## Teachers' Working Hours During the COVID-19 Pandemic

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#### Abstract

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This study uses nationally representative data for the United States from the Basic Monthly Current Population Survey to document how teachers' hours of work have changed in 2020 and 2021 relative to typical labor supply levels and to the hours worked by other college-educated professional workers. Controlling for demographics, teachers' hours decreased early in the pandemic, but throughout the 2020-2021 school year teachers have been working more than usual. The increase is slightly more pronounced for veteran teachers and for females. The findings emphasize the increased demands of the teaching profession during the global pandemic.


Keywords: descriptive analysis | economics of education | secondary data analysis | teacher research | work

## Article:

It is important to understand fully how the COVID-19 pandemic has affected elementary and secondary education and where resources and supports are most needed going forward. As part of this process, we need to identify the ways in which the teacher labor market has been affected and how educators are adapting to the new challenges. There is suggestive evidence from specialized surveys conducted in 2020 that teachers worked longer hours during the pandemic and that this may have caused burnout and lowered morale (Diliberti \& Kaufman, 2020; Kaufman \& Diliberti, 2021; Kraft et al., 2021; Pressley, 2021), which could affect student achievement negatively (Greenberg et al., 2016). Kraft et al. (2021) report that in the spring of $2020,16 \%$ of teachers reported being unable to balance work and home responsibilities. Even before the pandemic, it was common for teachers to put in additional hours after school and on weekends (Krantz-Kent, 2008), but we lack strong evidence on what drives variation in how much teachers work.

This study uses a large nationally representative sample of U.S. teachers to examine how their working hours changed between January 2020 and June 2021 relative to prepandemic levels. This is the first article to document the effects of the COVID-19 pandemic on teachers' work intensity using a comprehensive monthly data set that covers a period before the pandemic through the end of the 2020-2021 school year.

## Methodology

The analysis is based on data from the Basic Monthly Current Population Survey (CPS) provided by IPUMS ${ }^{1}$ for the period between January 2016 and June 2021. The sample is restricted to employed individuals between the ages of 22 and 61 years who have a completed bachelor's degree. Since the data do not differentiate between preschool and kindergarten teachers, this group is excluded from the sample. The sample includes elementary, middle, high school, and special education teachers but excludes those classified as "Other teachers and instructors." The final sample consists of 91,348 teachers representing all 50 states and the District of Columbia. All types of schools-public or private-are included in the data. While the sample includes some part-time teachers, $93 \%$ report that they usually work full-time. Some of the analyses compare trends for teachers to those for workers in other professional occupations. ${ }^{2}$

The main variable of interest is the number of hours respondents worked at their main job during the week prior to the survey. ${ }^{3}$ Trends in weekly hours are analyzed descriptively and using a regression model that compares hours in each month during 2020 and 2021 to hours in corresponding months during prior years, holding individual characteristics constant. ${ }^{4}$ The article also shows trends for selected subsamples.

## Results

Figure 1 shows average hours over the sample period for teachers and college-educated workers in other professional occupations. Hours are seasonally adjusted to remove fluctuations, especially during the summer months; Section A of the online appendix (available on the journal website) provides technical details about the adjustment, and Section B shows a plot with nonadjusted hours. A dip associated with the COVID-19 pandemic became evident in April 2020 and was especially pronounced for teachers, who were working about 3 fewer hours per week compared with prior years. Relative hours increased in the summer but dipped again below prepandemic levels in September. Starting in October, teachers' hours rose to a level above their prepandemic average, while workers in other occupations were still supplying less labor than usual. This trend largely remained in place through June 2021.

Figure 2 shows results from the regression model, where each coefficient estimate represents the difference in average hours between a given month in 2020 or 2021 and the same month prepandemic. ${ }^{5}$ There was a statistically significant increase in teachers' hours in each month starting with October 2020 with the exception of May 2021. This was not an overall labor market trend: hours for other professionals exhibited a statistically significant decrease throughout the pandemic.

Figure 2 also shows trends for several subgroups of teachers. The subgroup differences are generally not statistically significant but show heterogeneities that could be important for policy and should be explored further with different data because the CPS lacks information on many potentially important contextual factors such as school poverty levels. The increase in hours was slightly more pronounced for teachers with 20 or more years of experience, which could be due to older teachers being less comfortable with technology or younger teachers being more likely to have to balance work and family time (Kraft et al., 2021). The increase in hours was somewhat higher for female teachers and for teachers who reside in large metropolitan areas. Part of the latter difference may be due to schools in towns and rural areas being more
likely to offer in-person instruction during the 2020-2021 school year (Diliberti \& Kaufman, 2020). No distinct patterns emerge based on race and ethnicity or school level.

Figure 1. Weekly hours for teachers and other professionals.


Note. Author's analysis of Basic Monthly Current Population Survey data. The calculations use survey weights. The data are seasonally adjusted using a regression model with monthly dummies; see Section A of the online appendix (available on the journal website) for technical details.

Figure 2. Differences in weekly hours between 2020/2021 and prior years.


Note. Point estimates and 95\% confidence intervals. See Section A of the online appendix (available on the journal website) for technical details on the regression specification and Section C of the online appendix for the full set of coefficient estimates.

## Conclusion

This study documents that teachers worked more hours than usual during the 2020-2021 school year. This is consistent with reports of many teachers experiencing discomfort with remote teaching technology (Kraft et al., 2021) and accounts that delivering online or hybrid instruction is more taxing on teachers (Kaufman \& Diliberti, 2021). High hours are likely driven by the demands of mastering new technologies and learning platforms and of switching between different delivery modes mid-year and are also in line with prior research suggesting that intrinsic motivation drives some teachers to work longer hours than required by contract (Gicheva, 2020), as teachers have been expressing concerns about student engagement and learning during the pandemic (Kaufman \& Diliberti, 2021).

The findings have important implications since they relate to issues in the teacher labor market that predate the pandemic such as high stress and burnout in the profession. Increased hours should be considered when school leaders are assessing needs for additional support and compensation and setting expectations for teachers. This article complements the body of evidence recognizing the increased importance of working conditions during the COVID-19 pandemic (e.g., Diliberti \& Kaufman, 2020; Kraft et al., 2021), as higher workloads can come with increased likelihood of burnout and turnover. Future research should also help us understand better how teachers adjust their effort in response to disruptions to student learning.

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## Notes

1. IPUMS-CPS, University of Minnesota, www.ipums.org.
2. The following occupation groups are included: Managers; Business operations and financial specialists; Computer and mathematical professionals; Architects and engineers; Life, physical and social scientists; Community and social service professionals; Legal occupations; and Healthcare professionals.
3. The wording of the question used to construct this variable is "Last week, how many hours did you actually work at your main job?"
4. The model specification and list of covariates are available in Section A of the online appendix (available on the journal website). The results from models without covariates are similar.
5. Section C of the online appendix (available on the journal website) shows the full set of estimation results.

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