Discovering Impacts of the COVID-19 Pandemic on the Education Workforce

Methods and Procedures Report

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Abstract

After weeks of uncertainty and increasing concern regarding the COVID-19 pandemic, on March 16, 2020, New York's Governor Andrew Cuomo signed an executive requiring all K-12 schools to close and shift to remote instruction by March 18. A subsequent announcement required remote instruction for the remainder of the 2019-20 academic year. The following September (2020), school openings varied from fully remote to fully in-person or diverse combinations of each, as communities across the state experienced different levels of COVID-19 spread. In the fall of 2020 and spring of 2021, many schools faced periodic openings and closings as the pandemic went through cycles of waning and waxing in different communities. The disruptions caused by these changes were particularly problematic for leaders and educators in schools already challenged by educational inequities exacerbated by economic, technological, and social disadvantages.

During the first months of the pandemic, the bulk of educators' and policymakers' attention focused on student safety and learning needs associated with remote learning. Policymakers, in particular, also prioritized schools' functions as childcare organizations in support of parents with jobs. While these two priorities were understandable and essential, the needs of educators – including school leaders and instructional and support staff — received significantly less attention. But shifts to remote schooling had necessitated significant changes in educators' roles, responsibilities, and relationships with colleagues, students, and families. It is important to understand how educators have coped with these adaptations in their roles and performances and what effects such changes have had on the workforce.

Meanwhile, proposals for the return to place-based schooling in fall 2021 were met by educators' expressions of concern regarding the threats posed by unvaccinated people in school environments that lack virus-related protections. An interdisciplinary body of research suggested that it was timely and important to learn more about educators' occupational stress during periods of upheaval such as those caused by pandemic-related transitions (Bliese & Jex, 2002; Tavakoli, 2010). Occupational stress can take two forms: hazardous (distress) or beneficial (eustress).



Another kind of workforce stress is also important and of special interest in the research discussed in this report: educators' secondary traumatic stress (STS) (Lawson et al., 2019). STS arises from interactions with traumatized students, parents, and other school personnel and, like COVID-19, it can be contagious. All forms of stress impact educators' job satisfaction, particularly under conditions of rapid, dramatic change; stresses also influence performance, retention, and turnover (Toropova et al., 2021).

When investigating impacts of the pandemic on educators, school, district, and community contexts matter. Our study, therefore, also explored such questions as: What can we learn about contextual influences—commonalties,

similarities, and differences – in impacts on educators working in different school settings? And how do these differences in educators' experiences impact students as well as overall school operations and outcomes?

Study Overview

Studying how educators have coped with pandemic-related adaptations in their roles and performances and how this has affected the workforce entailed asking specific questions, such as: What are the indicators and causes of occupational stress in the education workforce? Have some educators experienced secondary traumatic stress? Have teachers considered staying or leaving their schools and/or the profession due to these stressors? What about principals? What are the contributing factors in educators' and leaders' considerations of staying or leaving the profession? What factors mitigate occupational stress during extreme disruptions such as the COVID-19 pandemic? How have school leaders and educators adapted their processes and practices? And regarding all these questions, what disparities exist, and how do these relate to organizational and contextual differences in schools and their host communities?

This mixed-method study illuminates occupational stress, job satisfaction, and performance adaptation disparities of leaders and educators working in districts and schools serving different subpopulations of students (i.e., ethnically, linguistically, and socioeconomically) and in different types of communities (i.e., urban, suburban, rural) across New York State. We also sought to discover disparities among educators of different genders, those with different childcare responsibilities, and those working in different content area classrooms and with students requiring specialized instruction such as students with disabilities and English language learners.

Theoretical Framing

An Ecologically and Developmentally Nuanced View

Social ecological theory (Bronfenbrenner, 2009) provides an overarching frame for this study. From a social-ecological perspective, classrooms are seen as micro-level systems that are nested within other systems (e.g., exo-level systems such as schools), and each of these systems is understood to have variable impacts on individual and group experiences. In this sense, the

resources and assets of the context and the ways individuals and collections of individuals interact within those contexts are of import in understanding outcomes in the present and what can be expected in the future. This perspective focuses attention on the contextual affordances and barriers to mitigate negative impacts of disruption in a school. Many rural schools, for example, needed to adapt in unique ways as broadband internet access, a pre-requisite to remote learning, was not available in many of their host communities at the outset of the pandemic. This provides but one example of how the impacts of COVID-19 on schools differ in different contexts. This variability in context and related impact is a core problem to be addressed as we seek to learn how to better prepare schools to work reliably through crises.



Performance Adaptation Theory, Research and Practice

A complementary theoretical lens is offered by performance adaptation theory, which offers insight into how organizations and people working within them adapt to new requirements and changing conditions. Performance adaptations by educators have three related features: cognitive, affective, and behavioral (Baard et al., 2014). Because these adaptations interrupt steady states and routines, they are inherently stressful. For purposes of this study, questions abound regarding whether educators' performance adaptations during the pandemic have produced distress, eustress, or variable combinations and how these experiences relate to their abilities and will to work individually and in collaboration with colleagues to tackle pandemic-related disruptions.

While performance adaptation theory and research prioritize individuals, this lens also draws attention to the collective actions and orientations of groups of educators as they work together in professional learning communities and school-based teams. It also focuses attention on the complexity of adaptations ranging from those that require only changes in one component of an organization versus those that require coordinative or dynamic change efforts.

Figure 1 presents a selective overview of performance adaptation and its focal levels and mechanisms (Baard et al., 2014).

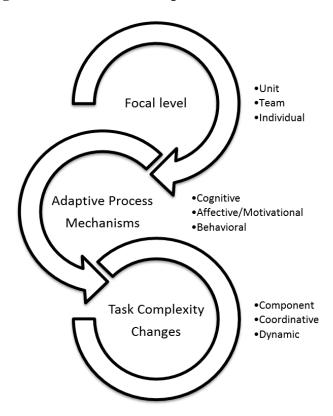


Figure 1. Performance adaptation mechanisms

Research Questions

1. To what extent and how do school leaders and teachers experience stress in response to COVID-19 disruptions?

How do school characteristics (i.e., level of urbanicity, level of economic disadvantage, level of ethnic and linguistic diversity), district and school leaders' practices, and district and school resources and workforce characteristics relate to these experiences?

2. To what extent and how do school leaders and teachers indicate a change in job satisfaction in response to COVID-19 disruptions?

How do school characteristics (i.e., level of urbanicity, level of economic disadvantage, level of ethnic and linguistic diversity), district and school leaders' practices, and district and school resources and workforce characteristics relate to these experiences?

3. To what extent and how do school leaders and teachers indicate changes in their work or personal life in response to COVID-19 disruptions?

How do school characteristics (i.e., level of urbanicity, level of economic disadvantage, level of ethnic and linguistic diversity), district and school leaders' practices, and district and school resources and workforce characteristics relate to these changes?

Research Goals

- 1. To identify levels and qualities of leader and educator occupational stress in response to COVID-19 disruptions (e.g., the need to pivot from remote instruction to in-person classes and vice-versa).
- 2. To identify mitigating forces, factors, and actors related to educator occupational stress in response to COVID-19 disruptions.
- 3. To identify levels and qualities of leader and teacher job satisfaction (e.g., intent to leave their professions) in response to COVID-19 disruptions.
- 4. To identify mitigating forces, factors, and actors related to leader and teacher job dissatisfaction.
- 5. To identify levels and qualities of leader and teacher adaptations in response to COVID-19 disruptions.
- 6. To identify facilitators, constraints, barriers related to leader and teacher adaptation.

After all data are analyzed, the research team will make recommendations for a retention and turnover indicator system, laying the foundation for a rapid response and prevention system for undesirable, preventable turnover in schools due to disruptions such as the pandemic. We will

also identify features of adaptive learning organizations (schools) that facilitate performance adaptations and mitigate distress during dramatic change in turbulent contexts.

Summary

This study aimed to explore educator stress, job satisfaction, and performance adaptations in the context of the COVID-19 pandemic. Specific lines of inquiry included: facilitators for performance adaptation – cognitive, behavioral, and affective; working conditions related to organizational and contextual forces, factors, and actors; occupational stress (e.g., negative stress and positive [eustress]); and life-work relations and balance. We also sought to identify the extent and character of secondary stress educators may experience as a result of increased needs of students and families.

Research Study Team and Methods

This mixed-method study was conducted by the research-practice partnership called NYKids (funded by the State of New York and housed in the University at Albany School of Education). NYKids is provided guidance by an advisory board of statewide organizations including the School Administrators Association of New York State (SAANYS). In consultation with SAANYS and others, we designed this study to provide valuable information to support leaders and educators through this pandemic and beyond it. SAANYS served as a partner in seeking participation and distributing the survey materials by disseminating to its members a letter soliciting participation.

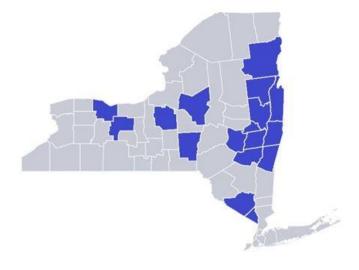
Methods

Sample Selection

The survey population targeted for this study was instructional staff (e.g., teachers and teaching assistants) and school support professionals (e.g., social workers, school psychologists, counselors) in New York State P-12 schools.

The interviews were conducted with a select group of school principals and other school leader designees such as assistant principals or COVID coordinators. These principals were identified by taking into account school demographics (e.g., economic disadvantage, ethnic and linguistic diversity) and survey results. The research team identified schools that qualify as positive outliers (i.e., exhibiting unusually more positive workforce responses with regard to stress, job satisfaction, and performance adaptation) and those that are more typical as well as negative outliers.

The research team solicited interview participation of a subset of principals from these schools with variable survey responses. These interviews sought to ascertain how any leader qualities, particular leadership practices such as decision-making, or other characteristics of schools or communities might relate to educator stress, job satisfaction, and performance adaptations.



Consent and Recruitment Procedures

Once the principal (and district leader if required by district guidelines) gave consent for participation in the study, the research team sent a unique link to a Qualtrics survey (see Appendix A). The principal was asked to remind participants about the survey once, approximately 7 days after the first time the survey was distributed to staff. Once the survey was closed, data were downloaded from Qualtrics to SPSS for analysis.

The process for recruitment and soliciting participation occurred in these steps:

- 1) The research team sent the "school survey invitation" 1) by email to SAANYS to distribute to all network principals or 2) by email directly from research staff to their networks.
- 2) The principal reviewed the letter and used the consent form "leader school survey consent" to confirm consent. If district consent was recommended per district guidelines, the principal forwarded the invitation to a district leader in charge of research decisions for consent.
- 3) Once leaders' consent was received, the research team created a unique survey link for each school and embedded it in the educator invitation letter. This was sent to the principal for distribution.
- 4) Educators provided consent and completed the survey.
- 5) The research team provided survey reminders to school leaders and a closure date. After the closure date, researchers downloaded data and created reports to share with principals that contained no personally identifying information (name, IP address) about participants.
- 6) The research team invited a subset of principals for interviews using the school leader individual interview invitation letter.
- 7) If the school leader agreed to the interview via email, the research team sent the individual consent form prior to the meeting, reviewed it with the participant and responded to any questions, and confirmed consent before proceeding with the interview, which was held over a password-protected Zoom meeting.

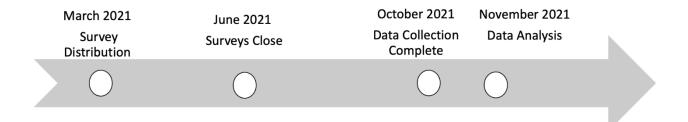
Level of	Number of	%	% White	% Hispanic/	% African	% ELLs
schools	schools	Economically		Latino	American/	
		disadvantaged			Black	
Elementary	20	36%	79%	5%	4%	3%
Intermediate	7	38%	76%	9%	4%	3%
Secondary	10	35%	81%	6%	5%	2%
K-12	1	61%	100%	0%	0%	0%

Data Collection

Data collection began with a Qualtrics survey of instructional and support staff (see Appendix A), followed by school leader interviews (Appendix B) in a select number of schools chosen for their school staff's survey response results. The survey was designed to take 5-10 minutes to complete, and the school leader interview took 30-45 minutes by password protected Zoom.

Figure 2 below shows a timeline of the study:

Figure 2: Study Timeline



Data Source Summary

This study included two major sources of data:

- 1) educator surveys (teachers, teaching assistants, school psychologists, social workers, and counselors)
- 2) interviews with school leaders

The survey can be found in Appendix A and the school leader interview protocol in Appendix B.

Survey

The survey questions were developed by our research team, with some questions derived from other validated survey instruments and research on employee turnover (Bothma & Roodt, 2013). The first set of survey questions (Appendix A, Q1) asked respondents to "rate how much the pandemic has changed" their lives in five categories: routines; family income/employment; access to personal social supports; experiences of stressors related to the pandemic; and balancing work and personal/family life. The next survey questions (Q2 and Q3) were designed to understand the nature and types of stressors incurred by educators in their workplaces as well as the frequency with which they occurred.

Two survey questions (Q4 and Q5, each with five sub-questions) were used to capture factors related to how likely an educator was to leave their current job both before and after the pandemic. A key component of the "intent to leave" index is whether employees report "I had considered leaving my job." However, two employees giving the same response (e.g., "once a month") may still differ in their likelihood of leaving due to differences in their feelings about their job. Additional items used for this index capture educators' intrinsic motivation to stay and extrinsic motivation to leave. One set of questions (Q4) asked educators to recall their feelings prior to March 2020 and the other (Q5), to report their feelings when responding to the survey between March and June 2021 (a year or more into the pandemic). Sub-questions explored the frequency which respondents felt their job was personally fulfilling, dreamt about a better paying job, and looked forward to another day at work. Respondents were also asked about levels of collaboration and communication before and during the pandemic.

The next section of the survey (Q6-Q14) captured demographic data of participants such as their role as an educator, their gender and racial/ethnic identity, and whether they had school-aged children in their care during the week. The final, open-ended question (Q15) asked: "Please provide any comments you would like to about stress, your job satisfaction, or your perceptions of the effects of the pandemic on your life and work as an educator."

Sample Summary

By the end of June 2021, NYKids had received 904 educator responses from 38 participating schools with an overall response rate of 33.1%. The responding educators were largely female (83%), white (94%), and classroom teachers (69%); on average they had 14 years of service in education. During the spring of 2021, 68% were teaching in a mixed in-person and remote format, and 46% also had childcare responsibilities during the day.

The participating schools served a variety of grade spans and ranged in size from 170 to 1,525 students. The rate of economically disadvantaged students in these schools was on average 37%, and the percentage of non-white students averaged 20%. The schools were located in 15 counties and communities ranging from distant rural to small cities in upstate New York. During the pandemic, the counties in which these schools are located reached an average 31% COVID positive rate during 2020 and had average rates of 4% in March 2021.

Survey Analysis

The survey responses were downloaded from Qualtrics and analyzed in SPSS (IBM, 2020). The research team created and maintained a directory that included a copy of the actual survey and codebook for the numbers. A document for the inventory of measures created from the survey was also created to reserve codes to keep them consistent across variables when conducting analysis. Raw data prepared for analysis using school identifier variables and codes were run to check for missing values. Each set of research questions required different analytic strategies Therefore, for each analysis, syntax was annotated to indicate author, date and purpose of analysis. Robustness checks were also employed such as Cronbach's alpha for internal consistency. Responses to the job satisfaction items, for example, were averaged for each time period (Cronbach's $\alpha = .742$ and .797 for before March 2020 and for March-June 2021, respectively). The scales for job satisfaction were constructed to reflect educators' more frequent negative feelings about their jobs such that higher values indicate greater job dissatisfaction. Because of the two-stage sample design, we used Complex Samples General Linear Modeling (CSGLM) in SPSS to adjust standard errors for potential correlated errors due to educators being clustered within schools.

To adjust for the cluster sample design, standard errors generated for this analysis used clustering options to compute the variance-covariance matrix. This procedure takes into account that educators were not independently sampled and that the efficiency of the regular test of means might be lower than multivariable linear regressions clustered by the school. For this reason, we ran multivariate regressions clustering by the school level to capture heterogeneity across schools.

Educators' responses to the open-ended survey question complemented the quantitative analysis. Of the 904 survey respondents, 314 participants left responses to the open-ended question. The open-ended survey responses were analyzed using computer-assisted qualitative data analysis software (NVivo 12). Coders used an inductive constant-comparison approach (each interpretation of data is compared with existing interpretations as they emerge) (Charmaz,

2006) to develop a codebook that in the end included eight "parent codes" (academic progress; adaptations; collaboration; community; job satisfaction; leadership; social-emotional well-being; stress) and another 29 related child codes. The research team then used methods of code comparison across schools (e.g., axial coding) (Saldaña, 2021) and used recommended strategies to reduce credibility threats inherent in qualitative studies (see Miles, Huberman, & Saldaña, 2014) including triangulation across data sources and interpretive memoing (i.e., reflecting on interpretations with intent to account for any over- or under-weighting of evidence).

School Leader Interviews

Once we had completed the survey analysis, we used these results to rank changes in job dissatisfaction in the respondents' schools and to identify six focal schools for follow-up interviews with principals. Two schools were chosen as "positive outliers" because they were in the lowest 25% of schools where educators indicated the least degree of shift in job dissatisfaction from prior to Spring 2020 to the 2020-2021 school year. Four additional schools were selected to represent our comparison schools, as they demonstrated increasing levels of job dissatisfaction during this time frame.

The school leader interview protocol used phenomenological research methods intended to explore individuals' lived experiences through a recounting of an experience (Seidman, 1998). It was developed based upon the 3-part sequence of focusing on historical background; details of critical experience; and reflection on meaning/interpretation of the experience. Interviews took approximately one hour and asked questions such as: As the pandemic continued in the fall of 2020 and spring 2021 term, how have you managed the prolonged disruptions? (See Appendix B).

Two researchers reviewed the six principal interview transcripts and coded them using NVivo qualitative software. As with the analysis of the open-ended survey data, they utilized a constant-comparison approach to develop a set of parent codes based on themes from the research literature and those that emerged from the interviews (Charmaz, 2006). They conducted the next round of coding axially (comparisons made across cases) to elicit similarities and differences across interviewees' experiences (Saldaña, 2021). Interpretive memos were written during the analysis process to reflect on interpretations made, and data were triangulated against survey findings to reduce credibility threats (Miles, Huberman, & Saldaña, 2014).

Project Sponsors

Know Your Schools~for NY Kids, housed in the University at Albany's School of Education, is funded by the State of New York.

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Appendix A. Survey COVID RESPONSE SURVEY

We are writing to request your participation in a short survey (5-10 minutes) on how teachers, teaching assistants, school psychologists, social workers, and counselors are being affected by the COVID-19 pandemic.

This survey is being conducted by the University at Albany School of Education's NYKids project – a research-practice partnership funded by the State of NY.

The survey is designed so that when you submit your responses, no personally identifying information (name, ID, survey ID, IP address) about you is connected to the survey responses.

As further protection, the research team guarantees the confidentiality of all individual responses and will only share aggregate statistical summaries of survey responses in our analyses.

We greatly value your honesty in responding to our questions, which have no right or wrong answers. Your participation is voluntary, and you have the right to not answer questions at any point during the survey. Please note that this survey will best be displayed on a laptop or desktop computer but can also be completed on a mobile device.

On behalf of the NYKids research team, we thank you for your time and input as we seek to inform policymakers and other leaders about the resources needed to support educators in NY State.

If you have any questions about this survey, please contact NYKids Principal Investigator Kristen C. Wilcox at kwilcox1@albany.edu.

To begin filling out the survey click on the arrow below:

Our best, The NYKids Team

Discovering Differential Impacts of the COVID-19 Pandemic On the Educator Workforce in New York State

IRB Study: 21E027

EDUCATOR INFORMED CONSENT FOR SURVEY

Purpose: This study explores educator stress, job satisfaction, and adaptations during the COVID-19 pandemic. We want to learn about how the pandemic has impacted you including your work activities and feelings about your work.

Procedures: Administered using an online survey tool called Qualtrics, the survey will take between 5 and 10 minutes to complete.

Voluntary Participation: Participation in this study is voluntary. Even after you agree to participate, you may decide to stop participating in the survey or decline to answer any question or portion of the survey without penalty.

Risks/Benefits of Participation: We anticipate no risk to your participation in this study and most find it rewarding to have the opportunity to reflect on experiences and be heard. Others may also ultimately benefit from the insight this study will offer with regard to how educators have been affected by the pandemic.

Anonymity and Confidentiality: When you submit your responses, no personally identifying information (name, ID, survey ID, IP address) is collected. The research team will only share aggregate statistical summaries of survey responses in reports including one your principal will receive. Finally, all information obtained in this study is strictly confidential unless disclosure is required by law. In addition, our Institutional Review Board (see below) and University or government officials responsible for monitoring this study may inspect these records.

Sharing of Results: Information about educators' experiences with the pandemic will be shared with the NYKids advisory board, policymakers, other educators, and researchers through reports, articles, and presentations. Other leaders and educators can learn from these results and policymakers can take account of the resources needed to support educators through disruptive events such as the pandemic. If you have any questions concerning your rights as a research participant, you may contact the principal investigator: Kristen Campbell Wilcox, Ph.D., Associate Professor, School of Education, University at Albany, Catskill 229, 1400 Washington Ave., Albany, NY 12222: 518-442-9085; kwilcox1@albany.edu.

Research at the University at Albany that involves human participants is carried out under the oversight of the Institutional Review Board (IRB). This research has been reviewed and approved by the IRB. If you have any questions concerning your rights as a research participant that have not been answered by the investigator or if you wish to report any concerns about the study, you may contact the University at Albany Office of Regulatory & Research Compliance at 1-866-857-5459 or hsconcerns@albany.edu.

Consent to Participate in Research:

Clicking "Yes, I consent" below indicates my willingness to participate in this study as described above. I understand that participation is voluntary, that the confidentiality of those who participate will be protected, that all data will be stored on password-protected computers and in locked cabinets/rooms until data analysis is complete, after which all data and key identifiers will be destroyed. I also understand that I can refuse to answer any of the questions with no repercussion. I have read, or been informed of, the information about this study. I hereby consent to participate in the study.

Yes, I consent (1)

No, I do not consent (2)

Q1. For each of the following, rate how much the pandemic has changed your life:

Q1(a). Routines

- No change.
- Mild. Change in only one area (e.g., work, education, social life, hobbies, religious activities).
- Moderate. Change in two areas (e.g., work, education, social life, hobbies, religious activities).
- Severe. Change in three or more areas (e.g., work, education, social life, hobbies, religious activities).

Q1(b). Family Income/Employment

- No change.
- Mild. Small change; able to meet all needs and pay bills.
- Moderate. Having to make cuts but able to meet basic needs and pay bills.
- Severe. Unable to meet basic needs and/or pay bills.

Q1(c). Access to personal social supports

- No change.
- Mild. Continued visits with social distancing and/or regular phone calls and/or tele-video or social media contacts.
- Moderate. Loss of in person and remote contact with a few people, but not all supports.
- Severe. Loss of in person and remote contact with all supports.

Q1(d). Experiences of stress related to COVID-19 pandemic

- None.
- Mild. Occasional worries and/or minor stress-related symptoms (e.g., feel a little anxious, sad, and/or angry; mild/rare trouble sleeping).
- Moderate. Frequent worries and/or moderate stress-related symptoms (e.g., feel moderately anxious, sad, and/or angry; moderate/occasional trouble sleeping).
- Severe. Persistent worries and/or severe stress-related symptoms (e.g., feel extremely anxious, sad, and/or angry; severe/frequent trouble sleeping).

Q1(e). Balancing work and personal/family life

- No change.
- Mild. Small change; able to balance work requirements and personal/family demands.
- Moderate. Having difficulty balancing work requirements and personal/family demands.
- Severe. Unable to balance work requirements and personal/family demands.

Q2. Thinking about your work in a school, please describe how often in the last month you have experienced the following:

Scale: Never, Almost never, Sometimes, Fairly often, Very often

- I have been upset because of something that happened unexpectedly at work.
- I have felt that I was unable to control important things related to my job.
- I have felt nervous and "stressed" about work.
- I have felt that things were going my way at work.
- I have felt that I could not cope with new aspects of my job.
- I have felt that work-related stress has impacted my personal life.
- I have felt that I am on top of things at work.
- I have been angry because of work-related problems that were outside of my control.
- I have felt that work-related difficulties were piling up so high that I could not overcome them.

Q3. In the context of this school year, to what extent do you agree with the following statements?

Scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

- I have had opportunities to weigh in on decisions impacting my work.
- I have been able to get help for students about whom I am concerned.
- I have had difficulties communicating with some students' parents and caregivers.
- I have had to find new strategies to engage students.
- I have had students struggle with mental health challenges.
- My students' mental health challenges have affected my mental health.
- I have had students receive the support and resources they need to learn while they are working remotely.
- I have been provided the support and resources I need to engage students with different needs while they are working remotely.
- I have felt comfortable working in person in my school.

Q4. Prior to the pandemic (before March 2020), how often did you feel the following?

Scale: Every day, Every week, Every couple of weeks, Once a month, Every couple of months, Never

- I found my job personally fulfilling.
- I dreamt about a better paying job.
- I looked forward to another day at work.
- I had considered leaving my job.
- I worried about losing my job due to budget cuts.

Q5. Thinking about changes in your job due to the pandemic (since March 2020), how often have you felt the following?

Scale: Every day, Every week, Every couple of weeks, Once a month, Every couple of months, Never

- I found my job personally fulfilling.
- I dreamt about a better paying job.
- I looked forward to another day at work.
- I had considered leaving my job.
- I worried about losing my job due to budget cuts.

Q6. I am currently working with students who are learning (select all that apply):

- In person only.
- Remote only.
- A combination of in person and remote.

Q7. How frequently did you have the following interactions with others in your school prior to the pandemic (before March 2020)?

Scale: Every day, 1-2 days per week, 1-2 days per month, Every 1-2 months, Almost never, Never

- I collaborated with my colleagues in planning and preparing instructional materials.
- I shared what I learned from my teaching experiences.
- I worked with colleagues to try out new ideas for engaging students.
- My colleagues and I discussed struggling students.
- My colleagues and I shared strategies for communicating with students' families.

Q8. How frequently have you had the following interactions with others in your school in this school year (fall 2020-present)?

Scale: Every day, 1-2 days per week, 1-2 days per month, Every 1-2 months, Almost never, Never

- I collaborated with my colleagues in planning and preparing instructional materials.
- I shared what I learned from my teaching experiences.
- I worked with colleagues to try out new ideas for engaging students.
- My colleagues and I discussed struggling students.
- My colleagues and I shared strategies for communicating with students' families.

Q9. Please tell us a little bit about yourself and your work responsibilities.

With which gender identity do you most identify?

- Male
- Female
- Non-binary
- Transgender
- Other
- I prefer not to say.

Q10. Please indicate your race/ethnicity (select all that apply):

- White
- Black or African American
- Asian
- American Indian or Alaskan Native
- Middle Eastern or North African
- Native Hawaiian or Other Pacific Islander
- Some other Race, Ethnicity, or Origin
- I prefer not to say

Q11. Do you have school-aged children in your care during weekdays?

- Yes
- No

Q12. How long have you worked in your profession?

- 1-2 years
- 3-5 years
- 5-10 years
- 11-20 years
- 21 or more years

Q13. Grade levels of students with whom you work (select all that apply):

- Pre-K/K
- 1-3
- 4-6
- 7-8
- 9-12
- I prefer not to say

Q14 What is your primary role?

- Mainstream Classroom/Core subject area teacher (English, Math, Science, Social Studies)
- Special subject area teacher (Physical Education, Art, Music, Technology, Library)
- Special Education teacher
- English New Language/Bilingual Education teacher
- Teaching assistant
- Social worker, School psychologist, and/or Counselor
- I prefer not to say

Q15. Please provide any comments you would like to about stress, your job satisfaction, or your perceptions of the effects of the pandemic on your life and work as an educator.					

Appendix B. Principal Interview Protocol

Introduction Script:

Thank you for participating in this interview. Before we begin, I would like to review the consent form and answer any questions you may have.

Part I:

- 1. Please tell me how long you have been in your current position and how long in total you have worked in the field of education.
- 2. Please tell me a little bit about your school and community (population served, any demographic shifts in recent years).

Part II:

- 3. Think back to February 2020 before schools were impacted by the pandemic. How would you characterize the work environment and your teachers' levels of stress and job satisfaction at that time?
 - a. (Probes: What kinds of things were teachers focused on? Were there any particular teachers or groups of teachers who seemed to be experiencing more stress or different levels of job satisfaction than others? If so, what was the content area, grade level, population served; other important characteristics? What was your understanding of the causes of stress or different levels of job satisfaction? What kinds of things were you doing to support your teachers in learning to adapt to new demands at that time?)

Part III:

- 4. As the pandemic continued to cause disruptions in the fall of 2020 and spring 2021 terms, how have you managed the prolonged disruptions?
 - a. (Probes: What kinds of things did you notice about how teachers were responding? What kinds of things did you do in response? Were there any particular teachers or groups of teachers who seemed to be experiencing more stress or different levels of job satisfaction, or need to adapt in some way than others? If so, what were the causes of these changes? What kinds of things have you done or plan to do in response?)
- 5. Is there anything about your particular school environment population served, community and school resources, etc., that you feel has impacted teachers' stress or different levels of job satisfaction or need to adapt policies, processes, or practices than others?
 - a. (Probes: What kinds of things are helping or hindering your ability to support your staff? What kinds of things are helping or hindering your ability to manage your responsibilities? What do you wish you had more of in terms of resources or support to do your job during these times?)

Part IV:

6. Please reflect on how the pandemic and related disruptions in your school have impacted you as a leader.

- a. (Probes: How, if at all, has your job changed since the pandemic began? How has the pandemic affected your experience of stress in your personal and/or professional life? How has the pandemic affected your relationships with your staff and other school or district leaders? How has the pandemic and related disruptions from it impacted your job satisfaction and plans to stay in the profession? In what ways have you needed to adapt?)
- 7. Is there anything else you would like to share with us about leading your school during the pandemic as it relates to workplace stress, job satisfaction, and adaptations?