2 - 3	\$31,620	\$ 32,939	\$42,487	\$42,935
4 - 5	\$34,751	\$ 36,006	\$39,715	\$40,103
6 - 7	\$35,194	\$ 36,500	\$43,379	\$44,038
8 - 9	\$42,556	\$ 43,193	\$44,883	\$46,345
10-14	\$41,404	\$ 43,188	\$51,640	\$52,904
15 - 19	\$50,792	\$ 52,505	\$54,028	\$54,649
20 +	\$50,469	\$ 51,249	\$61,121	\$63,250
# Estimate suppressed due to confidentiality concerns and small sample size. Few first-year teachers begin teaching with a master's degree.				

Table 2. Average school-related salaries for full-time teachers, by charter status and years of experience

	Traditional Public	Charter Public
1 year	\$ 31,457	\$ 29,666
2-3 years	\$ 33,608	\$ 31,084
4-5 years	\$ 37,736	\$ 33,125
6-9 years	\$ 43,529	\$ 33,683
10-19 years	\$ 51,517	\$ 35,043
20 years or more	\$ 60,418	\$ 36,220

or chess will be unable to do so if the position is already filled. Over time, turnover will open up these positions. More experienced teachers are also able to handle positions such as coordinating professional development within the school that novices do not yet have the skills to manage. Finally, novices also may be unable to take on many additional responsibilities because they are still preoccupied by their basic academic responsibilities. While additional pay may be appealing, new teachers are often not able to manage any more than they are already doing.

Average salaries may mask important salary differences between schools, which may in turn influence the qualifications and behaviors of teachers in those schools. Table 2 compares the average salaries for teachers in traditional public and charter schools. The average novice in a charter public school earns almost \$2,000 less than his or her traditional public school counterpart. This gap widens considerably over time. Teachers in traditional public schools with

at least 20 years of experience earn more than \$24,000 more than charter school teachers with the same level of experience. The gap widens mainly because the average charter school pays smaller increases for additional experience and for advanced degrees than the average traditional public school.⁴

Salary differences are also apparent when we look at the type of community in which a school is located (Table 3). Teachers in rural or small town communities consistently earn lower salaries than those in urban or suburban areas. This difference is small early in a teacher's career, but it grows as teachers gain more experience. Only a small part of this difference is due to the lower likelihood of a rural teacher earning a master's degree. Rural teachers with master's degrees earn less than their urban and suburban counterparts, as do those with only bachelor's degrees. The lower salaries in rural areas may be offset by a lower cost of living, particularly for novice teachers. On

Table 3. Average school-related salaries for full-time teachers, by urbanicity and years of experience

	Central City	Urban Fringe / Large Town	Rural / Small Town
1 year	\$ 31,945	\$ 31,636	#
2-3 years	\$ 34,846	\$ 33,574	\$31,386
4-5 years	\$ 37,476	\$ 38,684	\$33,840
6-9 years	\$ 39,082	\$ 45,174	\$38,660
10-19 years	\$ 54,078	\$ 52,639	\$46,316
20 years or more	\$ 57,870	\$ 64,203	\$51,528
# Estimate suppressed due to confidentiality concerns related to small sample size.			

the other hand, the increasing salary gap may encourage rural teachers to move to suburban jobs, where feasible, as they gain experience.

The evidence is more mixed about whether teachers in urban or suburban areas earn higher salaries. Contrary to conventional wisdom, it does not appear that suburban teachers consistently earn higher salaries than their urban counterparts. Early in their careers teachers may be able to earn slightly more in central city districts, but this advantage largely disappears as they gain experience. Teachers with 6-9 and 20 or more years of experience generally earn more in suburban schools than those in the central city.

When salary differences are analyzed by the percent of students in a school who are eligible for free or reduced-price lunch, the pattern changes as teachers gain more experience (Table 4). Novice teachers generally earn slightly higher salaries in high poverty schools. As they gain experience—and, presumably, expertise—the differential reverses. More experienced teachers generally earn lower salaries in high poverty schools. This may be contributing to the problems high poverty schools face in retaining their more experienced teachers.

Policies that have concentrated on offering signing bonuses and raising initial salaries in high poverty schools may simply be ensuring that these schools serve as reasonably well-paid training grounds for teachers who later move to lower poverty schools that pay a greater premium for experienced teachers.

When we look at salary differences related to the percent of minority students in a school, the pattern is similar to the one observed above when we looked at student poverty. Since Michigan’s children of color are more likely to be eligible for free and reduced lunch than their white counterparts (correlation = .67), this is not surprising. Relatively inexperienced teachers are able to earn more if they teach in schools with a high percentage of minority students. As these teachers gain experience, however, they have a financial incentive to move to schools with fewer minority students. The movement of teachers from schools with more minority students to those with fewer minority students may not be caused by this financial incentive alone, but the salary difference suggests that schools with high proportions of minority students may face an uphill struggle in retaining teachers.

Section Two: How much do teachers earn per hour?

Table 4. Average school-related salaries for full-time teachers, by percent students eligible for free or reduced-price lunch and years of experience #

	0 - 10 Percent	10.01 - 40 Percent	40.01 - 70 Percent	> 70 Percent
1-3 years	\$ 32,194	\$ 31,797	\$33,210	\$ 34,725
4-9 years	\$ 43,004	\$ 40,249	\$38,065	\$ 38,730
10-19 years	\$ 55,588	\$ 48,644	\$50,739	\$ 52,227
20 years or more	\$ 65,044	\$ 59,842	\$54,780	\$ 57,230

Some experience level groups were combined due to confidentiality concerns related to small sample size.

Drawing conclusions about appropriate teacher salary levels is difficult because it is unclear how teacher salaries should be compared to salaries in comparable jobs. When teacher salaries are discussed, policy-makers sometimes assume that teachers only work nine months out of the year and work fewer hours each week during the school year than other college graduates. This is misleading. Teachers may be contractually required to work only 36 hours

each week, but in fact the average teacher works 45 hours each week.⁵ Teachers often put in several hours after the school day is over preparing the next day's lessons, grading papers, meeting with parents, coaching, and supervising student activities.

The average Michigan teacher works 183 instructional days each year. These are days when the students are attending school. This varies somewhat by district. In addition, teachers are contractually obligated to work several additional days when students are not present. Some of this is time for mandatory recordkeeping activities, while other days are required to ensure that teachers participate in professional development activities. On average, Michigan teachers work approximately eleven additional days each year.⁶ For a teacher with more than three years of experience, the average is nine additional days – four recordkeeping days and five professional development days. Novice teachers are required to participate in five additional professional development days, bringing their average to thirteen days.

We computed teachers' hourly salaries by dividing their total school-related annual income (which often includes compensation for coaching and other activities) by the approximate number of hours worked each year. We calculated the number of hours worked by multiplying the number of hours that teachers report working each week by the number of days that they are contractually obligated to work. (This estimate does not include time that teachers choose to spend on professional development activities beyond their required days.) For example, the average first year teacher had an instructional day that was 6.6 hours long and reported working an additional 15.7 hours each week outside of the regular school day. The average first year teacher thus worked 49.1 hours per week.

We multiplied the hours worked per week by the number of weeks that teachers work. On average, first year teachers worked 182.5 instructional days, or 36.4 weeks. We then added the 128 hours of professional development activities in which first year teachers are required to participate. The typical first year teacher thus works 1915 hours per year. We divided the average first year salary of \$31,323 by the total hours worked, giving us an hourly wage of \$16.67 for beginning teachers.

The average Michigan teacher earns \$24 per hour, but this varies considerably. One source of variation is years of experience (Table 5). First-year teachers earn less than \$17 per hour. As teachers gain experience, their hourly salary increases. Teachers with 20 years of experience or more earn over \$36 per hour, more than twice the amount that novices earn. The low hourly salaries earned by novices may be encouraging them to leave teaching early in their careers if alternative opportunities with larger short-term rewards become available.

Analyzing teachers' hourly salary by charter status again highlights the salary differential for traditional public and charter school teachers. First-year teachers in traditional public and charter schools earn similar hourly wages, but larger experience increases for teachers in traditional public

Table 5. Average hourly salary for full-time teachers, by years of experience

	Hourly Salary
1 year	\$16.67
2-3 years	\$18.75
4-5 years	\$22.03
6-9 years	\$25.55
10-19 years	\$29.34
20 years or more	\$36.53

schools lead to large disparities in hourly pay for more experienced teachers (Table 6). On average, teachers in charter public schools with 19 years of experience earn only \$2,000 more than those with four years of experience. In addition to lower overall salaries, charter public school teachers tend to work longer hours than their traditional public school counterparts. This widens the hourly salary gap between traditional and charter school teachers even more. Given this gap, it is not surprising that charter schools have difficulty retaining teachers as they gain experience. Teachers may be tempted to earn a few years of experience in charter public schools and then move on to better-paid positions in traditional public schools.

Teachers' hourly wages also vary by community type. Teachers in rural or small town schools consistently earn lower hourly salaries than their peers in urban and suburban schools (Table 7). Once again, there is no clear pattern indicating whether hourly salaries are higher in urban or suburban schools. Urban teachers generally work

fewer hours than their suburban counterparts⁷ but this does not result in a consistently higher hourly salary.

Average salary figures mask important differences in hourly wages between teachers at different grade levels. When hourly salaries for elementary and secondary teachers are examined, secondary teachers consistently earn less. Since traditional public school districts use the same salary schedule for teachers at all levels and there are few secondary charter public schools in Michigan, most of this difference is attributable to the longer hours worked by secondary school teachers. While secondary

teachers may be paid for some of the activities lengthening their school day, not all activities are financially rewarded, and stipends may compensate them at low levels considering the large number of additional hours worked. First-year secondary

Table 6. Average hourly salary for full-time teachers, by charter status and years of experience

	Traditional Public	Charter Public
1 year	\$16.72	\$15.95
2-3 years	\$19.00	\$16.96
4-5 years	\$22.14	\$18.55
6-9 years	\$25.68	\$18.69
10-19 years	\$29.48	\$18.96
20 years or more	\$36.56	\$22.37

Table 7. Average hourly salary for full-time teachers, by urbanicity and years of experience

	Central City	Urban Fringe / Large Town	Rural / Small Town
1 year	\$16.81	\$17.12	#
2-3 years	\$21.34	\$18.74	\$16.39
4-5 years	\$22.19	\$22.61	\$19.59
6-9 years	\$25.49	\$26.36	\$21.74
10-19 years	\$30.59	\$29.83	\$27.32
20 years or more	\$35.42	\$38.73	\$30.74

Estimate suppressed due to confidentiality and small sample size.

school teachers earn less than \$16 per hour, while beginning elementary teachers earn almost \$18 per hour. The most experienced teachers earn \$35 per hour in secondary schools and \$38 per hour in elementary schools. Since secondary school teachers often have more attractive alternative employment opportunities than elementary school teachers, because they possess skills that are easily marketable outside of the education sector. Their lower hourly wage may consequently be exacerbating turnover among this group and discouraging potential secondary teacher candidates.

Disparities also appear when we look at hourly salaries for teachers at each experience level in schools with different percentages of students eligible for free or reduced-price lunch. As we would expect, more experienced teachers within each group earn more than their less experienced peers (Table 8). Novice teachers earn more per hour when they work in high poverty schools. This is consistent with the higher starting salaries in those schools. As they gain experience, the salary differential begins to reverse (Table 5 above) but the gap in hourly salaries does not shrink as quickly as we might expect. This is largely driven by the fact that teachers in schools with high concentrations of poverty work fewer hours each week⁸ than those who teach more affluent children. However, the salary premium paid by affluent schools is so large for teachers with 20 or more years of experience that teachers in the wealthiest schools earn more per hour than other teach-

ers, despite the fact that they also work longer hours.

Patterns in teacher salaries depend on systematic differences in both overall salary levels and the number of hours that teachers work. Differences in salary levels and hours worked may push in complementary or opposite directions. For example, while charter school teachers earn lower salaries than their public school counterparts, they also work longer hours, resulting in substantial differences in hourly pay. On the other hand, the relatively lower pay received by teachers in schools with high concentrations of poor and minority students is somewhat mediated by the fact that they tend to work fewer hours.

Section Three: How do Michigan teacher salaries compare to other professions?

To place teachers' compensation in a meaningful context, teachers' salaries must be compared to salaries in comparable occupations. Table 9 compares the average hourly salary of Michigan's public school teachers to average hourly salaries in other professions with similar educational requirements.

Table 8. Average hourly salary for full-time teachers, by percent of students eligible for free or reduced-price lunch and years of experience

	0 - 10 Percent	10.01 - 40 Percent	40.01 - 70 Percent	>70 Percent
1-3 years	\$16.71	\$17.32	\$18.06	\$22.03
4-9 years	\$24.75	\$23.86	\$21.50	\$24.00
10-19 years	\$31.02	\$29.14	\$28.32	\$26.17
20 years or more	\$38.89	\$36.00	\$33.46	\$36.14

Estimate suppressed due to confidentiality and small sample size.

Table 9. Hourly salaries for selected professions		
Area	Occupation	Hourly Compensation
Michigan	K-12 public school teachers	\$24.00
United States	Social workers	\$15.09
	Registered nurses	\$21.93
	Accountants and auditors	\$22.10
	Librarians, archivists, and curators	\$23.04
	Statisticians	\$25.56
	Speech therapists	\$26.62
	Natural scientists	\$26.95
	Engineers, architects, and surveyors	\$30.27
	Actuaries	\$33.00
Detroit-Ann Arbor- Flint	Social workers	\$24.53
	Registered nurses	\$23.26
	Accountants and auditors	\$25.12
	Librarians, archivists, and curators	\$27.80
	Natural scientists	\$22.45
	Engineers, architects, and surveyors	\$31.96
Grand Rapids- Muskegon-Holland	Social workers	\$22.60
	Registered nurses	\$22.33
	Accountants and auditors	\$20.93
	Engineers, architects, and surveyors	\$28.36
Kalamazoo-Battle Creek	Social workers	\$19.11
	Registered nurses	\$21.57
	Accountants and auditors	\$18.09
	Engineers, architects, and surveyors	\$29.14

Michigan's public school teachers earn average compensation of \$24.00 per hour. The first panel of Table 9 compares this figure to the national average for a variety of other occupations. According to these data, Michigan's teachers are in a better financial position than registered nurses and accountants, but behind speech therapists and engineers. This comparison is misleading, however, because the cost of living and average salaries are both high in Michigan relative to other parts of the country.

The remainder of Table 9 provides average hourly compensation information for several areas within Michigan.⁹ When comparisons are made within the state, the national pattern generally holds – teachers often make more than registered nurses and accountants but less than engineers – but the differences are smaller. It appears that Michigan's teachers are being compensated at an hourly rate that is comparable to similar professions. This may not be true, however, for secondary teachers in fields such as mathematics and science. We have seen in the previous section that secondary teachers tend to learn less than elementary teachers on an hourly basis. These teachers are likely to be the ones who could most easily find employment in competing, higher paying fields, such as statistics and engineering.

Individuals make career decisions in the context of other job opportunities within a specific geographic area. While teachers in Michigan appear to make significantly more than social workers and nurses nationally, their hourly salaries are more similar when compared to other local professionals within Michigan.

Conclusion

Teacher salaries in Michigan vary by teacher and school characteristics, such as years of experience, student composition, and

charter status. These variations may be enhanced or offset by differences in hours worked. Like overall salaries, Michigan teacher hourly salaries vary by school and teacher characteristics. More experienced teachers, teachers in traditional public schools, and those who teach in suburban or urban areas tend to have higher hourly salaries. While teachers in high poverty, high minority schools tend to earn lower annual salaries, this is partially offset by the fact that, on average, they also work fewer hours. Teachers in traditional public schools enjoy higher hourly wages than their charter school counterparts and differences become larger as a teacher gains experience. This may encourage high quality teachers in the charter sector to move to traditional public schools as they become experienced, exacerbating turnover in the charter sector. More generally, it appears that Michigan teacher salaries are reasonably competitive but somewhat lower than those in comparable professions, such as engineering and architecture. If other occupations offer substantially higher salaries than teaching, Michigan may find it difficult to recruit or retain teachers, particularly for certain teaching fields.

(Endnotes)

- ¹ This analysis excludes long-term substitute teachers.
- ² Total compensation includes all school-related compensation, such as base pay and additional stipends for coaching athletic and academic activity. Performance based rewards may be included as well. Income from sources such as teaching summer school for the district, summer employment as a camp counselor, or income from working in any jobs outside the school system is excluded.
- ³ The salary "bump" between the third and fourth year is partly a reflection of tenure. In many districts, teachers become tenured on the first day of their fourth teaching year and this often results in a salary increase.
- ⁴ For a more detailed analysis of this issue, see Harris, D., Working Paper #11 Lowering the bar or moving the target: A wage decomposition of Michigan's traditional and charter

public school teachers, <http://www.epc.msu.edu/publications/workpapers/wagedecomp.pdf>

- ⁵ Burian-Fitzgerald, M., Harris, D. (2004). *Giving 110%: A Portrait of a Michigan Teacher's Work Week*. The Education Policy Center at MSU. Policy Report Number 22.
- ⁶ These estimates were provided by Ruth Beier, Labor Economist, Michigan Education Association.
- ⁷ Burian-Fitzgerald, M., Harris, D. (2004). *Giving 110%: A Portrait of a Michigan Teacher's Work Week*. The Education Policy Center at MSU. Policy Report Number 22. One exception to the general pattern of urban teachers working fewer hours is first year teachers. First-year urban teachers report working more hours per week than suburban novices. Most of these additional hours are spent on activities involving students, rather than on paperwork or planning.
- ⁸ Burian-Fitzgerald and Harris, 2004.
- ⁹ Statewide data is not available due to sampling limitations in the BLS National Compensation Survey. Data limitations in the Schools and Staffing Survey data set preclude regional reporting of teacher salaries.



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