Sneak Peek

REL MIDWEST

Teachers who are not teaching: Who are they and what would motivate their return to teaching?

Jim Lindsay, Natalya Gnedko-Berry, and Carol Wan

July 2020

Michigan's efforts toward ensuring equitable access to qualified teachers are hindered by statewide teacher shortages. To alleviate the shortages, Michigan education leaders are considering recruiting from the pool of certified teachers who are not teaching (that is those who never taught or those who taught but left their position). This study analyzed Michigan's teacher certification data, employment data, and data from a survey of teachers who are not teaching to inform education leaders about the viability of this option. The study provides information on the characteristics of teachers who are not teaching, the reasons they are not teaching, and the types of incentives that might persuade them to work as a teacher in a public school. The study found the pool of teachers who are not teaching consists of 61,252 potential candidates for teaching positions: They are of nonretirement age or have renewed or advanced their teaching certificate after reaching retirement age. Certified teachers who are not teaching in public schools indicated that low salaries were a main reason for not teaching, and that increasing salaries might motivate them to teach in a Michigan public school. Other financial incentives that might motivate them include allowing retirees to maintain retirement benefits, improving other benefits, and forgiving student loans. Nonteaching teachers also may consider becoming a public school teacher if earning or renewing teaching certificates was easier and less costly, if they could more easily find full-time and part-time positions, and if they were assured of school leadership support and smaller class sizes or smaller student load.

Why this study?

In 2015, the Michigan Department of Education identified income-based and race/ethnicity-based gaps in students' access to certified teachers and has been working toward reducing those inequities (Michigan Department of Education, 2015, 2017a). However, the department's efforts toward alleviating these inequities have been hindered by teacher shortages. In 2020/21 Michigan reported shortages in mathematics, science, special education, elementary education, social studies, and physical education, among other subjects (U.S. Department of Education, 2020). The shortages throughout the state will likely continue due to the declining supply of new teachers from Michigan's teacher preparation institutions (Wan, Pardo, & Asson, 2019) and higher turnover among Michigan teachers relative to the national average (Robinson & Lloyd, 2017). Unable to fill teaching positions with qualified teachers, districts may turn to uncertified teachers or teachers who have not yet completed their training, such as long-term substitutes (Clotfelter, Ladd, & Vigdor, 2007; Palardy & Rumberger, 2008; Wan, Pardo, & Asson, 2019).

However, Michigan has a pool of certified teachers of nonretirement age not teaching in PK–12 public schools. Recruiting these teachers to teach in public schools could help districts alleviate their staffing shortages. To assess the viability of this option, education leaders in Michigan wanted to learn more about the characteristics of certified teachers who are not teaching, the reasons why they are not teaching, and the types of incentives that might motivate their return to teaching in public schools.

At the national level, most information about teachers who are not teaching comes from the Teacher Follow-Up Survey that was part of the Schools and Staffing Surveys administered by the National Center for Education Statistics (NCES) between 1987/88 and 2012/13. The survey found that between 2000/01 and 2012/13, approximately 8 percent of public school teachers left teaching each year. Results from the most recent administration of the survey indicated that 29 percent of teachers who left teaching in public schools between 2011/12 and 2012/13 continued to work for a PK–12 school or district but not as a regular teacher. Approximately 49 percent were under 50 years old and 89 percent had 4 or more years of teaching experience (NCES, 2013c, 2013d). Respondents to the most recent administration of the Teacher Follow-Up Survey cited the following reasons as most important for leaving the teaching profession other than retirement: personal life reasons (for example, health or childcare), the decision to pursue a position other than teaching, the need for a higher salary, and other factors not included in the survey response options (NCES, 2013b). For teachers in their first two years of teaching, the lack of preparation and support also may influence the decision to leave teaching (Bowsher, Sparks, & Hoyer, 2018; Gray & Taie, 2015).

Numerous studies on teacher mobility and turnover have examined teachers' reasons for leaving the profession or leaving their school or district. The reasons reported by these studies align with the reasons for leaving reported by NCES. These studies often emphasize teachers' salaries and working conditions, such as collegiality and support from school leaders, as important factors for teachers' decisions to leave or remain teaching (Carver-Thomas & Darling-Hammond, 2019; Ni, 2017; Podolsky, Kini, Darling-Hammond, & Bishop, 2019).

Little is known about the role of incentives in teachers' decisions to enter and remain in the teaching profession. Results of the most recent administration of the Teacher Follow-Up Survey suggest that approximately half of teachers who left would consider returning to PK–12 teaching. Of these teachers, 23 percent reported that a housing incentive would be a *very* to *extremely* important factor in their decision to return. However, the authors did not report results for the other incentives included in the survey, such as availability of teaching positions and an increase in salary (NCES, 2013a).

Other studies have considered different types of incentives for attracting teachers. Studies of teacher mobility and turnover, for example, recommend higher salaries, usually alongside improvements in working conditions, as incentives for teacher recruitment and retention (Ingersoll, Merrill, Stuckey, & Collins, 2018; Ni, 2017; Podolsky et al., 2019). Research on the use of bonuses and other financial incentives, such as student loan forgiveness, to recruit existing teachers to hard-to-staff schools or subject areas finds that financial incentives could be an effective tool for attracting and retaining teachers, but its effectiveness may fade over time (Cowan & Goldhaber, 2018; Feng & Sass, 2018; Hough & Loeb, 2013). Some districts faced with teacher shortages have offered housing and childcare assistance to attract and retain teachers as well (Brunden, 2018; Viadero, 2018). Rigorous evidence about the effectiveness of housing and childcare incentives has not yet accumulated.

Members of the Regional Educational Laboratory Midwest Alliance to Improve Teacher Preparation, which includes staff from the Michigan Department of Education, teachers, district administrators, and representatives of teacher preparation institutions and teacher unions, requested a study that would provide comprehensive information about certified teachers who reside in Michigan but are not teaching in public schools. Members of the alliance wanted to learn about the characteristics of these teachers, their reasons for not teaching, and incentives that may motivate them to teach in public schools. They also wanted to learn if teachers who are not teaching differ from those who are, based on demographic, certification, and employment characteristics.

Michigan Department of Education policymakers and other state, district, and school leaders may use the study's findings to assess the viability of recruiting certified teachers to teach in public schools from the pool of those who are not teaching. Knowing whether differences exist among these teachers will allow Michigan state, district, and school leaders to tailor their recruitment efforts. For example, teachers who have never taught after becoming certified may need different incentives for teaching in public schools compared with teachers who left after a

period of teaching. Likewise, teachers belonging to different racial or ethnic groups may have different reasons for leaving their position and may need different incentives to return to the classroom. Comprehensive information about why certified teachers do not teach in public schools also will provide the Michigan Department of Education and other state, district, and school leaders an opportunity to address the factors that underlie teachers' decisions not to teach, which could prevent additional loss of certified teachers.

Research questions

This study addressed three research questions:

1. How many of Michigan's certified teachers were not teaching in Michigan PK–12 public schools during the 2017/18 school year? What were the demographic, certification, and employment characteristics of the certified teachers who were not teaching? What demographic and employment characteristics distinguish teachers who do not teach from those who do?
2. What reasons did certified teachers who were not teaching in 2017/18 give for leaving or choosing not to enter teaching in PK–12 public schools? Did these reasons vary by teachers' demographic and employment characteristics?
3. What incentives would encourage teachers who were not teaching in 2017/18 to return to or enter teaching in PK–12 public schools? Does the attractiveness of the incentive vary based on teachers' demographic and employment characteristics? Do teachers who are considering a return to teaching favor some incentives over others?

Definitions of key terms used in the report are in box 1. The data sources, sample, and methods used to answer the research questions are described in box 2.

Box 1. Key terms

Certified teachers. Certified teachers in this study are educators to whom the Michigan Department of Education has issued a teaching certificate that allows independent classroom teaching in grades PK–12. Michigan issues endorsements to teaching certificates to indicate teachers' preparation to provide instruction in particular grade ranges and content areas, such as grades K-8 science or grades 6-12 history, as well as teachers' specialization to work with specific student populations, such as special education students. To become certified and receive endorsements, teaching candidates must meet the requirements of Michigan law and administrative rule, including completing content area coursework for the desired grade band and subject, student teaching, and passing the appropriate Michigan Test for Teacher Certification content examination. Certified teachers also can hold other school-related credentials, such as those for administrators and school psychologists. More information is available on the Michigan Department of Education's website (www.michigan.gov/teachercert) .

Initial teaching certificate. The initial teaching certificate is the first teaching certificate that the Michigan Department of Education issues to a teacher who completed or nearly completed all requirements for the desired content area and grade band.

Certification activity. Certification activity refers to applying for an initial certificate, renewing a current certificate, adding an endorsement to a certificate, or changing to another certificate type. For example, a teacher may advance a standard certificate to a professional certificate based on teaching experience and completion of additional professional development.

Currently teaching, recently taught, and not recently taught. For research question 1, teachers were classified as currently teaching, recently taught, or not recently taught based on the Michigan Department of Education's school employment data from 2013/14 to 2017/18 (earlier data were not available). The study team classified teachers as currently teaching if they were teaching in any Michigan public school during the 2017/18 school year. The study team classified teachers as recently taught if they had a teaching assignment in any Michigan public school between 2013/14 and 2016/17, but not in 2017/18. The study team classified teachers who did not have a teaching assignment in a Michigan public school between 2013/14 and 2017/18 as not recently taught. The final category combines teachers who have not recently or ever taught in Michigan public schools because the study's data did not include employment records that would allow separating these groups.

Previously taught and never taught. For research questions 2 and 3, the study team classified survey respondents into previously taught and never taught based on their answer to a survey item that asked whether they had ever taught in a Michigan public school (see box 2 for the description of data sources).

Box 2. Data sources, sample, and methods

Data sources. The study used a combination of data sources supplied by the Michigan Department of Education:

1. Teacher certification and demographic data from the Michigan Online Educator Certification System, including all records issued between 1943 and 2019.
2. Public school employment records, such as school and district assignment, from the Michigan Registry of Educational Personnel between 2013/14 and 2017/18.
3. Survey data from the sample of certified teachers who did not have a teaching assignment in Michigan public schools during the 2017/18 school year. Survey responses provided information on teachers' reasons for not teaching and incentives that could encourage teaching in public schools. The Michigan Department of Education administered the survey between December 2019 and January 2020.

Sample. Research question 1 focuses on the demographic, certification, and employment characteristics of certified Michigan teachers. This sample included 141,810 teachers who received an initial certificate between 1943 and 2018. The study team excluded 3,476 teachers who received an initial certificate after 2018 because their employment records were unavailable. The sample included only individuals between the ages of 18 and 60 and those older than 60 who had recent certification activity. These individuals comprised the sample for research question 1 because the Michigan Department of Education and the study team considered them to be viable candidates for recruitment to teaching positions in Michigan's public schools. Of the 141,810 teachers included in the sample, 80,558 are currently teaching, 18,367 have recently taught but are not currently teaching, and 42,885 have not recently taught (figure A1 in appendix A).

Research questions 2 and 3 ask about reasons for not teaching and whether incentives might persuade the respondents to enter or re-enter a teaching position in Michigan's public schools. To address these questions, the Michigan Department of Education administered a survey to all certified teachers who did not have a teaching assignment in PK–12 public schools during the 2017/18 school year and had a valid email address—a total of 59,433 teachers. The survey received 17,551 responses for a 30 percent response rate.[1] The study team excluded 838 teachers who were certified after 2018 because they may have had insufficient time to obtain a teaching position and because they would have insufficient experience to offer insights about teaching in public schools. The team excluded another 5,379 respondents because they indicated that they were currently teaching, and the team excluded 1,180 respondents because they indicated residing 20 or more miles outside of Michigan. After answering screening questions, these respondents were routed out of the survey. Another 312 respondents failed to complete the screening questions or provided data inconsistent with the Michigan Department of Education's records, and they too were excluded from the sample. The 9,842 respondents who remained after applying these exclusions comprised the analytic sample of nonteaching teachers for research questions 2 and 3 (figure A2 in appendix A).

The analytic sample is not representative of Michigan certified teachers who do not teach in Michigan's public schools. The sample underrepresents teachers from racial/ethnic minority groups and overrepresents teachers who were 35 or older, were certified in secondary grades, were initially certified prior to 2010, and whose most recent certification activity, such as renewal, was prior to 2001. The study team included these characteristics in statistical models to account for the overrepresentation and underrepresentation of these groups (details are in appendix A).

Methodology. To address research question 1, the study team compared demographic, employment, and certification characteristics of teachers who recently taught and those who have not recently taught to teachers currently teaching. Next, the study team used regression models to test for associations between teacher characteristics and their membership in the recently taught and not recently taught groups. Study partners at the Michigan Department of Education helped identify characteristics for the models based on their potential utility for recruiting certified teachers to teaching positions in public schools. The analyses statistically controlled for demographic characteristics, such as teachers' race/ethnicity and gender.

[1] The study team could not compute a response rate for those respondents who have previously taught and who had never taught in public schools because the data for identifying employment status prior to 2013/14 were not available.

To address research questions 2 and 3, the study team examined survey responses from certified teachers not teaching in public schools. Respondents indicated why they were not teaching by selecting among a list of possible reasons. Likewise, they selected among a list of incentives that might influence their decision to teach in a public school. Respondents also could write in their own reasons and incentives. The survey asked respondents to identify the three most important reasons and incentives from among those they provided. The survey also asked respondents whether they would consider returning to teaching in a PK–12 classroom (or becoming a teacher in a PK–12 classroom for those who never taught). The study team calculated the percentages of respondents who provided each reason and incentive and ranked them from most frequently selected to least frequently selected. Next, the study team used regression models to examine if select respondents' characteristics were associated with the top 10 reasons for not teaching and top 10 incentives that might motivate the survey respondents to teach in a public school. The analysis accounted for other factors, such as respondents' gender and year of initial certification. To account for the lack of representativeness in the analytic sample, the analysis also accounted for characteristics that were over- or underrepresented among the survey respondents. For all research questions, the study team consulted with the Michigan Department of Education policymakers on which teacher characteristics to include in the regression models to increase the likelihood that the department could use the findings to develop a teacher recruitment strategy. The study's methodology, including how the lack of representativeness in the survey sample was addressed, is in appendix A.

Findings

This section presents the main findings. More detailed findings are in appendix C.

Michigan has about 61,000 certified teachers who are not teaching in public schools, and most have not recently taught in public schools

Michigan has 61,252 certified teachers who are not currently teaching in public schools. Seventy percent of these teachers have not recently taught in public schools. Most of them are female (75.9 percent), 35 or older (71.6 percent), and certified to teach elementary grades (57.1 percent). Some 11 percent are members of racial/ethnic minority groups (table C1 in appendix C).[2] Most of the nonteaching certified teachers (93.4 percent) are not of retirement age (that is, they are between ages 18 and 60).[3] The remaining 6.6 percent who are over 60 are included among the 61,000 because they had recent certification activity, such as renewing their certificate or adding endorsements.

Compared with teachers currently teaching in Michigan public schools, teachers who have not recently taught were younger, whereas those who have recently taught were more often from a racial/ethnic minority group

Michigan teachers who are currently teaching differed from those who recently taught and those who have not recently taught on some demographic characteristics. Teachers who have not recently taught were younger than those who are currently teaching (30.7 percent of those who have not recently taught were younger than 35 compared with 20.4 percent of those currently teaching). Those who recently taught were more likely to be a member of a racial/ethnic minority group (13.6 percent) than those who are currently teaching (8.5 percent). Teachers did not differ with respect to gender or grade level of certification. Differences among teachers who recently taught, not recently taught, and were currently teaching remained after controlling for other characteristics (table 1; table C2 in appendix C).

[2] The study team grouped teachers who were American Indian/Alaskan Native, Asian, Black, Hawaiian Native and other Pacific Islander, multiracial, and of Hispanic ethnicity into a single category, labeled "Members of racial/ethnic minority groups." This grouping of teachers is aligned with the Michigan Department of Education's current practice.

[3] Most public school employees in Michigan qualify for a pension at age 60 with 10 years of service (Michigan Office of Retirement Services, 2020).

Table 1. Teachers who recently taught and who have not recently taught differed from teachers currently teaching by race/ethnicity and age, 2013/14–2017/18

Characteristic	Currently teaching (*n* = 80,558)	Not recently taught (*n* = 42,885)	Recently taught (*n* = 18,367)
Gender			
Female	75.8	76.1	75.2
Male	24.2	23.9	24.8
Race/ethnicity			
Racial/ethnic minority	8.5	9.6	13.6*
Nonracial/ethnic minority	91.5	90.3	86.4*
Age			
Below 35	20.4	30.7*	23.1
35 and above	79.6	69.3*	76.9
Certification grade level			
Elementary	58.0	57.1	55.4
Secondary	40.9	42.2	43.4
Missing	1.1	0.7	1.2

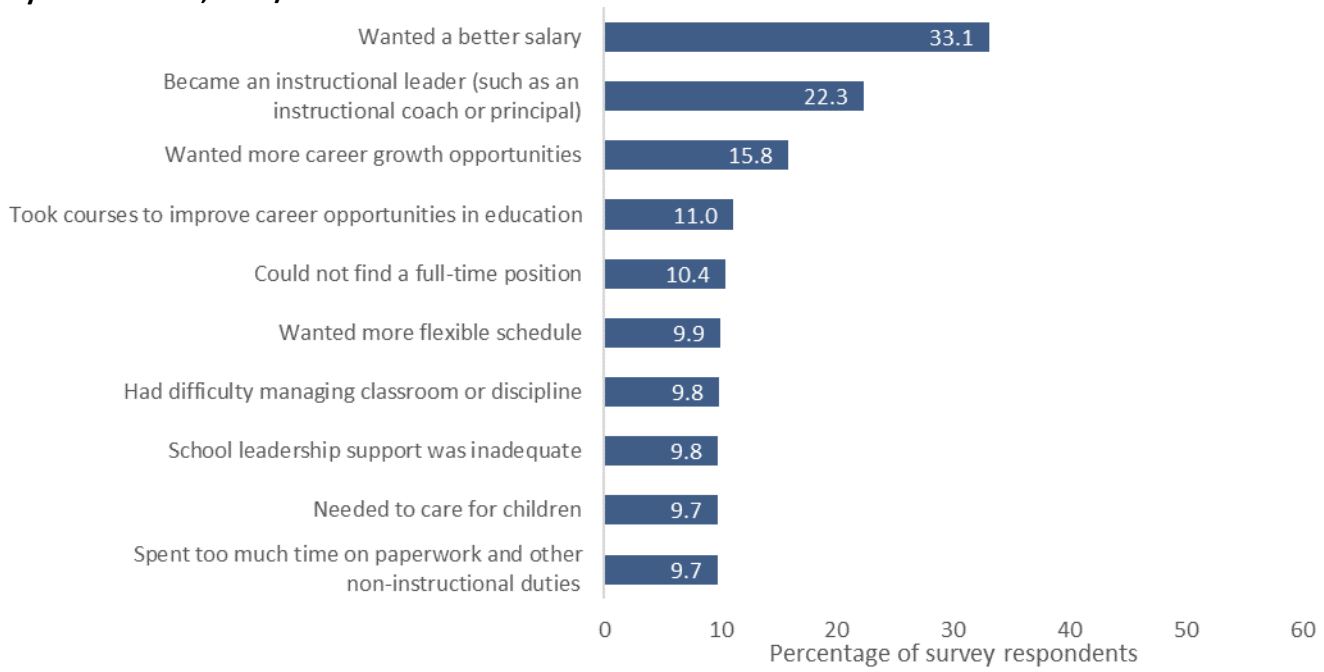
* Indicates at least 5 percentage point difference compared with certified teachers who are currently teaching.
Note: *N* = 141,810. Percentages indicate the proportion of teachers with a given characteristic among teachers who currently are teaching in PK–12 schools in Michigan, who recently taught, or who have not recently taught. Percentages are not weighted.
Source: Authors' calculations based on certification data from the Michigan Department of Education.

Regardless of their characteristics, survey respondents most frequently indicated salary as the main reason for not teaching

The most frequent main reason that survey respondents gave for not teaching was that they wanted a higher salary (selected by 33.1 percent of respondents). Survey respondents also indicated that they no longer taught because they had attained a position of an instructional leader, such as an instructional coach or principal (selected by 22.3 percent of respondents). Other main reasons for not teaching included wanting more professional growth opportunities (selected by 15.8 percent of respondents) or taking courses to advance their career in education (selected by 11.0 percent of respondents). About 10 percent indicated that they were not teaching because they were unable to obtain a full-time teaching position (figure 1 and table C4 in appendix C).

Wanting a higher salary was the most frequently chosen main reason for not teaching, for teachers who previously taught, and regardless of teachers' race/ethnicity, whether they had children younger than 5 years old at home, whether they worked in PK-12 schools or districts in a nonteaching capacity, or whether they were certified to teach elementary or secondary grades. Between 29.4 percent and 40.1 percent of respondents with different characteristics indicated this reason for not teaching. Respondents who have never taught in Michigan public schools were the only exception; a greater proportion of these respondents (53.4 percent) cited not being able to obtain a full-time position as the main reason for not teaching (figure 2 and table C4 in appendix C).

Figure 1. More survey respondents selected wanting a higher salary as their main reason for not teaching than any other reason, 2019/20



Note: 5,294 respondents identified at least one main reason. Percentages indicate the proportion of nonteaching teachers who cited the reason as one of their top three reasons for not teaching. Percentages are not weighted.
Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Respondents' reasons for not teaching differed by their characteristics

Although salary was one the most frequently cited top three reasons for not teaching among respondents, the study team found statistically significant differences among respondents in frequency of providing some reasons for not teaching based on their employment, demographic, and certification characteristics. These differences in choosing the top 10 overall reasons are described in the following sections (figure 2, table 2, and table C5 in appendix C).

Respondents' reasons for not teaching differed by their teaching experience. Survey respondents who taught in public schools after obtaining their certificate were more likely than those who never taught to indicate career-related reasons for leaving, including becoming an instructional leader and wanting more career-growth opportunities. These respondents also were more likely to indicate wanting a higher salary as a reason for leaving. In contrast, respondents who never taught were more likely than respondents who previously taught to indicate that they were not teaching because they were unable to obtain a full-time position.

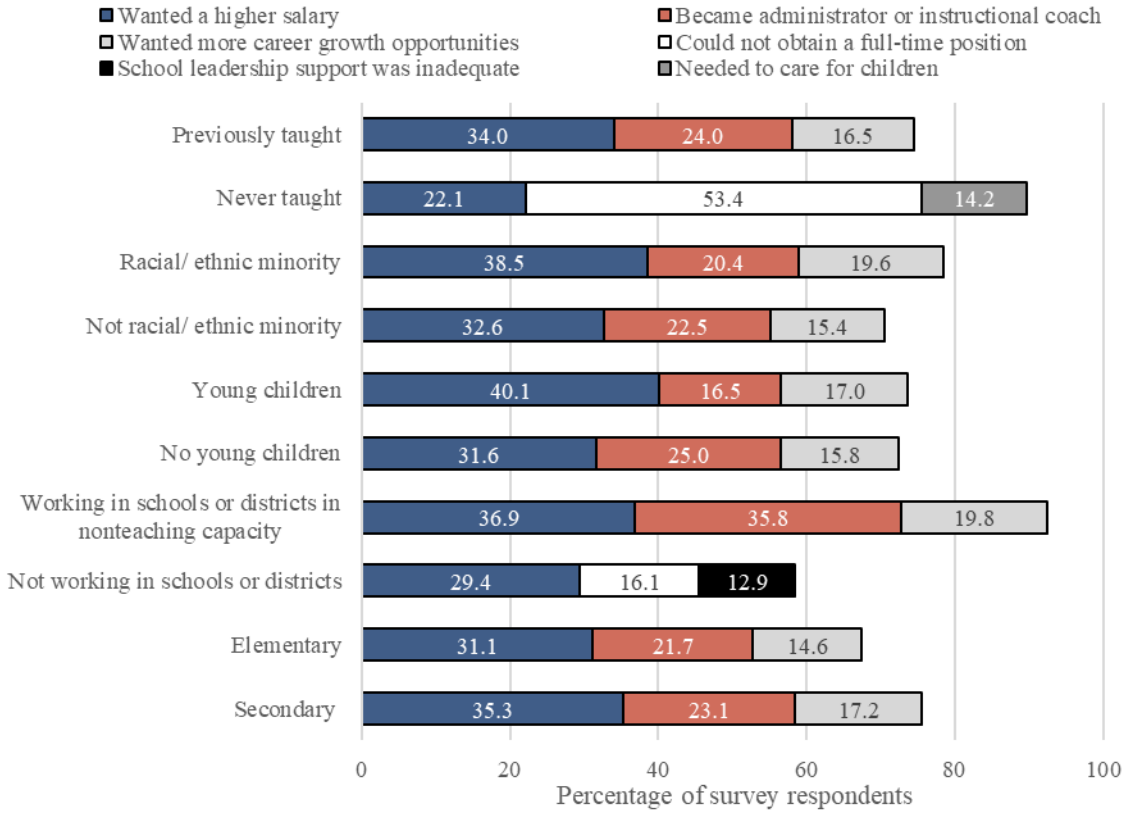
Respondents' reasons for not teaching differed by their race/ethnicity. Respondents belonging to racial/ethnic minority groups were more likely to indicate wanting a higher salary or wanting to take courses to improve career opportunities in education as reasons for leaving, compared to respondents who did not belong to racial/ethnic minority groups. Respondents who did not belong to racial/ethnic minority groups were more likely to leave teaching than respondents from racial/ethnic minority groups because they wanted to care for their young children.

Respondents' reasons for not teaching differed by whether they had young children in the home. Respondents with children 5 or younger at home were more likely than respondents without young children to indicate that they left teaching because of parenting responsibilities, because they needed a more flexible schedule, or because they took courses to improve career opportunities in education. Respondents without children 5 or younger at home were more likely than respondents with young children to indicate that they could not find a full-time position.

Respondents' reasons for not teaching differed according to whether they worked in a school or school district in a nonteaching capacity. Respondents who were working in schools or districts in a nonteaching capacity were more likely than respondents who were not to indicate that they left teaching for career-related reasons (for example, becoming an instructional leader). These respondents also more frequently indicated wanting a higher salary as a reason for leaving. Respondents not working in a school or district were more likely to indicate reasons for not teaching related to parenting, available positions (full-time and with a flexible schedule), and classroom and leadership support, compared to respondent who remained working in a school or district.

Respondents' reasons for not teaching differed according to grade level of certification. Respondents certified to teach elementary grades were more likely than respondents certified to teach secondary grades to cite the need to care for child(ren) as a main reason for not teaching. In contrast, those certified for secondary grades were more likely to cite inadequate school leadership support as a main reason for not teaching compared with those certified to teach elementary grades.

Figure 2. With the exception of teachers who never taught, survey respondents with different characteristics most frequently included wanting higher salary among their top three reasons for not teaching, 2019/20



Note: Percentages indicate the proportion of nonteaching teachers who chose each option as a main reason for not teaching. Percentages are not weighted.
Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Table 2. Respondents' reasons for not teaching differed by subgroup, 2019/20

Characteristic	Number of respondents	Reasons associated with not teaching for respondent group
Previously taught	4,886	Became instructional leader*** Wanted more career growth opportunities*** Wanted a higher salary***
Never taught	408	Could not find a full-time position***
Racial/ethnic minority	504	Took courses to improve career opportunities within education*** Wanted a higher salary*
Not a racial/ethnic minority	4,786	Needed to care for child(ren)***
Have children 5 or younger at home	1,097	Needed to care for child(ren)*** Wanted a more flexible schedule*** Took courses to improve career opportunities in education*
Do not have children aged 5 or younger at home	3,502	Could not find a full-time position*
Working in a school or district in nonteaching capacity	2,804	Became an administrator or instructional leader*** Took courses to improve career opportunities in education*** Wanted more career growth opportunities*** Wanted a higher salary***
Not working in a school or district	2,420	Could not find a full-time position*** School leadership support was inadequate*** Needed to care for child(ren)*** Wanted a more flexible position*** Had difficulty managing classroom*
Certified to teach elementary grades	2,792	Needed to care for child(ren)*
Certified to teach secondary grades	2,502	School leadership support was inadequate*

* Statistically significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$.
Note: 5,294 respondents selected at least one main reason. The number of respondents in characteristic groupings reflects the number of respondents who provided each characteristic. Due to nonresponse for certain characteristics, the sample size for each characteristic may not add up to 5,294. Control variables in logistic regressions included respondents' gender, household income, the first year in which they became certified to teach, age, and whether the teacher attempted to become recertified before 2000. Numbers in parentheses are odds ratios generated from a logistic regression. Estimates indicate whether certain groups of certified teachers have higher odds of selecting the reason for not teaching. For example, the odds of a certificate holder with previous teaching experience selecting "I wanted a higher salary" as a reason is 1.73 times that of a certificate holder who never taught. The magnitude of values less than 1 were converted using the number's reciprocal (1/odds ratio) and the other category representing the reference category.
Source: Authors' calculations based on logistic regression models using the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Regardless of survey respondents' characteristics, they most frequently indicated that an increase in salary could motivate them to teach in Michigan public schools

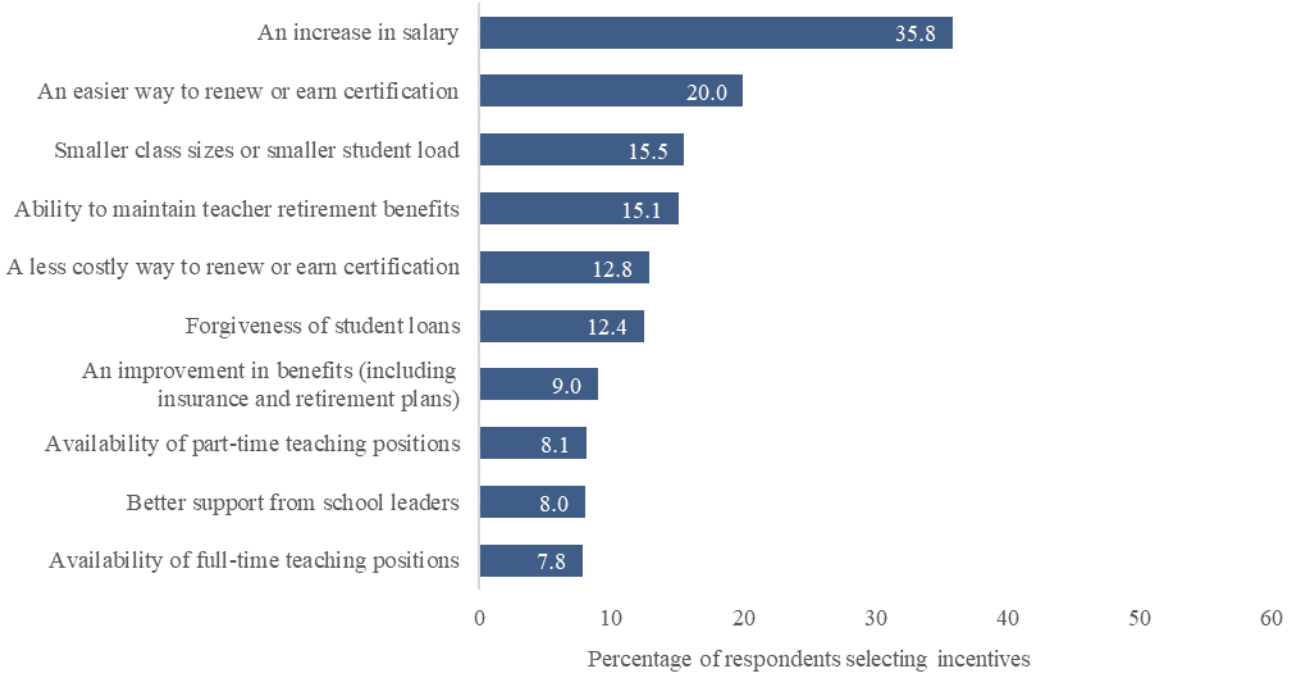
Survey respondents most frequently indicated an increase in salary as one of the top three incentives that could motivate them to teach (35.8 percent; see figure 2). The other preferred incentives included an easier way to renew certification or become recertified (20 percent), followed by having smaller class sizes or student load (15.5 percent). Survey respondents also indicated that they would consider teaching in public schools if they could maintain teacher retirement benefits (15.1 percent),[4] if the process to renew or become recertified was less costly (12.8 percent), or if they could have their student loans forgiven (12.4 percent). Other appealing incentives included improved benefits, availability of part-time or full-time teaching positions, and better support from school leaders (figure 3 and table C6 in appendix C).

An increase in salary remained the most frequently desired incentive that could motivate respondents to teach in Michigan public schools among all respondents examined in the study. Between 39.0 percent and 54.2 percent of survey respondents with different characteristics indicated their preference for this incentive, including respondents who have previously taught and never taught, respondent who were and were not from racial/ethnic

[4] In Michigan, teachers receiving retirement benefits cannot teach full-time without losing some benefits unless certain exceptions are applicable (The Public School Employees Retirement Act of 1979, 1980).

minority groups, those with and without children 5 or younger at home, those working and not working in a school district, and those certified to teach elementary or secondary grades (figure 4 and table C7 in appendix C).

Figure 3. More survey respondents indicated an increase in salary as an incentive that would motivate them to teach than any other incentive, 2019/20



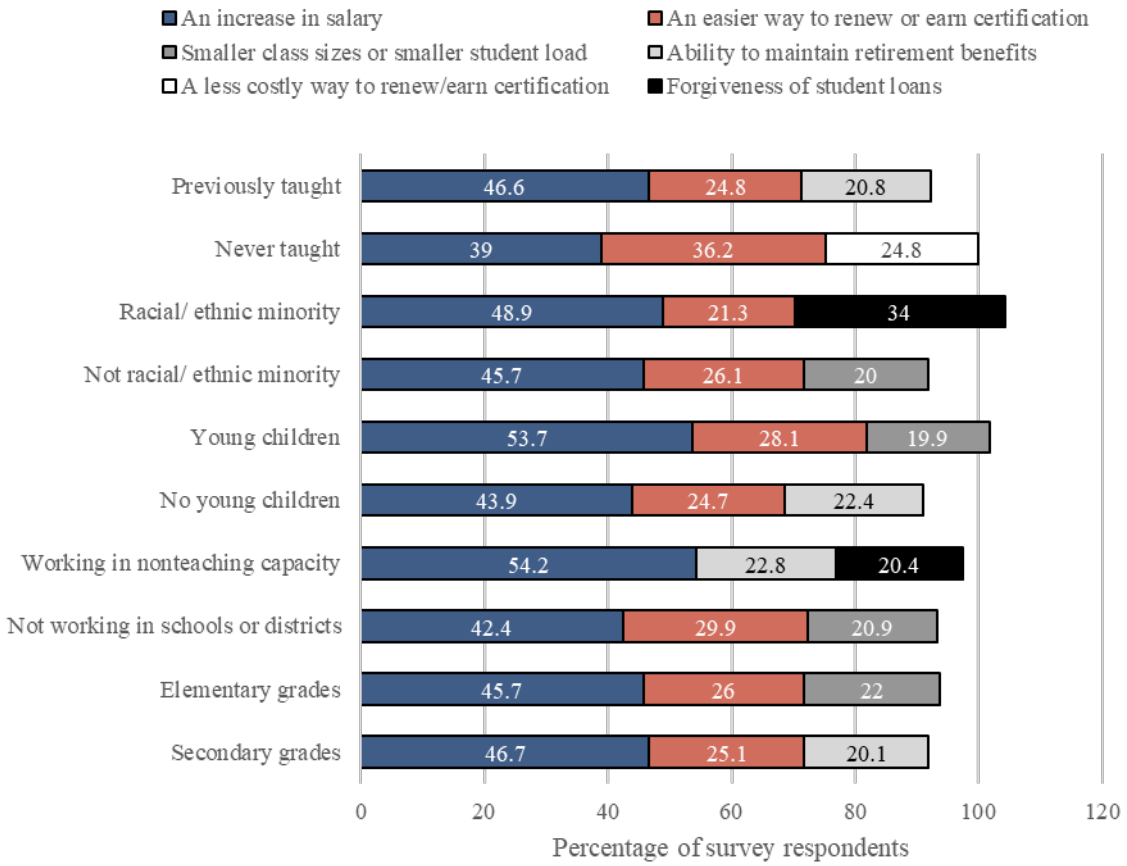
Note: *N* = 7,562 respondents who identified at least one preferred incentive. Percentages indicate the proportion of nonteaching teachers who provided the incentive as one of their top three incentives for re-entry to teaching.
Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

The incentives that would motivate respondents to teach differed by their characteristics

Although an increase in salary was the most frequently desired incentive that could motivate respondents to teach in Michigan public schools, the study found that respondents differed in their rates of indicating some incentives as appealing based on their employment, demographic, and certification characteristics. Statistically significant differences among the subgroups are described in the following sections (table 3 and table C7 in appendix C).

The appeal of incentives differed by whether the respondent had previously taught. Respondents who previously taught in public schools were more likely than those who never taught to identify financial incentives as appealing, including maintaining retirement benefits, improving other benefits, and raising salaries. These respondents were also more likely to identify improved support from school leaders as an appealing incentive compared with those who never taught. In contrast, more respondents who never taught, compared with those who have, gravitated toward incentives related to certification and job availability, including a less costly or easier way to renew or earn certification and the availability of full-time teaching positions.

Figure 4. Survey respondents with different characteristics most frequently indicated an increase in salary among their top three incentives that could motivate them to teach, 2019/20



Note: Percentages indicate the proportion of nonteaching teachers who chose each option as their main incentive for returning to teaching. Percentages are not weighted.
Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

The appeal of incentives differed by respondents' race/ethnicity. Respondents from racial/ethnic minority groups were more likely to identify forgiveness of student loans as an appealing incentive compared with those not from racial/ethnic minority groups. Respondents who were not from racial/ethnic minority groups were more likely to identify improvements in benefits, such as insurance and retirement plans, and a less costly ways to renew or earn certification, as an appealing incentive compared with those from racial/ethnic minority groups.

The appeal of incentives differed by whether the respondents had young children at home. Respondents with children 5 or younger at home were more likely to consider the availability of part-time teaching positions and higher salaries as appealing incentives compared with those without young children in the home. The latter subgroup was more likely to gravitate toward full-time teaching positions and maintenance of teacher retirement benefits compared to respondents with young children.

The appeal of incentives differed by whether the respondent worked in a school or school district in a nonteaching capacity. Financial incentives, including forgiveness of student loans, an increase in salary, and improvement in benefits, were more likely to appeal to respondents working in a school or school district in a nonteaching capacity, compared with those who were not. Respondents working outside of a school or school district, compared with those working in a school or school district, were more likely to identify the availability of full-time and part-time positions as appealing incentives. They also were more likely to indicate as appealing incentives better support from school leaders, a less costly way to renew or earn certification, and smaller class sizes or student load.

Appealing incentives differed by respondents' grade level of certification. Respondents certified in elementary grades, compared with the respondents certified in secondary grades, were more likely to identify smaller class sizes or student load as an incentive that could motivate them to teach.

Table 3. Teacher characteristics were associated with the incentives that might motivate their re-entry to teaching, 2019/20

Characteristic	Number of respondents	Incentives identified as appealing for respondent group
Previously taught	7,053	Ability to maintain your teacher retirement benefits*** An improvement in benefits (including insurance and retirement plans** Better support from your school leaders** An increase in salary***
Never taught	600	Availability of full-time teaching positions*** A less costly way to renew or earn certification*** An easier way to renew or earn certification***
Racial/ethnic minority	709	Forgiveness of your student loans***
Nonracial/ethnic minority	6,939	An improvement in benefits (including insurance and retirement plans* A less costly way to renew or earn certification*
Have children 5 or younger at home	1,791	Availability of part-time teaching positions* An increase in salary**
Do not have children 5 or younger at home	5,125	Availability of full-time teaching positions*** Ability to maintain your teacher retirement benefits**
Working in a school or district in nonteaching capacity	2,361	Forgiveness of your student loans*** An increase in salary*** An improvement in benefits (including insurance and retirement plans***
Not working in a school or district	5,292	Availability of part-time teaching positions*** Better support from your school leaders*** Availability of full-time teaching positions*** A less costly way to renew or earn certification** Smaller class sizes or smaller student load**
Certified to teach elementary grades	4,188	Smaller class sizes or smaller student load*
Certified to teach secondary grades	3,369	Na

* Statistically significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$.
na is not applicable.
Note: 7,653 respondents identified at least one preferred incentive. The number of respondents in characteristic groupings reflects the number of respondents who provided each characteristic. Due to nonresponse for certain characteristics, the sample size for each characteristic may not add up to 7,653. Control variables in logistic regressions included respondents' gender, household income, the first year in which they became certified to teach, age, and whether teacher attempted to become recertified before 2000. Numbers in parentheses are odds ratios generated from a logistic regression. Estimates indicate whether certain groups of certified teachers have higher odds of selecting the incentives. For example, the odds of a certificate holder with previous teaching experience selecting "an increase in salary" as an incentive is 1.59 times that of a certificate holder who never taught. The magnitude of values less than 1 were converted using the number's reciprocal (1/odds ratio) and the other category representing the reference category.
Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

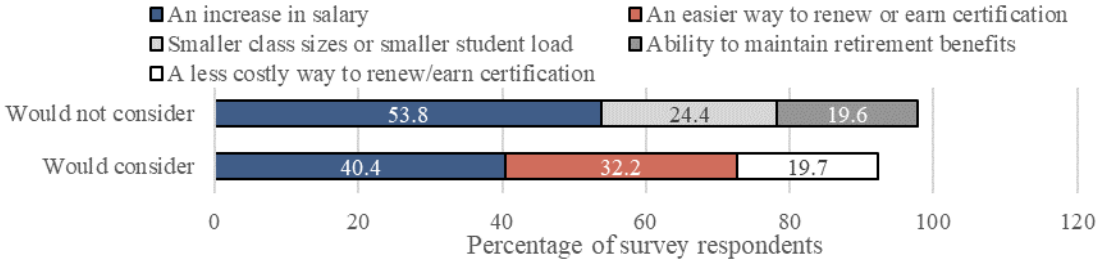
Most survey respondents indicated an openness to becoming a public school teacher; an increase in salary was the most frequently desired incentive by those who would and would not consider becoming a public school teacher

Most survey respondents (58 percent) indicated that they would consider taking a PK–12 teaching position in a public school in Michigan.[5] An increase in salary was the most frequently selected incentive for becoming a

[5] For respondents who are not currently employed in schools, 53 percent would consider becoming a teacher. Preferred incentives for this group are similar to those in the overall sample.

teacher by respondents who indicated that they would or would not consider teaching (40.4 percent and 53.8 percent of respondents selected this incentive, respectively; figure 5 and table C7 in appendix C). The study found that respondents who would and would not consider teaching differed significantly in their rates of indicating some incentives as appealing. Respondents who would consider teaching were more likely than those who would not to identify certification and the availability of full- and part-time teaching positions as appealing incentives. Respondents who would not consider teaching gravitated more toward financial incentives than those who would consider teaching, including an increase in salary, an improvement in benefits, and forgiveness of student loans. These respondents also more frequently indicated smaller class sizes or student loads and better support from school leaders as desirable incentives (table 4 and table C8 in appendix C).

Figure 5. Survey respondents who would consider teaching most frequently indicated an increase in salary among their top three incentives that could motivate them to teach, 2019/20



Note: Percentages indicate the proportion of nonteaching teachers who chose each option as a main incentive for returning to teaching. Percentages are not weighted.
Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Table 4. Survey respondents who would consider a return to teaching found some incentives more appealing than others, 2019/20

Characteristic	Number of respondents	Incentives with statistically significant representation
Would consider teaching PK–12 in Michigan	4,391	Availability of full-time teaching positions***
		An easier way to renew or earn certification***
		A less costly way to renew or earn certification***
		Availability of part-time teaching positions**
Would not consider teaching PK–12 in Michigan	3,224	An increase in salary***
		Smaller class sizes or smaller student load***
		Better support from school leaders**
		An improvement in benefits (including insurance and retirement plans)**
		Forgiveness of student loans**

* $p < .05$; ** $p < .01$; *** $p < .001$.
Note: 7,615 respondents indicated whether they would consider teaching PK–12 in Michigan. Control variables in logistic regressions included respondents' gender, household income, the first year in which they became certified to teach, age, and whether teacher attempted to become recertified before 2000. Numbers in parentheses are odds ratios generated from a logistic regression. Estimates indicate whether certain groups of certified teachers have higher odds of selecting the incentives. For example, the odds of a certificate holder with considering coming back to teaching selecting "an increase in salary" as an incentive is 1.80 times that of a certificate holder who would not consider teaching. The magnitude of values less than 1 were converted using the number's reciprocal (1/odds ratio) and the other category representing the reference category.
Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Implications

The study findings have several implications for recruiting certified teachers to teach in Michigan public schools.

Only a subgroup of the 61,000 certified teachers who are not teaching may be viable candidates for recruitment

Recruiting teachers from a pool of certified teachers not currently teaching may be a viable strategy for alleviating teacher shortages in Michigan. At 61,252 the pool is substantial, and most teachers in the pool are of nonretirement age. However, according to the survey approximately 22 percent of teachers in the pool left

teaching to serve as an instructional leader, such as a principal or coach. These individuals may best serve Michigan students by remaining in instructional leadership roles. Furthermore, these individuals may not be interested in becoming teachers. Excluding individuals in instructional roles from the pool may help the Michigan Department of Education focus recruitment efforts on those who are most likely to respond.

Consider financial incentives to recruit teachers, including higher salaries

Schools and school districts could consider increasing teacher salaries to attract certified teachers to fill vacant teacher positions, but such increases may require increases in school funding from the state legislature. For most groups of nonteaching teachers, salary was the most frequently selected reason for not teaching and the most frequently selected incentive for becoming a public school teacher. Public school teachers in Michigan earn 22.7 percent less than other college graduates employed in the state (Allegretto & Mishel, 2018). The difference in wages was reflected in the open-ended responses to the survey as well, where teachers indicated feeling that teacher salaries were insufficient for maintaining the middle-class lifestyle enjoyed by their college-educated contemporaries employed in other career fields. Survey findings suggest that nonteaching teachers also may find student loan forgiveness, maintenance of retirement benefits, and improvement of other types of benefits as persuasive incentives for becoming a public school teacher in Michigan.

Consider improving communication about changes in certification requirements

Publicizing recent changes to certification requirements may influence certified teachers' decision to re-enter teaching in public schools. Many survey respondents indicated that easier and less costly certification and certificate renewal could motivate them to become a teacher in a Michigan public school. These respondents may be unaware of the changes that Michigan initiated in 2017 to make the certification process easier and less costly (Michigan Department of Education, 2017b). Administrators at the Michigan Department of Education and Michigan public schools and school districts may be able to draw certified teachers to teaching jobs by communicating these changes through email or direct mail or by displaying the changes more prominently on agency websites. The communication may be most persuasive to teachers who never taught, those not employed in schools or districts, and those who do not belong to racial/ethnic minority groups.

Consider improving visibility for available teaching positions

Publicizing open teaching positions throughout the state may influence certified teachers' decision to re-enter teaching in public schools. Survey respondents frequently selected "could not obtain a full-time teaching position" as a reason for not teaching in public schools. The availability of full-time and part-time teaching positions were also among the most frequently selected incentives. The impression that teaching positions are rare in Michigan may be especially true for those who earned their certificate and tried to find teaching jobs prior to 2004, when the supply of newly certified teachers in Michigan was at its peak and teaching jobs were scarce (Stackhouse, 2017). Developing a centralized job bank would make it easier for certified teachers to locate teaching positions in their region, instead of checking job postings on the websites of the individual schools or districts. Districts can expand the reach of their recruitment efforts by posting to popular job search engines, such as CareerBuilder, Indeed.com, LinkedIn, and ZipRecruiter.[6] Survey responses suggest that improving communication about available positions may be an effective strategy for certified teachers who never taught, are not working in a school or district, do not have young children at home, and who would consider becoming a teacher in Michigan.

[6] Websites are included as examples and should not be viewed as endorsed by either the Institute of Education Sciences or the contracting organizations that operate the regional education laboratories.

Consider providing flexible employment options and childcare support to attract teachers with young children

Providing flexible employment options and childcare subsidies may motivate teachers who have young children to fill teaching positions. Survey respondents with children 5 or younger at home frequently indicated parental responsibilities and wanting a flexible schedule as reasons for not teaching. These respondents also frequently indicated part-time positions as a desirable incentive for teaching in public schools. Allowing part-time employment or job-sharing options could help school leaders fill teaching positions with qualified teachers when full-time teachers are unavailable. Childcare subsidies also may be attractive to teachers with young children, addressing both their childcare and financial needs. In Michigan, the annual average cost of childcare for an infant is $10,861 (Economic Policy Institute, 2019) and an average new teacher salary in is $39,840 (National Center for Education Statistics, 2019). Childcare support, therefore, could provide substantial financial relief to teachers with young children, many of whom are likely new teachers.

Consider improving classroom support and leadership support

Offering more classroom support and school leadership support to certified teachers—and communicating that support during the recruitment process—may alleviate potential applicants' fears about teaching in public schools. For example, school leaders can hire paraprofessionals to assist teachers with classroom management. School leaders also can enlist instructional coaches to work with teachers who struggle with classroom management. Likewise, survey results suggest that developing policies that restrict class sizes or student loads—and communicating those policies during teacher recruitment—also may draw in more applicants for teaching positions. Such efforts may be especially helpful in recruiting those not already employed in schools or districts and those certified to teach elementary grades.

Limitations

The study has three main limitations. First, the study team could access only school staffing data from 2013/14 to 2018/19. Ideally, teachers' employment status would be determined using up to 40 years of staffing data, allowing the study team to identify teachers who have and have not taught in Michigan public schools prior to 2013/14. As a result, to answer research question 1, the study team had to combine teachers who have and have not taught prior to 2013/14 into a "not recently taught" group, which included teachers who might have taught in the past and those who have never taught after initial certification. Second, the results for research questions 2 and 3 are based on self-reported data. Therefore, the information may be subject to recall bias and social desirability bias. Finally, the survey respondents are not representative of all teachers who are not teaching in Michigan. The survey underrepresents teachers from racial/ethnic minority groups and overrepresents teachers who were 35 or older; were certified to teach in secondary grades; were initially certified prior to 2010; and whose most recent certification activity, such as renewal, was prior to 2001. The results should be interpreted and used with caution.

References

Allegretto, S., & Mishel, L. (2018). *The teacher pay penalty has hit a new high: Trends in teacher wage and compensation gaps through 2017.* Washington, DC: Economic Policy Institute. Retrieved June 24, 2020, from https://eric.ed.gov/?id=ED593401

Bowsher, A., Sparks, D., & Hoyer, K. M. (2018). *Preparation and support for teachers in public schools: Reflections on the first year of teaching* (NCES 2018-143). Washington, DC: National Center for Education Statistics. https://eric.ed.gov/?id=ED581881

Brundun, J. (2018, September 18). In Denver's crazy hot housing market, teachers need an extra helping hand. *CPR News.* Centennial, CO: Colorado Public Radio. Retrieved on June 20, 2020 from https://www.cpr.org/2018/09/26/in-denvers-crazy-hot-housing-market-teachers-need-an-extra-helping-hand/.

Carver-Thomas, D., & Darling-Hammond, L. (2019). The trouble with teacher turnover: How teacher attrition affects students and schools. *Education Policy Analysis Archives, 27*(36). https://eric.ed.gov/?id=EJ1213629

Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2007). Teacher credentials and student achievement: Longitudinal analysis with student fixed effects. *Economics of Education Review, 26*(6), 673–682. https://eric.ed.gov/?id= EJ781075

Cowan, J., & Goldhaber, D. (2018). *Do bonuses affect teacher staffing and student achievement in high poverty schools? Evidence from an incentive for National Board Certified Teachers in Washington State* (Working Paper No. 194-0618-1). Washington, DC: National Center for Analysis of Longitudinal Data in Education Research at the American Institutes for Research. https://eric.ed.gov/?id=ED591825

Economic Policy Institute. (2019). The cost of childcare in Michigan. Retrieved July 21, 2020, from https://www.epi.org/child-care-costs-in-the-united-states/#/MI.

Feng, L., & Sass, T. R. (2018). The impact of incentives to recruit and retain teachers in "hard-to-staff" subjects. *Journal of Policy Analysis and Management, 37(*1), 112–135. https://eric.ed.gov/?id=EJ1163968

Gray, L., & Taie, S. (2015). *Public school teacher attrition and mobility in the first five years: Results from the first through fifth waves of the 2007–08 Beginning Teacher Longitudinal Study* (NCES 2015-337). Washington, DC: National Center for Education Statistics. https://eric.ed.gov/?id=ED556348

Hough, H. J., & Loeb, S. (2013). *Can a district-level teacher salary incentive policy improve teacher recruitment and retention?* (Policy Brief 13-4). Stanford, CA: Policy Analysis for California Education, PACE. https://eric.ed.gov/?id=ED562531

Ingersoll, R., Merrill, E., Stuckey, D., & Collins, G. (2018). *Seven trends: The transformation of the teaching force, updated October 2018*. Research report (#RR 2018–2). Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania. Retrieved June 23, 2020, from https://eric.ed.gov/?id=ED593467

Michigan Department of Education. (2015). *Michigan's plan to ensure equitable access to excellent teachers*. Lansing, MI: Author. Retrieved June 23, 2020, from https://www2.ed.gov/programs/titleiparta/equitable/miequityplan060115.pdf.

Michigan Department of Education. (2017a). *Michigan's consolidated state plan under the Every Student Succeeds Act*. Lansing, MI: Author. Retrieved June 23, 2020, from https://www.michigan.gov/documents/mde/Michigan-ESSA-Plan_11-15-17_606136_7.pdf.

Michigan Department of Education. (2017b). *Teacher certification code: Summary of key changes*. Lansing, MI: Author. Retrieved June 23, 2020, from https://www.michigan.gov/documents/mde/Summary_of_Changes_Teacher_Cert_605458_7.pdf.

Michigan Office of Retirement Services. (2020). Public schools employees retirement system. Retrieved July 17, 2020, from https://www.michigan.gov/orsschools/0,4653,7-206-36450---,00.html.

National Center for Education Statistics. (2013a). *Among former teachers who would consider returning to K–12 teaching, number and percentage distribution of former public school teachers, by how important housing incentives would be in influencing a decision to return to the position of K–12 teacher: 2012–13.* Retrieved June 23, 2020, from https://nces.ed.gov/surveys/sass/tables/TFS1213_20171201001_f1n.asp.

National Center for Education Statistics. (2013b). *Percentage distribution of the level of importance K–12 teachers who voluntarily left teaching attributed to any reason for leaving and percentage who listed a given reason as the most important reason for leaving, by selected reason for leaving: 2012–13.* Retrieved June 23, 2020, from https://nces.ed.gov/surveys/sass/tables/tfs1213_190507_f1n.asp.

National Center for Education Statistics. (2013c). *Table 2. Number and percentage distribution of public school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2012-13*. Retrieved June 23, 2020, from https://nces.ed.gov/surveys/sass/tables/TFS1213_2014077_cf1n_002.asp.

National Center for Education Statistics. (2013d). *Table 6. Total number and percentage distribution of public school teacher leavers, by their current occupational and industry status: 2012-13*. Retrieved June 23, 2020, from https://nces.ed.gov/surveys/sass/tables/TFS1213_2014XXX_f1n_006.asp.

National Center for Education Statistics. (2019). Digest of Education Statistics. Retrieved July 21, 2020, from https://nces.ed.gov/programs/digest/d19/tables/dt19_211.30.asp.

Ni, Y. (2017). Teacher working conditions, teacher commitment, and charter schools. *Teachers College Record, 119 (6),* 1–38.

Palardy, G., J., & Rumberger, R. W. (2008). Teacher effectiveness in first grade: The importance of background qualifications, attitudes, and instructional practices for student learning. *Educational Evaluation and Policy Analysis, 30*(2), 111–140. https://eric.ed.gov/?id= EJ797552

Podolsky, A., Kini, T., Darling-Hammond, L., & Bishop, J. (2019). Strategies for attracting and retaining educators: What does the evidence say? *Education Policy Analysis Archives, 27*(38). https://eric.ed.gov/?id=EJ1213631

Robinson, J., & Lloyd, B. (2017). *Teacher turnover in Michigan: A look at teacher mobility and attrition rates*. Retrieved June 23, 2020, from https://www.michigan.gov/documents/mde/Teacher_Mobility_Brief_Final_2017.09.18_v2_ada_601772_7.pdf.

Stackhouse, S. A. (2017). *Trends in Michigan teacher certification. Initial certificates issued 1996-2016*. Lansing, MI: Michigan Department of Education. Retrieved June 23, 2020, from https://www.michigan.gov/documents/mde/Final_Draft_5-year_certificate_trend_with_endorsement_code_appendix_ada_601771_7.pdf.

The Public School Employees Retirement Act of 1979. (1980). Retrieved June 23, 2020, from http://legislature.mi.gov/doc.aspx?mcl-38-1361.

U.S. Department of Education. (2020). Teacher Shortage Area Report: Michigan. Retrieved July 15, 2020, from https://tsa.ed.gov/#/reports.

Viadero, D. (2018). *Teacher recruitment and retention: It's complicated.* Retrieved June 23, 2020, from https://www.edweek.org/ew/articles/2018/01/24/teaching-shortages-many-answers-for-a-complex.html.

Wan, Y., Pardo, M., & Asson, S. (2019). *Past and projected trends in teacher demand and supply in Michigan* (REL 2019–009). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. https://eric.ed.gov/?id=ED597828

Appendixes

REL MIDWEST

Teachers who are not teaching: Who are they and what would motivate their return to teaching?

Jim Lindsay, Natalya Gnedko-Berry, and Carol Wan

July 2020

See https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=#### for the full report.

Appendix A. Methods

This appendix includes detailed information about the data used for this report, as well as the methods used to complete the analyses.

Data sources

The study team used data from the Michigan Department of Education to address the study's research questions (table A1). Regional Educational Laboratory Midwest and the Michigan Department of Education entered into a data-sharing agreement that allowed the study team access to all data necessary to conduct the study.

Data used to address research question 1. To address research question 1, the study team used information from two sources.

1. Teacher certification and demographic data from the Michigan Online Educator Certification System, including records between 1943 and 2019.
2. Public school employment records, such as school and district assignment, from the Michigan Registry of Educational Personnel between 2013/14 and 2017/18.

Data used to address research questions 2 and 3. To address research questions 2 and 3, the study team used data from a survey that the Michigan Department of Education administered to certified teachers who did not have a teaching assignment in Michigan public schools during the 2017/18 school year.

Table A1. Data used to answer research questions

Data element	Years of data used in analysis	Source
Research question 1. How many of Michigan's certified teachers were not teaching in Michigan PK–12 public schools during the 2017/18 school year? What were the demographic, certification, and employment characteristics of the certified teachers who were not teaching? What demographic and employment characteristics distinguish teachers who do not teach from those who do?		
Certificate type (for example, standard, professional)	1943–2019	Administrative data from Michigan Online Educator Certification System
Certificate date	1943–2019	
Program type (elementary, secondary)	1943–2019	
Grade level of certificate (for example, K–8, 6–12)	1943–2019	
Endorsement area (for example, elementary, special education, mathematics)	1943–2019	
Teacher gender	1943–2019	
Teacher race/ethnicity	1943–2019	
Teacher age	1943–2019	
Employment status (dates of hire or termination, FTE equivalent)	2013/14–2017/18	Administrative data from Michigan's Registry of Education Personnel
Type of position	2013/14–2017/18	
Place of assignment	2013/14–2017/18	
Grade level of assignment	2013/14–2017/18	
Subject of assignment	2013/14–2017/18	
Research question 2: What reasons did certified teachers who were not teaching in 2017/18 give for leaving or choosing not to enter teaching in PK–12 public schools? Did these reasons vary by teachers' demographic and employment characteristics?		
Reasons for not entering or for leaving teaching in public schools	2019/20	Michigan Department of Education's Survey of Teachers Who Do Not Teach
Teaching experience	2019/20	
Child(ren) 5 or younger at home	2019/20	
Household income	2019/20	
Current employment	2019/20	
Current residence	2019/20	
Research question 3: What incentives would encourage teachers who were not teaching in 2017/18 to return to or enter teaching in PK–12 public schools? Does the attractiveness of the incentive vary based on teachers' demographic and employment characteristics? Do teachers who are considering a return to teaching favor some incentives over others?[a]		
Incentives that could persuade certified teachers to re-enter (or enter) teaching as PK–12 teacher in Michigan schools	2019/20	Michigan Department of Education's Survey of Teachers Who Do Not Teach
Desire to re-enter teaching as PK–12 teacher in Michigan	2019/20	

a. The data elements used to address research question 2 related to nonteaching certified teachers' characteristics (teaching experience, child(ren) 5 or younger at home, household income, current employment, and current residence) also were used to address research question 3.
Source: Authors' compilation.

Instruments

Instruments for research question 1. No data instruments were developed for research question 1. The team used data that the Michigan Department of Education routinely collects for administrative purposes, including teacher certification and employment data.

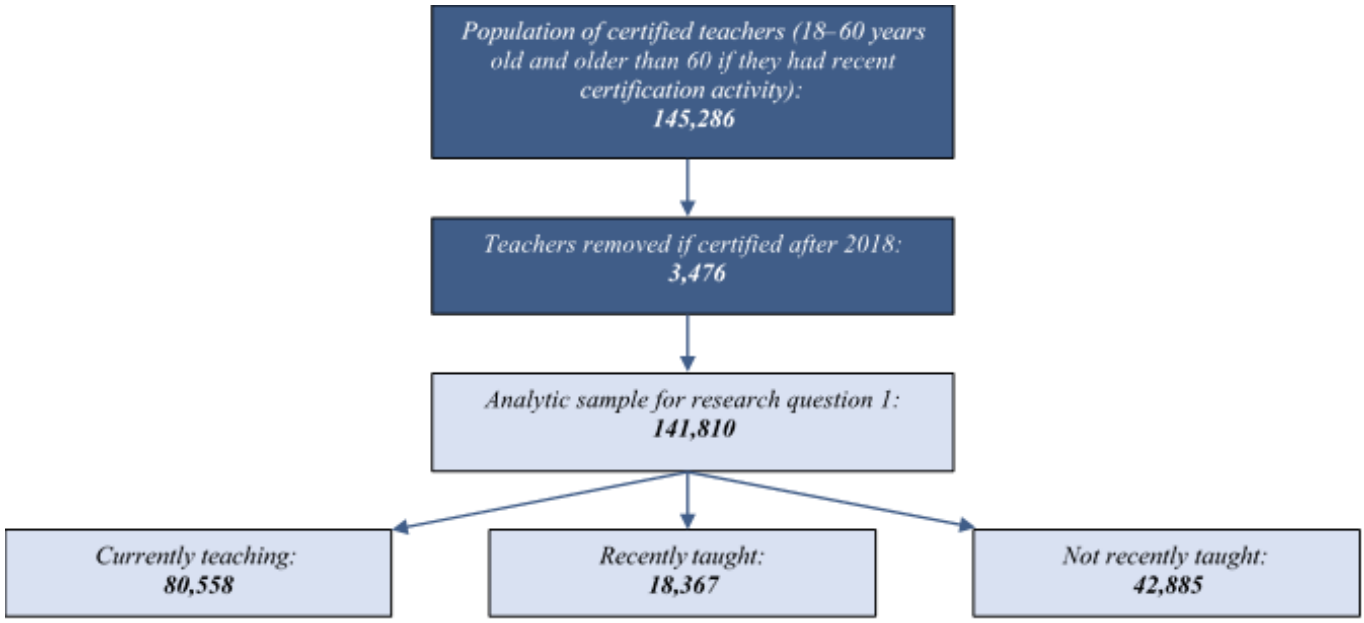
Instruments for research questions 2 and 3. The Michigan Department of Education designed a survey for certified teachers who do not teach in Michigan public schools. The survey contains five sections, with a total of 25 items. The first section includes screening items, such as current teaching status, teaching experience, and current residence. Participants who indicated that they were not teaching at the time of survey administration and resided in Michigan or within 20 miles of the Michigan border were eligible to complete the survey. Eligible participants completed the remaining four sections of the survey, including reasons for not teaching; a comparison of current employment to teaching; incentives for re-entry to teaching; and demographic information, such as household income and child(ren) age 5 or younger in the household. The Michigan Department of Education administered the survey online from December 5, 2019, to January 10, 2020. The complete instrument can be found in appendix B.

Sample description

The sample for research question 1 came from administrative data provided by the Michigan Department of Education. The sample for research questions 2 and 3 came from a survey that the Michigan Department of Education administered to certified teachers who did not have a teaching assignment in PK–12 public schools during the 2017/18 school year and had a valid email address.

Sample for research question 1. The population of teachers for research question 1 included 145,286 teachers. These were certified teachers between the ages of 18 and 60 or older than 60 if they had a recent certification activity, such as renewal. The study team excluded 3,476 teachers who received an initial certificate after 2018 because their employment records were unavailable. Of the 141,810 teachers included in the analytic sample, the study team classified 80,558 as currently teaching, 18,367 as having recently taught, and 42,885 as not having recently taught (figure A1) based on the Michigan Department of Education's employment records from 2013/14 to 2017/18. The study team classified teachers as currently teaching if they had a teaching assignment in any Michigan public school during the 2017/18 school year. Teachers were classified as having recently taught if they had a teaching assignment in any Michigan public school between 2013/14 and 2016/17 but not in 2017/18. Teachers who did not have a teaching assignment in a Michigan public school between 2013/14 and 2017/18 were classified as not having recently taught. Because the Michigan Department of Education's employment data were available only from 2013/14 to 2017/18, teachers classified as not having recently taught also included teachers who never taught after the initial certification because their employment status prior to 2013/14 could not be verified. This is a limitation of this study applicable to research question 1. The procedure the study team applied to derive the final analytic sample is described in figure A1.

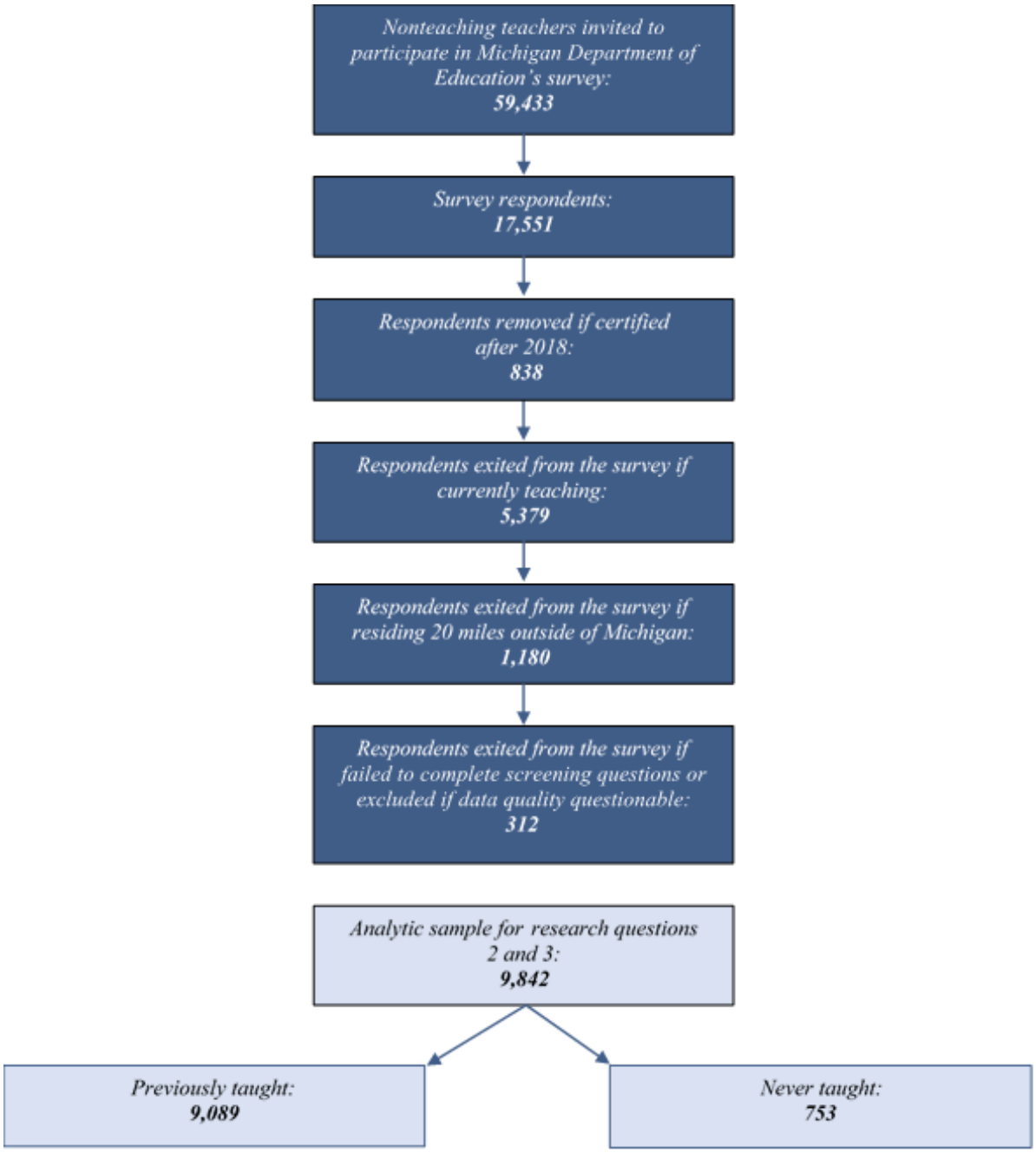
Figure A1. Procedure applied to derive the analytic sample for research question 1



Source: Authors' compilation.

Sample for research questions 2 and 3. The sample for research questions 2 and 3 included respondents to a Michigan Department of Education survey. The Michigan Department of Education administered the survey to all 59,433 certified teachers who did not have a teaching assignment in PK–12 public schools during the 2017/18 school year and who had a valid email address (that is, those who had the email address field in their certification record filled in or those for whom email invitations to participate in the survey were not returned to the Michigan Department of Education as undeliverable). The survey response rate was 30 percent (*n* = 17,551). The initial sample for research questions 2 and 3 included 17,551 individuals who responded to the survey. The study team excluded from the analytic sample 838 respondents who were certified after 2018. These respondents may have had insufficient time to obtain a teaching position and therefore would have insufficient experience to offer insights about teaching in public schools. The following respondents were excluded from completing the survey after answering screening questions: 5,379 who indicated that they were currently teaching and 1,180 who were not teaching but resided 20 miles outside of Michigan. An additional 312 respondents were removed because they failed to complete the screening questions or because of data quality concerns (for example, some participants indicated that they had never taught in Michigan public schools, but the study team located their employment records). The final analytic sample for research questions 2 and 3 included 9,842 survey respondents. Of these, 9,083 self-identified as having previously taught and 753 self-identified as having never taught (figure A2).

Figure A2. Procedure applied to derive the analytic sample for research questions 2 and 3



Source: Authors' compilation.

Representativeness of sample for research questions 2 and 3. The final analytic sample for research questions 2 and 3 included 9,842 individuals not teaching in PK–12 at the time the survey was administered (see figure A2). To examine the representativeness of the analytic sample, the study team compared characteristics of 9,842 survey respondents in the analytic sample with 61,252 nonteaching teachers in the Michigan Department of Education's administrative data ("recently taught" and "not recently taught" in figure A1). Compared with teachers in the Michigan Department of Education's data, 14.5 percent more survey respondents were 35 or older, 14.8 percent more initially were certified prior to 2004, and approximately 8 percent fewer were certified between 2010 and 2018. The remaining differences were within 5 percent (see table A1).

The study team also examined differences between nonteaching teachers in the analytic sample and the Michigan Department of Education data using chi-square tests. Differences with standardized residuals exceeding 2.0

standard deviations were considered showing greater than expected discrepancy (Agresti, 2013; Sharpe, 2015). Results of this analysis suggest that the survey's analytic sample overrepresents teachers who were 35 or older, whose certification was for secondary grade levels, who initially were certified in 2009 or earlier, and whose last certificate activity was prior to 2001. The analytic sample underrepresents individuals who have not recently taught, who were from racial/ethnic minority groups,[7] who were younger than 35, whose certification was for elementary grade levels, who were initially certified between 2010 and 2018, and whose last certificate activity was in 2001 or later (table A2). The results suggest that the survey respondents included in the analytic sample are not representative of similar nonteaching Michigan teachers, which is a limitation of this study for research questions 2 and 3. The analytic approach section below includes a discussion of how the study team addressed the representativeness of survey sample in the analysis.

Table A2. Comparison of characteristics between nonteaching teachers in the Michigan Department of Education administrative data and in the survey analytic sample

	Nonteaching teachers in Michigan Department of Education data		Survey sample of nonteaching teachers			
Characteristic	Number	Percentage	Number	Percentage	Percentage point difference	Chi-squared standardized residuals 2 standard deviations or greater
Gender						
Female	46,462	75.9	7,443	75.6	-0.3	
Male	14,790	24.1	2,399	24.4	0.3	
Race/ethnicity						
Racial/ethnic minority	6,651	10.8	893	9.0	-1.1	Yes
Nonminority	54,601	89.1	8,949	90.9	1.8	
Age						
Below 35	19,330	31.6	1,684	17.1	-14.5	Yes
35 and older	41,922	68.4	8,158	82.9	14.5	Yes
Grade level of certification						
Elementary	34,671	56.6	5,381	54.7	-1.1	Yes
Secondary	26,072	42.6	4,333	44.0	1.4	Yes
Missing	509	0.8	128	1.3	0.5	
Year of initial certification						
2004 and prior	28,020	45.8	5,964	60.6	14.8	Yes
2005–2009	11,424	18.7	2,008	20.4	1.7	Yes
2010–2014	13,949	22.8	1,422	14.5	-8.3	Yes
2015–2018	7,859	12.8	448	4.6	-8.2	Yes
Year of most recent certification activity						
2000 and prior	3,251	5.3	854	8.7	3.4	Yes
2001–2018	58,001	94.7	8,988	91.3	-3.4	Yes

Note: The percentages are column percentages for each category. Percentages may not sum to 100 due to rounding.
Source: Authors' calculations based on data from the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Additional sample characteristics for research questions 2 and 3. Survey participants provided information in the survey about characteristics that were not collected in the Michigan Department of Education data, such as their household income and the presence of children 5 or younger at home. The majority of survey respondents included in the analytic sample (*n* = 9,089, or 92.4 percent) previously taught, did not have children age 5 or younger at home (*n* = 6,221, or 75.7 percent), did not work in a school or district (*n* = 6,441, or 65.4 percent), and had a household income of $50,000 or greater (*n* = 7,819, or 87.0 percent) (table A3).

[7] The study team grouped teachers who were of American Indian/Alaskan Native, Asian, Black, Hawaiian Native and other Pacific Islander, multiracial, and Hispanic ethnicity into a single category, labeled "Members of racial/ethnic minority groups." This grouping of teachers is aligned with the Michigan Department of Education's current practice.

Table A3. Characteristics of survey respondents included in the analytic sample

Characteristic	Survey sample	
	Number	Percent
Teaching experience		
Previously taught	9,089	92.4
Never taught	753	7.6
Young children at home		
Have children 5 or younger at home	2,001	24.3
Do not have children 5 or younger at home	6,221	75.7
Current employment		
Working in a school or district in nonteaching capacity	3,401	34.6
Not working in a school or district	6,441	65.4
Certification grade level		
Elementary grades	5,381	54.7
Secondary grades	4,461	45.3
Household income		
Household income >= $50,000	7,819	87.0
Household income < $50,000	1,164	13.0

Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Analytic approach

The study team used descriptive analysis and regression models to address all research questions.

Analytic approach for research question 1. To address research question 1, the study team examined differences among teachers currently teaching, teachers who had recently taught, and teachers who had not recently taught on characteristics available in the Michigan Department of Education's administrative data. These characteristics included gender, race/ethnicity, age, and grade level of certification (elementary or secondary). The first step of analysis compared percentages of teachers with these characteristics among teachers who had or had not recently taught with teachers who were currently teaching. The second step used multinomial regression to examine the characteristics that were statistically significant predictors of membership in the recently taught or not recently taught groups, compared with currently teaching. The regression models controlled for the year of initial teaching certification and the year of last certification activity.

Analytic approach for research questions 2 and 3. For research questions 2 and 3, the analysis focused on the most important reasons that participants identified for not teaching and the incentives to return to or enter teaching that they identified as most appealing. Each respondent could select up to three reasons for not teaching as most important from 43 response options. Survey respondents could select up to three incentives that would motivate them to return to or enter teaching from 23 response options. Instead of or in addition to choosing from the available response options, respondents could provide an open-ended answer for each question. For the most important reasons for not teaching, 4,351 survey respondents provided an open-ended answer, and for incentives to return or enter, 1,567 provided an open-ended answer. The study team first analyzed open-ended answers by drawing a random sample of 200 respondents for each item, stratified on previously taught and never taught. The study team identified 10 themes for the reasons for not teaching and seven themes for incentives that were unique (that is, not already represented among the multiple-choice response options). The study team then coded all open-ended responses for these unique themes, which were included in the subsequent analyses. Coders agreed on 97 percent of open-ended responses. Disagreements were resolved in conference.

The study team used frequencies and percentages of respondents choosing the main reasons and incentives to determine which ones were favored most often. Next, the study team used logistic regression to examine the association between the top 10 reasons and top 10 incentives and respondents' characteristics, including teaching

experience (that is, previously taught and never taught in public schools), race/ethnicity, presence of children 5 or younger at home, current occupation, and grade level of certification (elementary or secondary). For incentives, the study team also examined the association between the top 10 incentives and respondents' openness to becoming a PK–12 teacher. The analysis controlled for respondents' gender and household income. The analysis also included as predictors or control variables all characteristics with greater than expected discrepancy between the survey respondents included in the analytic sample and similar nonteaching Michigan teachers to help account for the nonresponse bias (for example, the year of initial certification, age). This approach functions similarly to weighs that would have been based on the same characteristics (Winship & Radbill, 1994; Young & Johnson, 2012). The study team chose this approach because it simplifies the interpretability of regression findings and because the study's goal was not to generate population estimates but to understand the associations between the respondents' characteristics and their responses after accounting for other potential differences.

The study team explored using weights in the descriptive analysis to account for nonresponse bias. The team's main challenge was accounting for the nonresponse bias associated with the previously taught and never taught respondents. The team could not identify the proportion of these individuals among the population of Michigan's certified teachers as school employment data was not available prior to 2013/14. As a workaround, the team identified a proportion of certified teachers who had never taught since becoming certified in 2013/14 since employment records for these teachers were available. Based on this group, responses from 753 survey respondents who self-identified as never taught would have to be upweighted by the factor of 8 to be representative. Because finding teaching positions in Michigan had become easier since 2004, it is likely that the representativeness of survey respondents who have never taught would have been lower if the rate could be calculated using all employment records. Therefore, the team decided against using weights in descriptive analyses as they could introduce considerable bias.

References

Agresti, A. (2013). *Categorical data analysis* (3rd ed.). Hoboken, NJ: Wiley.

Sharpe, D. (2015). Chi-square test is statistically significant: Now what? *Practical Assessment, Research, and Evaluation,* 20, Article 8. Retrieved June 23, 2020, from https://scholarworks.umass.edu/pare/vol20/iss1/8.

Winship, C., & Radbill, L. (1994). Sampling weights and regression analysis. *Sociological Methods & Research, 23*(2), 230–257.

Young, R., & Johnson, D. R. (2012). *To weight or not to weight, that is the question: Survey weights and multivariate analysis*. Paper presented at the 67th annual conference of the American Association for Public Opinion Research, Orlando, Florida.

Appendix B. The Michigan Department of Education's Survey of Teachers Who Do Not Teach

I TEACHING STATUS

Q1a Do you CURRENTLY TEACH any regularly scheduled class(es) in any of grades PK–12 in a public or private school?
(Regularly scheduled classes are those taught at least once per week for a full term.)

If you teach a particular specialty either within or outside of a regular classroom (e.g., you are a special education teacher, an English as a Second Language teacher, or a reading specialist teaching reading), please answer "yes."

If you work in some other capacity at the school (e.g., principal, paraprofessional, or school counselor) and occasionally teach a single lesson or unit of instruction, please answer "no."

1 Yes→ **Go to Q1b**
2 No → **Go to Q3**

Q1b Are you residing in Michigan or within 20 miles of Michigan?

1 Yes → **Go to Q2**
2 No → **End the survey**

Q2 How do you classify your position at your CURRENT school(s), that is, the activity at which you spend most of your time during this school year?

1 Regular full-time or part-time teacher (in any grades PK–12 or comparable ungraded levels in a **public** school)
2 Regular full-time or part-time teacher (in any grades PK–12 or comparable ungraded levels in a **private** school)
3 Itinerant teacher (i.e., your assignment requires you to provide instruction at more than one school)
4 Long-term substitute (i.e., your assignment requires that you fill the role of a regular teacher on a long-term basis, but you are still considered a substitute)
5 Short-term substitute
6 Student teacher
7 Teacher aide
8 School or district administrator (e.g., principal, assistant principal, director, school head)
9 Library media specialist or librarian
10 Other professional staff (e.g., counselor, curriculum coordinator, social worker)
11 Support staff (e.g., secretary)
12 Prefer not to answer

*[If Q2 was displayed, then **End the survey**]*

Q3 What is your current MAIN employment or other occupational status?

1 Working for a **public** PK–12 school or school district in Michigan, but not as a teacher
2 Working for a **private** PK–12 school as a teacher in Michigan
3 Working in the field of PK–12education but not in a school or school district
4 Working in the field of postsecondary education
5 Working outside the field of education (PK–12 and postsecondary), including military service and corporate training
6 Student at a college or university
7 On temporary leave from teaching (e.g., maternity or paternity leave, disability leave, sabbatical)
8 Caring for family members
9 Retired
10 Disabled
11 Unemployed
12 Other, please specify:_____
13 Prefer not to answer

Q4 Have you ever taught any classes in grades PK–12?

1 Yes → **Go to Q5**
2 No → **Go to Q9**

Q5 Think about the last time you taught. What type(s) of school did you LAST teach at?

1 Public, non-charter school
2 Public, charter school
3 Private school
4 Both public (charter and non-charter) and private school
5 I did not work as a teacher in the last school
6 I have never taught. → **Go to Q9**
7 Other – *please specify*:_____
8 Prefer not to answer

Q6 How would you classify your position at the LAST school where you taught, that is, the activity at which you spent most of your time during the LAST school where you taught?

If you held positions at more than one school during the last time you taught, think about the position that occupied most of your time; or if you spent equal time on positions, think about any of the positions you held in your last school.

1 Regular full-time or part-time teacher (in any grades PK–12 or comparable ungraded levels in a **public** school)
2 Regular full-time or part-time teacher (in any grades PK–12 or comparable ungraded levels in a **private** school)
3 Itinerant teacher (i.e., your assignment requires you to provide instruction at more than one school)

4	Long-term substitute (i.e., your assignment requires that you fill the role of a regular teacher on a long-term basis, but you are still considered a substitute)
5	Short-term substitute
6	Student teacher
7	Teacher aide
8	School or district administrator (e.g., principal, assistant principal, director, school head)
9	Library media specialist or librarian
10	Other professional staff (e.g., counselor, curriculum coordinator, social worker)
11	Support staff (e.g., secretary)
12	Prefer not to answer

[If Q3 =7,8,9,10,11,12, skip to Q11; if Q4 =No, or Q5=I have never taught, skip to Q9; Else, continue]

II INFORMATION ON LEAVING OR NOT ENTERING THE TEACHING PROFESSION

Q7 Did you leave your PK–12 teaching position voluntarily or involuntarily (e.g., contract not renewed, laid off, school closed or merged)?

1	I left PK –12 position **voluntarily**. → **Go to Q9**
2	I left PK –12 position **involuntarily**. → **Go to Q8**

Q8 Which of the following best describes why you involuntarily left your PK–12 teaching position?

1	The contract was not renewed.
2	I was laid off by the school or district.
3	The school was closed or merged.
4	I did not meet Highly Qualified Teacher (HQT) requirements
5	Other. Specify_____
6	Prefer not to answer

[If Q8 was displayed, go to Q11]

People choose to stop teaching [(*if Q4 = No or Q5 = I have never taught***) not to teach after getting their certificates] for many reasons.**

Please select "Applies to me" next to any/all the reason(s) that apply to you.

Q9a Personal reasons

	Applies to me
Needed a job more conveniently located (e.g., closer to my house, closer to childcare center).	
Needed to take care of my health.	
Needed to provide childcare for my child or children.	
Needed to provide care for family member(s) (other than my child or children).	
Decided to take courses to improve career	

opportunities WITHIN the field of education.	
Decided to take courses to improve career opportunities OUTSIDE the field of education.	
I was recalled to active military service.	
Spouse or partner job relocation.	
Other, please specify:_____	

Q9b Employment factors

	Applies to me
I wanted a higher salary than I could get teaching.	
I did not want compensation to be tied to student performance.	
I wanted better on-the-job benefits than I could get teaching (e.g., vacation time, health insurance).	
I wanted better retirement benefits than I could get teaching.	
I wanted a more flexible schedule than I could get teaching.	
I wanted a better job security than I could get teaching.	
I wanted better career growth opportunities than I could get teaching.	
I couldn't get a full-time position.	
I couldn't get a part-time position.	
Other, please specify: _____	

Q9c Aspects of teaching I found particularly difficult

	Applies to me
Handling a range of classroom management or discipline situations.	
Using a variety of instructional methods.	
Teaching my subject matter.	
Using computers in classroom instruction.	
Using formative assessment.	
Using summative assessment.	
Using data from assessments to inform instruction.	
Differentiating instruction.	
Teaching students with special needs.	

Meeting state content standards Other, please specify:_____	

[If Q4 = No, or Q5 = I have never taught, skip to Q10]

Q9d Classroom characteristics

Please focus on your experience at your last school.

	Applies to me
My classroom assignments didn't match my certificate endorsement(s).	
I did not have enough autonomy over my classroom(s).	
Class sizes were too large.	
I had limited classroom resources for teaching (e.g., books, technology, supplies).	
I spent too much instructional time for test preparation.	
I spent too much time on paperwork and other duties unrelated to instructing students.	
I did not have a good relationship with my students.	
I did not have a good way of communicating with families of my students.	
Other, please specify:_____	

Q9e Working conditions

Please focus on your experience at your last school.

	Applies to me
I did not have influence over school-level decisions.	
Access to professional development for new teachers was inadequate (e.g., mentorship for new teachers).	
Access to professional development for experienced teachers was inadequate.	
Quality of professional development was inadequate.	
Teacher collaboration was inadequate.	
School leadership support was inadequate.	
I had too many duties outside of teaching (e.g., recess duty, lunch duty).	
I was dissatisfied with the school building and maintenance (e.g., issues with heat/cold, cleanliness, structure)	
Other, please specify:_____	

Among all the reasons you chose, which ones do you consider the most important in your decision to leave the position [(*If Q4=No or Q5 =I have never taught***) not to enter the position] of a PK–12 teacher?**

[Display the reasons that respondents selected "Yes"]

1 _____

2 _____

3 _____

[If Q4 = No or Q5 =I have never taught, skip to Q15; Else, continue]

III YOUR IMPRESSIONS OF TEACHING AND OF YOUR CURRENT JOB

Q11 You mentioned that you have taught at least one grade PK-12 in a Michigan school. Please answer the following questions based on your last teaching experience in a Michigan school.

Excluding time spent on medical leave, maternal/paternal leaves or sabbatical, how many school years did you work as a full- and/or part-time PK–12 teacher in Michigan?
Do NOT include time spent as a student teacher.

Full-time teacher is defined by 24 or more hours per week assigned as a teacher.
Part-time teacher is defined by less than 24 hours per week assigned as a teacher.

Please round up the number to the nearest whole number if you only taught a portion of a year.

_____ Number of years as a full-time teacher

_____ Number of years as a part-time teacher

Q12 When did you leave your last Michigan PK–12 teaching position?

1 Less than 1 year ago
2 1 – 3 years ago
3 4 – 5 years ago
4 6 – 10 years ago
5 More than 10 years ago

[If Q3 = 6-12, skip to Q15; otherwise, continue]

Q13 How would you rate your current position compared to a Michigan PK-12 teacher in terms of each of the following aspects?

[Display Q14 as checklist]

	Better in teaching	About the same	Better in current position
Opportunities for professional development			
Opportunities for learning from colleagues			
Social relationships with colleagues			
Recognition and support from administrators/managers			
Safety of environment			
Influence over workplace policies and practices			
Autonomy or control over your own work			
Professional prestige			
Procedures for performance evaluation			
Manageability of workload			
Ability to balance personal life and work			
Availability of resources and materials/equipment for doing your job			

General work conditions	
Job security	
Intellectual challenge	
Sense of personal accomplishment	
Opportunities to make a difference in the lives of others	
Schedule flexibility	
Salary	
Benefit	
Other, please specify: _____	

Q14 Thinking about all the factors that influence your job satisfaction, overall, how satisfied are you with your current position compared to the position of a Michigan PK–12 teacher?

1 More satisfied in teaching
2 More satisfied in current position
3 No difference

IV EDUCATION ACTIVITIES AND FUTURE PLANS

Q15 Would you consider returning to the position [*(if Q4 = No or Q5 = I have never taught)* **starting a position] of a PK–12 teacher in Michigan?**

1 Yes → **Go to Q16**
2 No → **Go to Q19**

Q16 How certain are you to return to [*(if Q4 = No or Q5 = I have never taught)* **start] teaching in Michigan on a scale of 1 to 10 with 1 being the least certain and 10 being the most certain?**

0 1 2 3 4 5 6 7 8 9 10

Q17 How soon might you return to the position [*(if Q4 = No or Q5 = I have never taught)* **starting a position] of a PK–12 teacher in Michigan?**

1 Later this school year (2019-20)
2 Next school year (2020-21)
3 Within 5 years school year (2021-26) or later
4 Undecided

Q18 At what level(s) would you like to teach?

1 PK
2 K to 2nd grade
3 3rd to 5th grade
4 6th to 8th grade
5 9th to 12th grade

6	Across grades (applies to teachers who usually teach multiple grades, for example, special education or music.)

Q19 Which of the following factors could persuade you to return to the position [*(if Q4 = No or Q5 = I have never taught)* **starting a position] of a PK–12 teacher in Michigan schools?** *[Displayed as a checklist]*
Please select "Applies to me" next to any/all the factor(s) that apply to you.

	Yes
Ability to maintain your teacher retirement benefits [*access teacher benefits if Q4 = No*]	
State certification reciprocity (a state's acceptance of teacher certifications from other states)	
An easier way to renew or earn certification	
A less costly way to renew or earn certification.	
Smaller class sizes or smaller student load	
Availability of full–time teaching positions	
Availability of part–time teaching positions	
Forgiveness of your student loans	
Housing incentives (e.g., subsidies, rent assistance, low interest loans, relocation assistance)	
An increase in salary	
An improvement in benefits (including insurance and retirement plans)	
Availability of suitable childcare options like subsidies and access to childcare	
Availability of teaching positions in desired grade-level(s)	
Availability of teaching positions in desired subject(s)	
Availability of mentoring support for new teachers	
Flexibility on curriculum choices and/or instructional methods	
High quality professional development opportunities	
Financial assistance for college courses (e.g., for advanced degree, additional endorsements)	
More flexibility with scheduling, including flexible personal days	
Removal of duties not directly related to teaching (e.g., lunch or recess duties)	
Better support from your school leaders	
Better coaching from school or district	
None of the factors that are listed	

Q20a Would any factors other than the ones listed above persuade you to return to [*(if Q4 = No or Q5 = I have never taught)* **starting] teaching in** PK–12 **in Michigan?** *[Display if any factor was selected]*

1	Yes, what factors are they? Please specify: _____ _____
2	No

Q20b You have not selected any factors that could persuade you to return to the position [*(if Q4 = No or Q5 = I have never taught)* **starting a position] of a PK–12 teacher in Michigan schools. Are there any factors that could persuade you?**

[Display if no factor was selected, or "none of the factors that are listed" was selected]

1 Yes, these factors include:
_____
_____

2 No, please explain: _____

[If Q20b =No then skip to Q22]

Q21 Among all the reasons you chose, which ones do you consider the most important in your decision to return to a position [*(if Q4 = No or Q5 = I have never taught)* **starting a position] in PK–12?**
Please select the top three reasons that are the most important to you. Please skip this question if the number of reasons you selected is already three or fewer.

1 _____
2 _____
3 _____

V BACKGROUND INFORMATION

The following section asks about your background information. Your responses will be used for classification purposes only.

Q22 What is your education level?

1 Bachelor's degree (BA, BS)
2 Some graduate or professional education, but no degree
3 Master's degree (MA, MS), but no 30 degree
4 Doctorate degree (PhD, EdD)
6 Professional degree beyond bachelor's degree (MD, JD, DDS, LLB)
5 Prefer not to answer

Q23 Including yourself, how many family members were living in your household or were financially dependent on you (or your spouse) during 2019?
Please skip this question if you prefer not to answer.

_____ Number of family members

Q24 How many family members counted in the previous item were 5 years of age or younger?
Enter 0 if none. Please skip this question if you prefer not to answer.

_____ Number of family members were 5 or younger

Q25 Which category represents the total combined BEFORE-TAX income of ALL FAMILY MEMBERS in your household during 2019? Include your own income. Include money from jobs, net business or farm income, pensions, dividends, interest, rent, Social Security payments, and any other income received by family members in your household.

1 Less than $35,000
2 $35,000 – $49,999
3 $50,000 – $74,999
4 $75,000 – $99,999
5 $100,000 – $149,999
6 $150,000 or more
7 Prefer not to answer

[END OF SURVEY]

Appendix C. Supplemental analyses

This appendix includes detailed findings for the analyses included in the study report.

Research question 1: Comparison of characteristics among teachers currently teaching, recently taught, and not recently taught

Using the Michigan Department of Education's administrative data, the descriptive analysis for research question 1 used frequencies and percentages to describe and compare the distribution of characteristics among teachers currently teaching and those having recently taught or not having recently taught (table C1). The study team examined potential associations between teachers' teaching status (recently taught and not recently taught versus currently teaching) and their characteristics using multinomial regression. The results of multinomial regression suggest that teachers who have not recently taught and teachers who have recently taught have a significantly greater probability of being from racial/ethnic minority groups than teachers currently teaching (1.11 and 1.68 probabilities, respectively) (table C2). The results also suggest that teachers who have recently taught, compared with teachers currently teaching, have greater probabilities of being 35 years or older and certified in secondary grade levels (0.92 and 1.1 probabilities, respectively).

Table C1. Teachers who had previously taught and had never taught differed from teachers currently teaching by race/ethnicity, age, year of initial certification, and year of most recent certification activity, 2013/14–2017/18

	Not recently taught (*n* = 42,885)		Recently taught (*n* = 18,367)		Currently teaching (*n* = 80,558)	
Characteristic	Number	Percentage	Number	Percentage	Number	Percentage
Gender						
Female	32,193	76.1	13,812	75.2	61,050	75.8
Male	10,092	23.9	4,555	24.8	19,508	24.2
Race/ethnicity						
Racial/ethnic minority	4,044	9.6	2,505	13.6*	6,884	8.5
Nonracial/ethnic minority	38,197	90.3	15,862	86.4*	73,674	91.5
Missing	44	0.1	0	0.0	0	0.0
Age						
Younger than 35	13,002	30.7*	4,237	23.1	16,420	20.4
35 and older	29,283	69.3*	14,130	76.9	64,138	79.6
Certification grade level						
Elementary	24,145	57.1	10,177	55.4	46,709	58.0
Secondary	17,844	42.2	7,976	43.4	32,943	40.9
Missing	291	0.7	214	1.2	906	1.1
Year of initial certification						
Before 2004	18,394	43.5*	9,367	51.0*	45,717	56.8
2005–2009	7,489	17.7	3,828	20.8	15,048	18.7
2010–2014	9,506	22.5*	4,307	23.5*	12,785	15.9
2015–2018	6,897	16.3*	865	4.7	7,009	8.7
Year of most recent certification activity (for example, renewal)						
Before 2001	2,805	6.6*	406	2.2	1,281	1.6
2001–2018	39,480	93.4*	17,961	97.8	79,277	98.4

* Indicates at least 5 percentage point difference compared with certified teachers who are currently teaching.
Note: The percentages were reported in column percentage.
Source: Authors' calculations based on certification data from the Michigan Department of Education.

Table C2. Associations between teacher characteristics and teaching experience in Michigan public schools

Variables	Not recently taught (*n* = 42,885) Relative risk ratio (standard error)	Recently taught (*n* = 18,367) Relative risk ratio (standard error)
Characteristic		
Male	1.00 (0.02)	1.01 (0.02)
Racial/ethnic minority	1.11*** (0.02)	1.68*** (0.01)
Age 35 or older	1.02 (0.02)	0.92** (0.03)
Certified for secondary grade level[a]	1.02 (0.01)	1.1*** (0.02)
Control variables		
First certified 2004 or prior[b]	0.36*** (0.01)	1.67*** (0.06)
First certified 2005–2009[a]	0.51*** (0.01)	2.10*** (0.08)
First certified between 2010–2014[a]	0.76*** (0.02)	2.75*** (0.11)
Last certification activity in 2000 or before	6.26*** (0.22)	1.60*** (0.09)

* Significant at $p < .05$; ** significant at $p < 0.01$; *** significant at $p < 0.001$.

Note: Relative risk ratios were generated from a multinomial regression, with those currently teaching as base group. Estimates indicate whether certain groups of certified teachers have higher probabilities of having a characteristic. For example, the probability of a certificate holder who has never taught being initially certified between 2005 and 2009 is 1.43 times that of a certificate holder who is currently teaching. The magnitude of values less than 1 was converted using the number's reciprocal (1/relative risk) and the other category representing the reference category.

a. Reference group is those who are certified to teach at elementary grade levels.

b. Reference group is those who were first certified after 2014.

c. Reference group is those whose most recent certification activity, such as renewal and advancement, was after 2000.

Source: Authors' calculations based on multinomial regression model using certification data from the Michigan Department of Education.

Research question 2: Reasons for not teaching

The study team conducted two analyses to address the second research question. First, the study team calculated the frequency with which survey respondents provided various reasons as their top three reasons for not teaching, and the percentages of respondents who chose those reasons. The second analysis examined the association between respondents' characteristics and their main reasons for not teaching.

The most frequently provided reason for not teaching was "wanted higher salary" (33.1 percent); higher salary was a main reason for not teaching for survey respondents with different characteristics. The frequencies with which respondents provided reasons for not teaching, including multiple-choice and open-ended responses, ranged from 1,753 for "wanted a higher salary" (33.1 percent) to less than 4 for "called up for military service" (less than 0.1 percent) (table C3). Higher salary was the most frequently selected reason for not teaching by survey respondents with different characteristics (29.4 percent to 40.1 percent of respondents with different characteristics selected this reason). Only respondents who never taught selected "could not obtain a full-time position" more frequently than salary (53.4 percent versus 22.1 percent) (table C4).

Table C3. More survey respondents selected wanting a higher salary as their main reason for not teaching than any other reason, 2019/20

Possible reason for not teaching	Number of respondents providing this reason	Percentage of respondents providing this reason
Wanted a higher salary	1,753	33.1
Became an instructional leader[a]	1,384	26.1
Wanted more career growth opportunities	837	15.8
Took courses to improve career opportunities *WITHIN* education	584	11.0
Could not find a full-time position	549	10.4
Wanted more a flexible schedule	526	9.9
Had difficulty managing classroom/discipline	521	9.8
School leadership support was inadequate[b]	518	9.8
Needed to care for children	516	9.7
Spent too much time on paperwork and other noninstructional duties[b]	515	9.7
Classes were too large[b]	366	6.9
Took a nonteaching school position such as counselor or athletic director	340	6.4
Did not want pay linked with student performance	244	4.6
Had limited classroom resources[b]	206	3.9
Spent too much time on test preparation[b]	206	3.9
Needed to take care of my health	197	3.7
Burned out or job became too stressful[a]	188	3.6
Spent too much time on other duties such as recess or hall monitor[b]	173	3.3
Took courses to improve career opportunities *OUTSIDE* education	172	3.2
Needed better job security	151	2.9
Had no influence on school-level decisions[b]	150	2.8
Spouse relocation	147	2.8
Needed a job that was more conveniently located	140	2.6
Problems with parents	139	2.6
Could not obtain a part-time position	130	2.5
Not enough autonomy in classroom[b]	130	2.5
Problems with standardized testing	125	2.4
Took a postsecondary position in teacher education	121	2.3
Needed better benefits	116	2.2
Needed better retirement benefits	106	2.0
Had difficulty providing instruction to students with special needs	92	1.7
Had difficulty meeting state content standards	83	1.6
Inadequate teacher collaboration	82	1.5
Quality of professional development was inadequate[b]	72	1.4
Professional development for new teachers (coaching) was inadequate[b]	67	1.3
Needed to care for family members (other than children)	66	1.2
Lack of respect from students, parents, society[a]	62	1.2
Teaching assignment did not match endorsement area[b]	59	1.1
Had difficulty differentiating instruction	53	1.0
Dissatisfied with school building and maintenance[b]	47	0.9
Professional development for experienced teachers was inadequate[b]	46	0.9
Problems with teacher evaluation[a]	43	0.8
Difficulty using data inform instruction	34	0.6
Retired[a]	28	0.5
State or district politics[a]	28	0.5
Did not have good relationship with students[b]	12	0.2
Had difficulty with a variety of instructional methods	12	0.2
Had difficulty using computers in instruction	12	0.2

Possible reason for not teaching	Number of respondents providing this reason	Percentage of respondents providing this reason
Had difficulty using summative assessment	11	0.2
Had difficulty teaching my subject matter	10	0.2
Had difficulty using formative assessment	8	0.2
Unable to communicate with parents[a]	6	0.1
Called up for military service	< 4	< 0.1

Note: Percentages are based on number of respondents who provided a main reason for not teaching (*N* = 5,294). Percentages are unweighted.
a. The options were coded from open-ended responses by survey participants.
b. Only those who had previously taught responded to this question (*N* = 4,886).
Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

The odds for respondents' choice of specific reasons for not teaching varied by whether the respondents had ever taught before, by their race/ethnicity, by the presence of young children in the home, by their place of employment, and by the grade levels that they were certified to teach. The study team examined whether certain types of respondents were more likely than others to choose specific reasons for not teaching. The logistic regression analyses had respondents' selection of a reason as the binary outcome variable, and the predictors of interest were whether they had previously taught, their race/ethnicity, the presence of child(ren) 5 or younger in the home, their place of employment, and whether their teaching certificate was for elementary grade levels or secondary grade levels. The models controlled for other characteristics that the Michigan Department of Education found less policy relevant and to account for nonresponse, including respondents' gender, household income, the year of initial certification, age, and the year of last certification activity. These regression models were run on the top 10 most frequently provided reasons for not teaching (table C5).

Table C4. Percentages of survey respondents identifying the top 10 reasons for not teaching, by group, 2019/20

	Teaching experience		Race/ethnicity		Having child(ren) 5 or younger in home		Employment in PK–12 schools or districts		Grade levels of certificate	
Reason for not teaching	Previously taught	Never taught	Racial/ ethnic minority	Not racial/ ethnic minority	Young children	No young children	Working in schools or districts in nonteaching capacity	Not working in schools or districts	Elementary	Secondary
Wanted a higher salary	34.0 (1)	22.1 (2)	38.5 (1)	32.6 (1)	40.1 (1)	31.6 (1)	36.9 (1)	29.4 (1)	31.1 (1)	35.3 (1)
Became administrator or instructional coach	24.0 (2)	2.5 (16)	20.4 (2)	22.5 (2)	16.5 (3)	25.0 (2)	35.8 (2)	7.1 (10)	21.7 (2)	23.1 (2)
Wanted more career growth opportunities	16.5 (3)	7.8 (8)	19.6 (3)	15.4 (3)	17.0 (2)	15.8 (3)	19.8 (3)	11.6 (5)	14.6 (3)	17.2 (3)
Took courses to improve career opportunities in education	11.3 (4)	7.8 (9)	15.7 (4)	10.6 (5)	13.4 (6)	10.5 (5)	17.0 (4)	4.3 (19)	11.3 (5)	10.7 (4)
Could not obtain a full-time position	6.8 (11)	53.4 (1)	7.5 (10)	10.7 (4)	10.0 (8)	10.7 (4)	5.5 (12)	16.1 (2)	10.5 (8)	10.2 (6)
Wanted more flexible schedule	9.8 (7)	11.3 (6)	7.7 (8)	10.2 (7)	14.8 (4)	8.5 (9)	8.1 (7)	12.3 (4)	9.7 (9)	10.2 (7)
Had difficulty managing classroom/discipline	9.7 (8)	12.0 (5)	10.1 (7)	9.8 (9)	8.3 (10)	10.0 (6)	8.3 (6)	11.4 (7)	10.6 (7)	9.0 (8)
School leadership support was inadequate	10.6 (5)	–	11.1 (5)	9.7 (10)	10.4 (7)	9.7 (7)	7.0 (9)	12.9 (3)	9.3 (10)	10.3 (5)
Needed to care for children	9.4 (9)	14.2 (3)	4.8 (15)	10.2 (6)	14.1 (5)	8.1 (10)	7.8 (8)	11.6 (6)	12.6 (4)	6.5 (11)
Spent too much time on paperwork and other noninstructional duties	10.5 (6)	–	7.7 (9)	9.9 (8)	9.9 (9)	9.7 (8)	9.3 (5)	10.1 (8)	10.8 (6)	8.6 (9)

– indicates that the reason was not offered to certified teachers who never taught.

Note: Regressions are based on survey respondents who offered whom all predictor information was available (*N* = 4,022). Numbers in parentheses represent the ranking of that reason for that group.

Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Table C5. Survey respondents' characteristics were associated with their reasons for not teaching, 2019/20

Predictors	Reason for not teaching				
	Wanted a higher salary	Became instructional leader	Wanted more career growth opportunities	Took courses to improve career opportunities within education	Could not find a full-time position
Previously taught[a]	1.73***	8.29***	1.81**	0.95	0.06***
	(0.25)	(3.05)	(0.38)	(0.21)	(0.01)
Racial/ethnic minority	0.78*	0.98	0.79	0.60**	1.16
	(0.09)	(0.14)	(0.12)	(0.10)	(0.26)
Children younger than 5 in home	1.16	0.83	1.11	1.35*	0.69*
	(0.10)	(0.09)	(0.12)	(0.17)	(0.10)
Working in a school or district in nonteaching role	1.57***	5.77***	1.91***	4.53***	0.30***
	(0.12)	(0.60)	(0.18)	(0.61)	(0.04)
Certified for secondary grade levels	1.02	0.95	1.11	0.95	0.96
	(0.07)	(0.08)	(0.10)	(0.10)	(0.12)
Control variables					
Male	1.95***	2.03***	1.32**	1.38**	0.87
	(0.15)	(0.18)	(0.13)	(0.16)	(0.12)
Household income ≥ $50,000	2.28***	1.94**	2.86***	2.22**	0.49***
	(0.32)	(0.42)	(0.64)	(0.60)	(0.07)
First certified before 2004[b]	0.87	1.86	1.29	1.13	0.74
	(0.17)	(0.62)	(0.35)	(0.39)	(0.21)
First certified between 2004 and 2009[b]	1.41	1.22	1.23	1.36	1.47
	(0.28)	(0.42)	(0.34)	(0.47)	(0.42)
First certified between 2009 and 2014[b]	1.21	0.96	0.98	0.81	1.62
	(0.24)	(0.34)	(0.27)	(0.29)	(0.45)
35 years old or older	0.65**	1.47	0.57**	0.69	2.03***
	(0.08)	(0.32)	(0.10)	(0.15)	(0.40)
Last certification activity before 2000	1.02	0.93	1.01	0.93	0.52**
	(0.14)	(0.13)	(0.17)	(0.18)	(0.11)
Constant	0.15***	0.01**	0.04***	0.04***	3.41**
	(0.05)	(0.00)	(0.02)	(0.02)	(1.43)

Table continues

Predictors	Reason for not teaching				
	Wanted a more flexible schedule	Had difficulty managing classroom/ discipline	School leadership support was inadequate	Needed to provide childcare to child(ren)	Spent too much time on paperwork and other non-instructional duties
Previously taught[a]	0.99 (0.19)	1.02 (0.20)	—	0.70 (0.13)	—
Racial/ethnic minority	1.16 (0.24)	1.1 (0.22)	0.89 (0.16)	1.89* (0.49)	1.48 (0.32)
Children younger than 5 in home	1.85*** (0.23)	0.84 (0.12)	0.95 (0.13)	2.63*** (0.37)	1.08 (0.15)
Working in a school or district in nonteaching role	0.66*** (0.07)	0.76* (0.09)	0.56*** (0.06)	0.64*** (0.08)	0.88 (0.10)
Certified for secondary grade levels	1.10 (0.12)	0.85 (0.09)	1.24* (0.14)	0.59*** (0.08)	0.85 (0.10)
Control variables					
Male	0.46*** (0.06)	0.61*** (0.08)	0.67** (0.09)	0.11*** (0.03)	0.78 (0.10)
Household income >= $50,000	1.95** (0.42)	0.64** (0.10)	0.86 (0.14)	0.92 (0.18)	0.90 (0.17)
First certified before 2004[b]	1.40 (0.42)	1.01 (0.31)	0.89 (0.23)	2.79* (1.13)	2.35* (0.85)
First certified between 2004-2009[b]	1.16 (0.35)	0.92 (0.28)	0.82 (0.22)	1.71 (0.69)	1.71 (0.62)
First certified between 2009-2014[b]	1.23 (0.36)	1.48 (0.28)	0.80 (0.21)	1.57 (0.63)	1.59 (0.57)
35 years old or older	0.65* (0.12)	1.22 (0.43)	0.93 (0.17)	0.96 (0.21)	0.79 (0.17)
Last certification activity before 2000	0.85 (0.18)	0.80 (0.16)	1.68* (0.41)	0.41*** (0.07)	1.81* (0.43)
Constant	0.08*** (0.04)	0.20*** (0.08)	0.14*** (0.06)	0.13*** (0.07)	0.03*** (0.02)

* Significant at $p < .05$; ** significant at $p < 0.01$; *** significant at $p < 0.001$.

Note Regressions are based on survey respondents for whom all predictor information was available (N = 4,022). Numbers are odds ratios generated from logistic regression models, and numbers in parentheses are the associated standard errors. Estimates indicate whether certain groups of certified teachers have higher odds of selecting the reason for not teaching. For example, the odds of a certificate holder with previous teaching experience selecting "I wanted a higher salary" as a reason is 1.73 times that of a certificate holder who never taught. Values less than 1 indicate that the reference group had higher odds of selecting the reason, compared with those identified by the predictor name.

a. Respondents who never taught were not presented with reasons involving school leadership or amount of time spent performing noninstructional tasks.

b. Reference group are those who were first certified after 2014.

Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Research question 3: Incentives to motivate teachers to return to or enter teaching in public schools

The study team conducted two analyses to address the third research question. These analyses were the same as the analyses conducted to address the second research question. First, the study team examined the frequency with which survey respondents provided the top three incentives that would motivate them to teach in public schools. The second analysis examined the association between respondents' characteristics and top incentives.

The most frequently provided incentive for return to teaching was "an increase in salary"; salary was the most frequently provided incentive for survey respondents with different characteristics. The frequencies with which respondents provided incentives for return to teaching, including multiple-choice and open-ended responses, ranged from 3,524 for "an increase in salary" (35.8 percent) and 10 for "more autonomy in the classroom" (0.1 percent) (table C6). Higher salary was the most frequently provided incentive for return to teaching by survey respondents with different characteristics (40.4 percent to 54.2 percent of respondents with different characteristics provided this incentive) (table C7).

Table C6. More survey respondents identified an increase in salary as an incentive that would motivate them to teach than any other incentive, 2019/20

Possible incentive for starting or returning to teaching	Number of respondents providing this incentive	Percentage of respondents providing this incentive
An increase in salary	3,524	35.8
An easier way to renew or earn certification	1,964	20.0
Smaller class sizes or smaller student load	1,525	15.5
Ability to maintain your teacher retirement benefits	1,485	15.1
A less costly way to renew or earn certification	1,261	12.8
Forgiveness of your student loans	1,224	12.4
An improvement in benefits (including insurance and retirement plans)	886	9.0
Availability of part-time teaching positions	794	8.1
Better support from school leaders	790	8.0
Availability of full-time teaching positions	771	7.8
Flexibility on curriculum choices and/or instructional methods	729	7.4
More flexibility with scheduling, including flexible personal days	681	6.9
Availability of teaching positions in desired subject(s)	549	5.6
Availability of teaching positions in desired grade level(s)	486	4.9
Removal of duties not directly related to teaching (for example, lunch or recess duties)	474	4.8
Financial assistance for college courses (for example, for advanced degree, additional endorsements)	261	2.7
State certification reciprocity (a state's acceptance of teacher certifications from other states)	205	2.1
High-quality professional development opportunities	158	1.6
Availability of suitable childcare options like subsidies and access to childcare	155	1.6
Availability of mentoring support for new teachers	148	1.5
Change in standardized testing[a]	132	1.3
Help with discipline[a]	114	1.2
Better coaching from school or district	93	0.9
Change in teacher evaluation[a]	77	0.8
More respect or appreciation from students, parents, or society[a]	66	0.7
Better collaboration with parents[a]	60	0.6
Housing incentives (for example, subsidies, rent assistance, low interest loans, relocation assistance)	54	0.5
If lost/left current position[a]	34	0.3
More autonomy in the classroom[a]	10	0.1

Note: Percentages are based on number of respondents who provided top incentives for returning to or entering teaching (*N* = 7,653). Percentages are unweighted.

a. The options were coded from open-ended responses by survey participants.

Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

The odds of respondents' providing specific incentives for returning to teaching varied by whether they had ever taught before, by their race/ethnicity, by the presence of young child(ren) in the home, by their place of employment, by the grade levels of their certificates, and by whether they would consider returning to teaching.
The study team used logistic regression to examine the association between respondents' characteristics and the likelihood of their providing top 10 incentives. The characteristics included whether respondents had previously taught, their race/ethnicity, the presence of child(ren) 5 or younger at home, their place of employment, whether their teaching certificate was for elementary grade levels or secondary grade levels, and their willingness to return to teaching. The regression model included control variables such as gender, household income, the year of obtaining first teaching certification, the year of last certification activity, and age. The regression models were run on each of the 10 incentives that were the most frequently identified by survey respondents (table C8).

Table C7. Percentages of survey respondents identifying the top 10 incentives that would motivate them to teach, by characteristic, 2019/20

	Teaching experience		Race/ethnicity		Having child(ren) 5 or younger in home		Employment in PK–12 schools or districts	
Incentives for return to teaching	Previously taught	Never taught	Racial/ ethnic minority	Not racial/ ethnic minority	Young children	No young children	Working in nonteaching capacity	Not working in schools or districts
An increase in salary	46.6 (1)	39.0 (1)	48.9 (1)	45.7 (1)	53.7 (1)	43.9 (1)	54.2 (1)	42.4 (1)
An easier way to renew or earn certification	24.8 (2)	36.2 (2)	21.3 (3)	26.1 (2)	28.1 (2)	24.7 (2)	16.1 (5)	29.9 (2)
Smaller class sizes or smaller student load	19.8 (4)	21.8 (5)	18.9 (5)	20.0 (3)	19.9 (3)	19.4 (4)	17.7 (4)	20.9 (3)
Ability to maintain retirement benefits	20.8 (3)	2.5 (10)	20.6 (4)	19.3 (4)	10.2 (8)	22.4 (3)	22.8 (2)	17.9 (5)
A less costly way to renew/earn certification	15.8 (5)	24.8 (3)	12.6 (6)	16.9 (5)	16.9 (5)	16.2 (5)	13.0 (7)	18.0 (4)
Forgiveness of student loans	15.7 (6)	19.2 (6)	34.0 (2)	14.2 (6)	18.2 (4)	15.6 (6)	20.4 (3)	14.0 (6)
An improvement in benefits (including insurance/retirement plans)	12.0 (7)	6.7 (8)	9.7 (7)	11.8 (7)	9.9 (9)	12.2 (7)	15.7 (6)	9.8 (10)
Availability of part-time teaching positions	10.5 (9)	9.3 (7)	7.8 (10)	10.6 (8)	11.6 (6)	9.9 (9)	6.1 (10)	12.3 (7)
Better support from school leaders	10.6 (8)	6.5 (9)	9.0 (8)	10.5 (9)	10.1 (7)	9.9 (9)	7.2 (9)	11.7 (8)
Availability of full-time teaching positions	8.8 (10)	24.5 (4)	8.0 (9)	10.3 (10)	9.5 (10)	10.4 (8)	7.3 (8)	11.3 (9)

	Grade levels associated with certificate		Consideration of return to teaching	
Incentives for return to teaching	Elementary grades	Secondary grades	Would consider	Would not consider
An increase in salary	45.7 (1)	46.7 (1)	40.4 (1)	53.8 (1)
An easier way to renew or earn certification	26.0 (2)	25.1 (2)	32.2 (2)	16.6 (5)
Smaller class sizes or smaller student load	22.0 (3)	17.7 (4)	16.5 (5)	24.4 (2)
Ability to maintain teacher retirement benefits	18.6 (4)	20.1 (3)	19.3 (4)	19.6 (3)
A less costly way to renew or earn certification	17.3 (5)	15.6 (6)	19.7 (3)	12.1 (8)
Forgiveness of student loans	16.1 (6)	15.9 (5)	14.9 (6)	17.5 (4)
An improvement in benefits (including insurance/retirement plans)	10.9 (8)	12.5 (7)	10.1 (9)	13.6 (6)
Availability of part-time teaching positions	11.6 (7)	8.9 (10)	11.5 (8)	8.7 (9)
Better support from your school leaders	10.6 (9)	10.2 (9)	8.9 (10)	12.3 (7)
Availability of full-time teaching positions	9.6 (10)	10.5 (8)	14.7 (7)	3.8 (10)

Note: Numbers in parentheses represent the ranking of that reason for that group.
Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.

Table C8. Survey respondents' characteristics were associated with the incentives that might motivate their re-entry to teaching, 2019/20

	Incentives for bringing teachers back to or to start teaching				
Predictor	An increase in salary	An easier way to renew or earn certification	Smaller class sizes or smaller student load	Ability to maintain teacher retirement benefits	A less costly way to renew or earn certification
Taught previously	1.59*** (0.16)	0.60*** (0.06)	1.04 (0.12)	7.38*** (2.19)	0.55*** (0.06)
Racial/ethnic minority	1.07 (0.1)	0.81 (0.09)	0.90 (0.1)	1.01 (0.12)	0.74* (0.1)
Children younger than 5 in home	1.24*** (0.08)	0.96 (0.07)	0.98 (0.08)	0.71*** (0.07)	0.93 (0.08)
Consider coming back to teach	0.56*** (0.03)	2.5*** (0.16)	0.60*** (0.04)	1.12 (0.07)	1.79*** (0.13)
Working in a school or district in nonteaching role	1.73*** (0.1)	0.45*** (0.03)	0.87* (0.06)	0.97 (0.07)	0.72*** (0.06)
Certified for secondary grade levels[a]	0.94 (0.05)	0.95 (0.06)	0.85* (0.06)	1.08 (0.07)	0.99 (0.07)
Control variables					
Male	1.42*** (0.09)	0.87 (0.07)	0.66*** (0.06)	1.36*** (0.11)	0.64*** (0.06)
Household income >=$50,000	1.66*** (0.13)	0.82* (0.07)	0.98 (0.09)	1.33** (0.14)	0.54*** (0.05)
First certified 2004 or before[b]	0.82 (0.11)	1.82*** (0.32)	0.83 (0.14)	14.12*** (6)	2.59*** (0.6)
First certified 2005–2009[b]	1.20 (0.17)	2.86*** (0.5)	0.75 (0.12)	4.30*** (1.85)	3.86*** (0.88)
First certified between 2010 and 2014[b]	1.18 (0.16)	2.40*** (0.42)	1.04 (0.16)	2.42* (1.06)	2.4*** (0.55)
35 years old or older	0.60*** (0.06)	1.21 (0.13)	0.90 (0.1)	1.2 (0.24)	1.01 (0.13)
Last certification activity in 2000 or before[c]	0.71*** (0.07)	2.21*** (0.23)	0.77* (0.1)	0.95 (0.1)	1.99*** (0.23)
Constant	0.55*** (0.1)	0.28*** (0.05)	0.39*** (0.08)	0.03*** (0.01)	0.32*** (0.07)

Table continues

Predictor	Incentives to encourage teachers to re-enter or enter teaching				
	Forgiveness of student loans	An improvement in benefits (including insurance and retirement plans)	Availability of part-time teaching positions	Better support from school leaders	Availability of full-time teaching positions
Taught previously	0.83 (0.10)	1.88*** (0.36)	1.05 (0.16)	1.78** (0.32)	0.35*** (0.04)
Racial/ethnic minority	3.06*** (0.29)	0.66** (0.10)	0.71* (0.12)	0.76 (0.12)	0.78 (0.12)
Children younger than 5 in home	1.05 (0.09)	0.89 (0.09)	1.29* (0.13)	0.90 (0.09)	0.63*** (0.07)
Consider coming back to teach	0.76*** (0.05)	0.75*** (0.06)	1.39*** (0.12)	0.72*** (0.06)	4.36*** (0.48)
Working in a school or district in nonteaching role	1.86*** (0.14)	1.52*** (0.12)	0.46*** (0.05)	0.62*** (0.06)	0.68*** (0.07)
Certified for secondary grade levels [a]	0.95 (0.07)	1.05 (0.09)	0.98 (0.08)	0.97 (0.08)	1.01 (0.09)
Control variables					
Male	1.03 (0.09)	1.64*** (0.14)	0.25*** (0.04)	0.84 (0.09)	1.37** (0.14)
Household income ≥ $50,000	0.79* (0.08)	1.43** (0.19)	1.57*** (0.21)	0.72** (0.08)	0.57*** (0.06)
First certified 2004 or before[b]	0.46*** (0.08)	1.19 (0.28)	1.39 (0.31)	1.19 (0.26)	0.46*** (0.08)
First certified 2005–2009[b]	0.87 (0.15)	1.02 (0.24)	0.89 (0.20)	1.20 (0.27)	0.71 (0.13)
First certified between 2010 and 2014[b]	1.16 (0.19)	1.06 (0.25)	0.71 (0.16)	1.14 (0.25)	0.87 (0.15)
35 years old or older	1.44** (0.17)	1.06 (0.17)	1.08 (0.18)	0.78 (0.11)	1.07 (0.15)
Last certification activity in 2000 or before[c]	0.34*** (0.07)	0.67* (0.1)	1.01 (0.15)	0.43*** (0.09)	1.1 (0.19)
Constant	0.38*** (0.08)	0.03*** (0.01)	0.07*** (0.02)	0.13*** (0.04)	0.1*** (0.03)

* Significant at $p < .05$; ** significant at $p < 0.01$; *** significant at $p < 0.001$.

Note: Numbers are odds ratios generated from logistic regression models, and numbers in parentheses are the associated standard errors. Estimates indicate whether certain groups of certified teachers have higher odds of selecting the incentive that encourage them to re-enter or enter teaching. For example, the odds that a certificate holder with previous teaching experience would select "an increase in salary" as an incentive are 1.59 times that of a certificate holder who never taught. Values less than 1 indicate that the reference group had higher odds of selecting the reason, compared with those identified by the predictor name.

a. Reference group is those who were certified to teach at elementary grade levels.

b. Reference group is those who were first certified after 2014.

c. Reference group is those whose most recent certification activity, such as renewal and advancement, was after 2000.

Source: Authors' calculations based on the Michigan Department of Education's survey of teachers who are not teaching, administered between December 2019 and January 2020.